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REVISTA BRASILEIRA DE MEDICINA DE FAMÍLIA E COMUNIDADE
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EDITORIAL

O espaço de entrecruzamento das palavras: a relação médico-paciente

The intersection space of words: the doctor-patient relationship

El espacio de la intersección de las palabras: la relación médico-paciente

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> *Livros e revistas oferecem apenas ideias genéricas, esboços (mais ou menos bem sucedidos) das correntes gerais na vida do mundo, mas não podem dar a impressão direta, imediata e vívida da vida de Pedro, Paulo e João, dos únicos e reais indivíduos e, a não ser que se possa entendê-los, não se poderá compreender o que está sendo universalizado e generalizado.* (p. 165)
>
> *Antonio Gramsci*[1]

A Revista Brasileira de Medicina de Família e Comunidade (RBMFC) nesta edição especial de Volume 10 número 35, aborda o tema da Prevenção Quaternária (P4), que passou a fazer parte dos descritores da Bireme (DeCS) em 06/04/2015, graças a iniciativa da RBMFC.[2,3] Assim, novas palavras começam a ganhar forma e força como discurso contra-hegemônico dentro da própria medicina por meio da 'liderança moral e intelectual'[4] de pesquisadores e médicos práticos. A ilustração da capa, intitulada 'Palavras da Prevenção' faz referência à importância de certos termos no campo da prevenção, bem como aos vários temas discutidos na presente edição. De certa forma, é por meio da linguagem e do uso das palavras que se sustenta a prática da medicina de família, calcada na relação médico-paciente. Esta se constitui como um dos cernes da especialidade e tem a palavra como potencializadora de atividades de prevenção quaternária. As palavras, muitas vezes, podem causar iatrogenia, ao se rotular ou transformar potenciais riscos em 'doença', e assim gerar dúvidas e medos nos pacientes pela produção de pseudodoenças. Mas é também por meio das palavras que se pode tranquilizar e produzir efeitos terapêuticos positivos nos pacientes. Portanto, a palavra como um dos pilares da comunicação, necessita ser adequadamente trabalhada para facilitar o entendimento entre profissionais de saúde e pacientes durante a troca de informações. É a partir da relação médico-paciente, espaço de entrecruzamento das palavras, que se constrói no cotidiano a prevenção quaternária.

A presente edição especial é uma construção coletiva liderada brilhantemente pelo editor convidado, Dr. Marc Jamoulle, idealizador do conceito da P4. O entusiasmo e dinamismo do Dr. Jamoulle em fortalecer uma rede internacional de pesquisadores e médicos de família preocupados com os excessos da medicina foi fundamental para a materialização desta edição. Se da dimensão epidemiológica e dos ensaios clínicos surgiram provas científicas quanto aos efeitos danosos do sobrediagnóstico e sobretratamento, foi do campo da prática dos médicos de família que surgiu o conceito da prevenção quaternária. Hoffman e Wilkes afirmam que a '*P4 oferece um novo paradigma, ao insistir que o dano médico está longe de ser algo trivial ou uma preocupação secundária*'. A prevenção quaternária é a resposta

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prática, concreta e possível para o enfrentamento cotidiano de uma epidemia iatrogênica velada resultante do intervencionismo da biomedicina e do domínio da informação. Nesse sentido, esta edição aborda alguns dos temas relativos à prática médica ao discutir os fenômenos decorrentes dos excessos da medicina, rotulados pelo prefixo em inglês 'over'.

A seção de artigos originais inicia a temática da P4 no campo da semântica com os artigos de Jamoulle et al. *The words of prevention, part I: changing the model* e *The words of prevention, part II: ten terms in the realm of quaternary prevention*. O primeiro artigo revisita os conceitos e definições das prevenções primária, secundária, terciária e quaternária destacando a necessidade de mudança de paradigma de uma perspectiva temporal-linear para uma perspectiva co-construtivista, fundamentada na relação com o outro. Já o segundo artigo, sinaliza para a necessidade da inclusão nas bases de dados científicas de termos importantes para o campo da medicina, tais como: sobrediagnóstico e sobretratamento, incidentalomas, sobrerrastreamento, desprescrição, sobremedicalização, entre outros. Alguns desses termos mereceram aprofundamento: Gómez Santana et al. discorrem sobre o uso criterioso da desprescrição como medida de prevenção quaternária; Pizzanelli define e aborda questões importantes relativas ao tema do sobrerrastreamento; e Mariño traz uma revisão sobre o tema dos incidentalomas e suas implicações na prática médica. Já Cardoso, discute e contextualiza o tema da medicalização (e sobremedicalização) e os desafios da prática da P4, visto que de certa forma, todos esses neologismos têm como base o excesso da prática e da extrapolação da 'jurisdição' médica.

Um dos campos mais sensíveis de medicalização é o da saúde mental. Sendo assim, Lobo e Bernstein discutem as particularidades e desafios na abordagem dos pacientes em sofrimento psíquico. Os autores questionam o potencial de danos, tanto das abordagens psicoterápicas como medicamentosas, e oferecem algumas alternativas a serem consideradas, tais como o fortalecimento da relação médico-paciente e a desprescrição. Como exemplo dos riscos da medicalização no campo da saúde mental, Jean-Claude St-Onge faz uma análise crítica do transtorno de déficit de atenção e hiperatividade (TDAH) alertando sobre os riscos e potenciais consequências do sobrediagnóstico e do sobretratamento. Ainda no campo da medicalização, Tesser et al. discutem o tema da violência obstétrica no Brasil e as taxas escandalosas de cesarianas, além de proporem alternativas de ações de P4, tanto a nível da Atenção Primária à Saúde (APS) como a nível institucional.

Nas dimensões epistemológica, filosófica e ética da P4, esta edição especial nos convida a refletir e a pensar alternativas tanto na prática da medicina como nas atividades acadêmicas. Assim, Widmer fornece as bases filosóficas da P4 como subsídio ao pensamento crítico sobre o conhecimento médico (Epistemologia) e as ações em saúde (Ética). Perpassando esse tema, Mangin e Heath ressaltam a importância da prevenção quaternária frente a pacientes com quadro clínicos múltiplos e complexos, em que modelos ou protocolos fundamentados em uma abordagem de doença-única são poucos efetivos e potencialmente danosos. Por outro lado, Wagner et al. apontam para os conflitos de interesses na construção das evidências científicas e na manipulação dos dados de pesquisas para favorecer os interesses das corporações do setor farmacológico e do complexo médico hospitalar. Por sua vez, Yver discute a influência da biotecnologia e do complexo fármaco-industrial na área da patologia clínica para estabelecer pontos de corte da positividade do teste imunohistoquímico HER-2 e o uso do *Herceptin* (*Trastuzumab*) para tratamento do câncer de mama. Fazendo um contraponto à produção científica em medicina, De Jonghe traz um relato de experiência da aplicação da prevenção quaternária como um guia para o corpo editorial de uma revista de Medicina Baseada em Evidência (MBE), destacando a responsabilidade ética e os desafios na produção de conhecimento na área da saúde.

Na prática educativa e acadêmica da medicina, Tran e Vo discutem o impacto da introdução da P4 para estudantes do quinto ano do curso de medicina da universidade de Pham Ngoc Thach, Hochiminh, Vietnã. Os autores ressaltam o potencial positivo de mudança de comportamento na prática dos estudantes ao assimilarem os conceitos da P4. Em uma perspectiva de fortalecimento da prevenção quaternária como conteúdo médico-acadêmico, Gomes et al. propõem um guia teórico-prático para a implementação da P4 na formação de médicos, tanto na graduação como nos programas de residência em medicina de família. Por fim, Norman e Tesser fundamentam uma proposta de operacionalização da P4 na relação médico-paciente, estruturada por meio do modelo de consulta aprimorado de Calgary-Cambridge. O artigo pretende criar uma base conceitual e instrumental para facilitar a inclusão da P4 na consulta dos médicos de família, que uma vez internalizada poderia contribuir para diminuir os excessos da medicina.

A organicidade intelectual de Gramsci, exemplificada na epígrafe deste editorial, tem forte paralelo com a prática da medicina de família, visto que esta sempre desconfiou das generalizações e da universalização da biomedicina. Com o advento da MBE ocorreu uma proeminência de estudos populacionais, que de certa forma amplificou o pensamento abstrato, tornando anônimos os pacientes. Exemplo disso está no 'Índice de Sobretratamento' como ferramenta útil para a medicina de família na tomada de decisão clínica, descrito por Pezeshki e Pezeshki. Esse novo contexto agora requer do médico prático

saberes específicos que possam fortalecer uma prática médica dialógica entre os polos 'objetivos' e 'subjetivos' do encontro clínico.[5] O primeiro se refere à construção do saber biomédico e à materialidade dos corpos, o segundo à particularidade dos indivíduos, na sua dimensão biopsicossocial. A prevenção quaternária tem como parâmetro para intervenções médicas a relação com o paciente, tanto nos seus aspectos subjetivos como objetivos, ao mesmo tempo em que desmistifica o saber médico ao situá-lo como um instrumento subserviente à dimensão humana.

Por fim, esta edição evidencia o processo de aprimoramento da RBMFC, que cada vez mais se define como um periódico voltado para as questões da MFC e da APS, dialogando internacionalmente com seus pares na busca por alternativas éticas à pesquisa e à prática em medicina. Esta edição também revela o caráter independente do periódico, visando contribuir para o conhecimento dos profissionais da área da APS, bem como de leitores interessados na temática da saúde e dos abusos do setor das indústrias fármaco-biomédicas. A RBMFC, portanto, mantém seu compromisso com os médicos de família, com os profissionais da saúde e acadêmicos envolvidos na construção de uma APS forte e de sistemas públicos de saúde de qualidade, ao produzir esta edição especial sobre a prevenção quaternária.

Referências

1. Crehan K. Gramsci, culture and anthropology. London: Pluto Press; 2002.
2. Pan-American Health Organization (OPAS); World Health Organization (WHO). Já está disponível a versão 2015 do DeCS. Brasília: OPAS; 2015 [acesso em 2015 May 21]. Disponível em: http://www.paho.org/bireme/index.php?option=com_content&view=article&id=283%3Aja-esta-disponivel-a-versao-2015-do-decs&Itemid=73&lang=pt
3. Pan-American Health Organization (OPAS); World Health Organization (WHO). DeCS 2015 – Novidades. Brasília: OPAS; 2015 [acesso em 2015 May 21]. Disponível em: http://decs.bvs.br/P/visaogeral2015.htm
4. Kurtz DV. Hegemony anthropology: gramsci, exegeses, reinterpretations. Crit Anthropol. 1996;16(2):103-35. http://dx.doi.org/10.1177/0308275X9601600202.
5. Heath I. Arm in arm with righteousness. Philos Ethics Humanit Med. 2015;10(7):1-4. http://dx.doi.org/10.1186/s13010-015-0024-y. PMid:25903168.

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EDITORIAL

The intersection space of words: the doctor-patient relationship

O espaço de entrecruzamento das palavras: a relação médico-paciente

El espacio de la intersección de las palabras: la relación médico-paciente

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> *Books and magazines only offer general ideas, sketches (more or less successful) of general currents in the world's life, but they cannot give the immediate, direct, vivid impression of the lives of Peter, Paul, and John, of single, real individuals, and unless one understands them one cannot understand what is being universalized and generalized.* (p.165)
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> Antonio Gramsci[1]

The Brazilian Journal of Family and Community Medicine (RBMFC) in this special issue, Volume 10, Number 35, addresses the subject of Quaternary Prevention (P4), which became part of the Bireme descriptors (DeCS) on 06/04/2015, thanks to the initiative of RBMFC.[2,3] Thus, new words begin to take shape and strength as a counter-hegemonic discourse within the medicine through the 'moral and intellectual'[4] leadership of researchers and practical doctors. The cover illustration entitled 'Words of Prevention' refers to the importance of certain terms in prevention, as well as to the various topics discussed in this issue. It is through language and the use of words that practice of family medicine is underpinned, based on the doctor-patient relationship. As this constitutes one of the cores of the specialty, words can be a potentiator of quaternary prevention activities. The words can often be iatrogenic when labelling or turning potential risk factors into 'diseases', and thus generating doubts and fears in patients by producing pseudo-diseases. But it is also through words that patients can be reassured, resulting in positive therapeutic effects. So, word as one of the pillars of communication needs to be properly worked to facilitate understanding between health professionals and patients during the exchange of information. It is from the doctor-patient relationship, as an everyday intersection space of words, that quaternary prevention is built.

This special issue is a collective construction led brilliantly by guest editor, Dr. Marc Jamoulle, the P4's concept creator. The enthusiasm and dynamism of Dr. Jamoulle to strengthen an international network of researchers and family physicians concerned about the excesses of medicine was critical to the realization of this edition. If from the epidemiological and clinical trials dimension emerged the scientific evidence about the harmful effects of overdiagnosis and overtreatment, it was from family doctors' practice dimension that emerged the concept of P4. Hoffman and Wilkes state that *'P4 offers a new paradigm, by insisting that medical harm is far from a trivial, or secondary, concern'*. Quaternary prevention is the practical, concrete and possible answer for facing daily a hidden iatrogenic epidemic resulting from the biomedical interventionism and the domination of information. In this sense, this

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edition addresses some of the issues related to medical practice when discussing the phenomena resulting from the excesses of medicine, labelled by the English prefix 'over'.

The original articles' section introduces the P4 theme through the field of semantics with the papers of Jamoulle et al. '*The words of prevention, part I: changing the model'* and '*The words of prevention, part II: ten terms in the realm of quaternary prevention'*. The first article revisits the concepts and definitions of primary, secondary, tertiary, and quaternary preventions, stressing the need for a paradigm shift from a time-linear to a co-constructivist perspective, based on the relationship with the other. The second article points out the need to include in scientific databases important terms to the field of medicine, such as overdiagnosis and overtreatment, incidentalomas, overscreening, deprescription, overmedicalization, among others. Some of these terms deserved further analysis: Gómez Santana et al. address the judicious use of deprescription as a measure of quaternary prevention; Pizzanelli defines and tackles important issues related to overscreening; and Mariño provides a review on the subject of incidentalomas and its implications in medical practice, whereas Cardoso, discusses and contextualises the issue of medicalization (and overmedicalization) and the challenges of the P4 practice, since in a way, all these neologisms are based on the excess of doctors' practice and 'jurisdiction' extrapolations.

One of the most sensitive fields of medicalization is mental health. Thus, Lobo and Bernstein discuss the particularities and challenges in approaching patients in psychological distress. The authors highlight the potential for harm of both psychotherapy and medication and offer some alternatives to consider, such as strengthening the doctor-patient relationship and use of deprescription. As an example of the potential of medicalization in mental health, Jean-Claude St-Onge critically analyses the attention deficit hyperactivity disorder (ADHD), warning about the risks and potential consequences of overdiagnosis and overtreatment. Also in the field of medicalization, Tesser et al. address the issue of obstetric violence in Brazil and the scandalous rates of caesarean sections, and propose P4 action alternatives, both in Primary Health Care (PHC) level and in the institutional level.

In the epistemological, philosophical and ethical dimensions of P4, this special issue invites us to reflect and to think about alternatives both in the practice of medicine and in academic activities. Thus, Widmer provides the philosophical basis of P4 as input to critical thinking on medical knowledge (Epistemology) and health actions (Ethics). Running along this theme, Mangin and Heath emphasize the importance of quaternary prevention for patients with multiple and complex clinical conditions, in which models or protocols based on a single-disease approach, tend to be ineffective and potentially do harm. Moreover, Wagner et al. point to conflicts of interest in the construction of the scientific evidence and the manipulation of research data to favour drug industry and the hospital medical complex corporate interests. In the same line, Yver discusses the influence of biotechnology and drug-industrial complex in the area of clinical pathology to establish cut-off points of positive immunohistochemical test HER-2 and the use of Herceptin (trastuzumab) for treating breast cancer. Making a counterpoint to the scientific literature in medicine, De Jonghe brings an experience report of applying quaternary prevention as a guide to the editorial board of an Evidence-Based Medicine (EBM) journal, highlighting the ethical responsibility and challenges in the production of knowledge in healthcare.

In educational and academic practice of medicine, Tran and Vo discuss the impact of the introduction of the P4 concepts to students of the fifth year of Medicine course at Pham Ngoc Thach University, Hochiminh city, Vietnam. The authors point out the potential of a positive behavioural change in the practice of students through the assimilation of P4 concepts. In a perspective of strengthening quaternary prevention as medical and academic subject, Gomes et al. propose a theoretical and practical guide for implementing the P4 concepts in the medical education, both in undergraduate and in specialty training programmes in family medicine. Finally, Norman and Tesser present a proposal for the operationalization of P4 in the doctor-patient relationship, based on Calgary-Cambridge's enhanced consultation model. The article aims to create a conceptual and instrumental base to facilitate the inclusion of P4 in the family doctors consultation, which once internalized could help reduce the excesses of medicine.

Gramsci's intellectual organic nature, exemplified in this editorial's epigraph, has a strong parallel to the practice of family medicine since family doctors were always suspicious about generalizations and universalization in biomedicine. The advent of EBM has put prominence on population studies, which somehow amplified the abstract thinking, making patients anonymous. One example are the Pezeshki and Pezeshki comments on the 'Unnecessary Overtreatment Index' as a useful tool in family practice clinical decision-making. This new context now requires practitioners specific knowledge that can strengthen a dialogic medical practice that takes into account the 'objective' and 'subjective' poles in the clinical encounter.[5] The first concerns the construction of biomedical knowledge and the materiality of the body, the second to the particularity of individuals in their biopsychosocial dimension. The quaternary prevention has the relationship with

the patient as parameter for medical interventions, both in its subjective and objective aspects, therefore demystifying the medical knowledge by positioning it as an instrument to be subservient to the human dimension.

Finally, this issue highlights the RBMFC's improvement process, which increasingly defines itself as a scientific journal concerned with family medicine and PHC issues that internationally dialogues with their peers in the search for ethical alternatives to research and practice in medicine. This edition also reveals the independent character of the journal that seeks to contribute to the knowledge of PHC professionals and readers interested in the theme of health and in the abuses of drug-biomedical industries. The RBMFC, therefore, remains truly committed to family doctors, health professionals, and academics involved in building a strong PHC and quality public health system, as exemplified in this special issue on quaternary prevention.

References

1. Crehan K. Gramsci, culture and anthropology. London: Pluto Press; 2002.
2. Pan-American Health Organization (OPAS); World Health Organization (WHO). Já está disponível a versão 2015 do DeCS. Brasília: OPAS; 2015 [acesso em 2015 May 21]. Disponível em: http://www.paho.org/bireme/index.php?option=com_content&view=article&id=283%3Aja-esta-disponivel-a-versao-2015-do-decs&Itemid=73&lang=pt
3. Pan-American Health Organization (OPAS); World Health Organization (WHO). DeCS 2015 – Novidades. Brasília: OPAS; 2015 [acesso em 2015 May 21]. Disponível em: http://decs.bvs.br/P/visaogeral2015.htm
4. Kurtz DV. Hegemony anthropology: gramsci, exegeses, reinterpretations. Crit Anthropol. 1996;16(2):103-35. http://dx.doi.org/10.1177/0308275X9601600202.
5. Heath I. Arm in arm with righteousness. Philos Ethics Humanit Med. 2015;10(7):1-4. http://dx.doi.org/10.1186/s13010-015-0024-y. PMid:25903168.

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EDITORIAL

Quaternary prevention: first, do not harm

Prevenção quaternária: primeiro não causar dano

Prevención cuaternaria: primero no hacer daño

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Towards patient-doctor relationship based care

Clinical prevention, under the influence of public health, has been organised in a chronological manner since the middle of the 20th century. A paradigm shift from a *chronological* to a *constructivist* relationship-based preventive pattern of care[1] offers new insights into the practice of doctors. This paradigm shift brings to light the concept of *quaternary prevention,* a critical look at medical activities with an emphasis on the need *not to harm*. Quaternary prevention addresses the fundamental question of what constitutes too much or too little medicine. It is the fourth form of disease prevention, but also the fourth frame of action for family doctors (Figure 1).

The shift from time-based prevention towards a relationship-based organisation offers new perspectives into physicians' work. The physicians observe themselves and question the ethical limits of their activities. In this sense, quaternary prevention is aimed more at the doctor than the patient. Moreover, the four definitions of prevention, published in the Wonca Dictionary of Family Medicine,[2] offer a structured way to discuss the activities of family doctors, including ethical considerations on the patient-doctor encounter. Quaternary prevention, also known as P4, is a new term for an old concept: first, do not harm. This concept enforces disciplines and attitudes such as evidence-based medicine, quality assurance, defensive medicine, avoiding abusive nosographic diagnoses and ethical issues including those linked to overinformation, and overmedicalisation.[3]

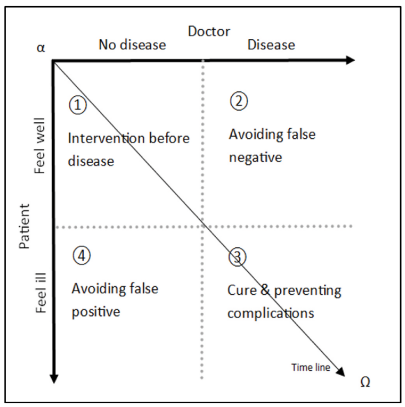

Figure 1. Four fields of the patient-doctor encounter based on relationships. The doctor looks for diseases. The patient could feel ill. Timeline is obliquely oriented from left to right, from alpha to omega, from birth to death. Anyone will become sick and die, doctors as well as patients.[1]

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Quaternary prevention concept expanding worldwide

Disseminated by the colleagues of the Wonca International Classification Committee (WICC), the P4 concept is now widely recognised in Europe, Canada, South America and Asia. Astonishingly, quaternary prevention has lain dormant for two decades. With the expansion of Internet and social networks and facing the worldwide overdiagnosis movement, family doctors are now recently jostled with the idea. Endorsed by the Brazilian Society of Family and Community Medicine (SBMFC), Quaternary prevention has been proposed as a core concept of the Brazilian National Health System[4] and has induced an international movement in the whole South America. Following the Quaternary Prevention Workshop during the Wonca Europe Basel Conference in 2010, the Swiss Journal of Primary Care has published a paper on P4 in six languages.[5] During the Wonca World Conference in Prague, in 2013, a P4 seminar was organised with speakers from New Zealand, China, Iran, the UK and Belgium[6] and a poster was translated into French, Spanish, Portuguese, Vietnamese, Thai and Chinese,[7] followed by a publication in the Hong Kong journal of general practitioners.[8] In addition, during the recent Lisbon Wonca conference, in 2014, the tiny room was crowded of enthusiastic young doctors while the Wonca past president Richard Roberts was presenting the P4 concept as seminal for the future of Wonca (Figure 2).

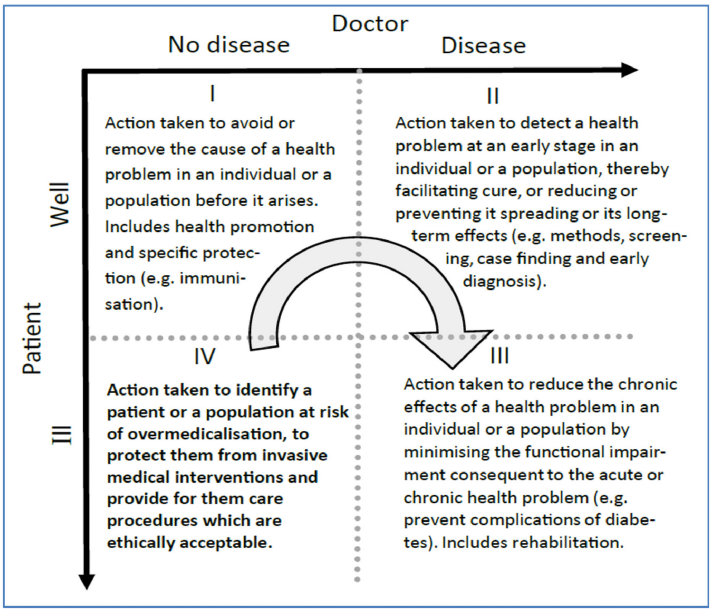

Figure 2. The patient-doctor relationship is at the origin of the four types of activities. The arrow shows that the P4 attitude is impacting all the activities.[1,2]

The enthusiasm generated around this topic shows that the P4 concept is used as a framework for a multifaceted repositioning of current questions and limitations of medical practice: disease invention, Attention Deficit Hyperactivity Disorder (ADHD) market extension, transformation of symptoms into diseases, osteoporosis marketing, breast cancer epidemiology and screening, incidentaloma issues, flu immunization, HPV, drug marketing, as well as empathy and communication, the value of the symptoms, rational use of drugs (including antibiotics), and the cautious drug use in mental health, hypertension or dyslipidaemia. And this list is not exhaustive.

Quaternary prevention involves the need for close monitoring by the doctor himself, a sort of permanent quality control on behalf of the consciousness of the harm they could do, even unintentionally, to their patients. Quaternary prevention is also about understanding that medicine is based on a relationship, and that this relation must remain truly therapeutic by respecting the autonomy of patients and doctors. P4 attitude acts as a resistance, a rallying cry against the lack of humanity of whole sectors of medicine and their institutional corruption.

A growing P4 network

The P4 network has now members in Brazil, Argentina, Uruguay, Bolivia, Ecuador, Peru, Canada, Pakistan, China, India, Thailand, Vietnam, Belgium, France, Germany, Italy, Spain and England, expressing through websites, Facebook and Twitter. After the 2013 Curitiba Meeting in Brazil, members of the Brazilian P4 group have written *The Curitiba Manifesto: for the Quaternary Prevention and for a Medical Practice without conflicts of interest*.[9] For more information about quaternary prevention-related events as well as links, bibliography and slides, access the Wonca International Classification Committee website under the Quaternary Prevention rubric.

References

1. Jamoulle M. Information et informatisation en médecine générale [Computer and computerisation in general practice]. In: Les informa-g-iciens. Presses Un. Namur, Belgium: Presses Universitaires de Namur; 1986:193–209.
2. Bentzen N. Wonca Dictionary of General/Family Practice. Maanedsskr. Copenhagen; 2003.
3. Jamoulle M. Quaternary prevention, an answer of family doctors to overmedicalization. Int J Health Policy Manag. 2015;4(2):61-64. http://dx.doi.org/10.15171/ijhpm.2015.24. PMid:25674569. PMCid:PMC4322627
4. Norman AH, Tesser CD. Prevenção quaternária na atenção primária à saúde: uma necessidade do Sistema Único de Saúde [Quaternary prevention in primary care: a necessity for the Brazilian Unified National Health System]. Cad Saúde Pública / Ministério Da Saúde, Fundação Oswaldo Cruz, Esc Nac Saúde Pública. 2009;25(9):2012–2020. Available at: http://www.ncbi.nlm.nih.gov/pubmed/19750388
5. Kuehlein T, Sghedoni D, Visentin G, et al. Quaternary prevention: a task of the general practitioner. Prim Care 2010. 18:350–4. http://www.primary-care.ch/docs/primarycare/archiv/fr/2010/2010-18/2010-18-368_ELPS_engl.pdf
6. Jamoulle M, Tsoi G, Heath I, Mangin D, Pezeshki M, Pizzanelli Báez M. Quaternary prevention, addressing the limits of medical practice. Wonca world conference Prague 2013 Retrieved from http://www.ph3c.org/PH3C/docs/27/000322/0000469.pdf
7. Jamoulle M, & Roland M. Quaternary prevention. From Wonca world Hong Kong 1995 to Wonca world Prague 2013. In Wonca world conference Prague 2013 (Poster). Retrieved from http://www.ph3c.org/PH3C/docs/27/000284/0000435.pdf
8. Tsoi G. Quaternary prevention (editorial). Hong Kong Pract. 2014;36(June):49–50.
9. Silva AL, Mangin D, Pizzanelli M, Jamoulle M, Wagner HL, Silva DH et al. Manifesto de Curitiba: pela Prevenção Quaternária e por uma Medicina sem conflitos de interesse. Rev Bras Med Fam Comunidade. 2014;9(33):371-374. Disponível em http://dx.doi.org/10.5712/ rbmfc9(32)1006.

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EDITORIAL

Prevenção quaternária: primeiro não causar dano

Quaternary prevention: first, do not harm

Prevención cuaternaria: primero no hacer daño

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Em direção a um cuidado alicerçado na relação paciente-médico

A prevenção clínica, sob a influência da saúde pública, foi organizada de forma cronológica, desde meados do século XX. No entanto, uma mudança de paradigma de uma ordem *cronológica* para um padrão *construtivista*[1] fundamentado em uma relação preventiva de atendimento, oferece novas reflexões à prática dos médicos. Essa mudança de paradigma traz à tona o conceito de prevenção quaternária, um olhar crítico sobre as atividades médicas, com ênfase na necessidade de não causar danos. A prevenção quaternária aborda a questão principal do que se constitui como 'muita' ou 'pouca' medicina. Ela é a quarta forma de prevenção de doenças, e também a quarta etapa de ação dos médicos de família (Figura 1).

A mudança de uma prevenção fundamentada no tempo para uma organização alicerçada no relacionamento oferece novas perspectivas para o trabalho dos médicos. Os médicos observam a si próprios e questionam os limites éticos de suas atividades. Nesse sentido, a prevenção quaternária está voltada mais para o médico do que para o paciente. Além disso, as quatro definições de prevenção publicadas no Dicionário de Medicina de Família da Wonca[2] oferecem uma forma estruturada para discutir as atividades dos médicos de família, incluindo considerações éticas sobre o encontro paciente-médico. A prevenção quaternária, também conhecida como P4, é um novo termo para um velho conceito: em primeiro lugar, não causar danos. Este conceito reforça atitudes e disciplinas como a medicina baseada em evidências, garantia de qualidade e a medicina defensiva, evitando diagnósticos nosográficos abusivos e questões éticas, incluindo aqueles ligados à sobrecarga de informação e à sobremedicalizacao.[3]

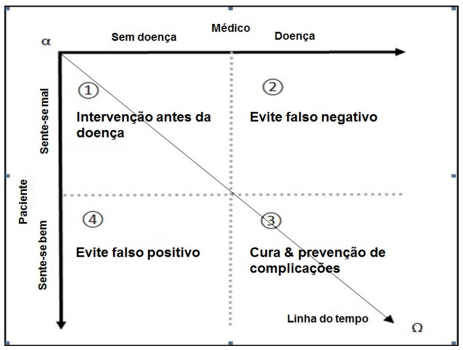

Figura 1. Os quatros campos do encontro com base na relação paciente-médico. O médico procura por doenças. O paciente pode se sentir mal. A linha do tempo está obliquamente orientada a partir da esquerda para a direita, de alfa a ômega, do nascimento a morte. Qualquer um vai adoecer e morrer, tanto os médicos como os pacientes.[1]

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A expansão do conceito da prevenção quaternária em todo o mundo

Disseminado pelos colegas da Comissão de Classificação Internacional da Wonca (WICC), o conceito de P4 é hoje amplamente reconhecido na Europa, Canadá, América do Sul e Ásia. Surpreendentemente, a prevenção quaternária ficou adormecida por duas décadas. Mas, com a expansão da Internet e das redes sociais, e diante do movimento do sobrediagnóstico em todo o mundo, os médicos de família estão, mais recentemente, impulsionando a ideia. Endossada pela Sociedade Brasileira de Medicina de Família e Comunidade (SBMFC), a prevenção quaternária tem sido proposta como um conceito central para o Sistema Único de Saúde brasileiro[4] e tem induzido um movimento em toda a América do Sul. Após a oficina de prevenção quaternária durante o *Wonca Europe Conference* em Basel, em 2010, o *Swiss Journal of Primary Care* publicou um artigo sobre P4 em seis idiomas.[5] Durante a Conferência Mundial da Wonca em Praga, em 2013, foi organizado um seminário de P4 com palestrantes da Nova Zelândia, China, Irã, Reino Unido e Bélgica.[6] Além do mais, um pôster foi traduzido em francês, espanhol, português, vietnamita, tailandês e chinês,[7] seguido de uma publicação no jornal dos médicos de família de Hong Kong.[8] Durante a recente conferência da Wonca em Lisboa, em 2014, a pequena sala estava lotada de jovens médicos entusiasmados, enquanto o ex-presidente da Wonca, Richard Roberts, apresentava a ideia da P4 como seminal para o futuro da Wonca (Figura 2).

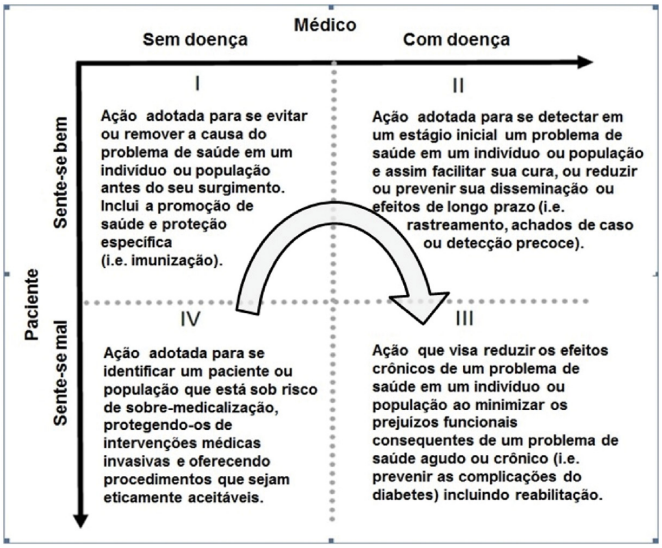

Figura 2. A relação paciente-médico está na origem dos quatro tipos de atividades. A seta indica que a atitude P4 impacta todas as atividades.[1,2]

O entusiasmo gerado em torno deste tema mostra que o conceito da P4 tem sido utilizado como modelo para um reposicionamento multifacetado sobre questões atuais e sobre as limitações da prática médica, tais como: invenção de doenças, a expansão do mercado do Transtorno de Déficit de Atenção e Hiperatividade (TDAH), a transformação de sintomas em doenças, o marketing da osteoporose, a epidemiologia e rastreamento do câncer de mama, as questões relativas aos incidentalomas, a imunização contra a gripe, o HPV, o marketing das drogas, bem como, a empatia e comunicação, o valor dos sintomas, o uso racional de medicamentos (incluindo antibióticos), e o uso criterioso de drogas na área da saúde mental, da hipertensão ou da dislipidemia. E esta lista não se esgota.

A prevenção quaternária envolve a necessidade de um acompanhamento rigoroso de si próprio, pelo médico, uma espécie de controle de qualidade permanente em nome da consciência do mal que poderia, mesmo que não intencionalmente, causar aos seus pacientes. A prevenção quaternária também implica na compreensão de que a medicina está alicerçada no relacionamento, e que essa relação deve permanecer verdadeiramente terapêutica, respeitando a autonomia de pacientes e médicos. A atitude P4 funciona como uma resistência, um grito de alerta contra a falta de humanidade de setores inteiros da medicina e sua corrupção institucional.

A rede crescente de P4

A rede de P4 possui atualmente membros no Brasil, Argentina, Uruguai, Bolívia, Equador, Peru, Canadá, Paquistão, China, Índia, Tailândia, Vietnã, Bélgica, França, Alemanha, Itália, Espanha e Inglaterra, que se expressam por meio de *websites*, *Facebook* e *Twitter*. Após o Encontro de Curitiba, Brasil, em 2013, os membros do grupo brasileiro de P4 escreveram o *'Manifesto de Curitiba: pela Prevenção Quaternária e por uma Medicina sem conflitos de interesse'*.[9] Para obter informações sobre os eventos relacionados com a prevenção quaternária, assim como links, bibliografia e slides, acesse o site do Comitê Internacional de Classificação da Wonca sob a rubrica prevenção quaternária.

Referências

1. Jamoulle M. Information et informatisation en médecine générale [Computer and computerisation in general practice]. In: Les informa-g-iciens. Presses Un. Namur, Belgium: Presses Universitaires de Namur; 1986:193–209.
2. Bentzen N. Wonca Dictionary of General/Family Practice. Maanedsskr. Copenhagen; 2003.
3. Jamoulle M. Quaternary prevention, an answer of family doctors to overmedicalization. Int J Health Policy Manag. 2015;4(2):61-64. http://dx.doi.org/10.15171/ijhpm.2015.24. PMid:25674569. PMCid:PMC4322627
4. Norman AH, Tesser CD. Prevenção quaternária na atenção primária à saúde: uma necessidade do Sistema Único de Saúde [Quaternary prevention in primary care: a necessity for the Brazilian Unified National Health System]. Cad Saúde Pública / Ministério Da Saúde, Fundação Oswaldo Cruz, Esc Nac Saúde Pública. 2009;25(9):2012–2020. Available at: http://www.ncbi.nlm.nih.gov/pubmed/19750388
5. Kuehlein T, Sghedoni D, Visentin G, et al. Quaternary prevention: a task of the general practitioner. Prim Care 2010. 18:350–4. http://www.primary-care.ch/docs/primarycare/archiv/fr/2010/2010-18/2010-18-368_ELPS_engl.pdf
6. Jamoulle M, Tsoi G, Heath I, Mangin D, Pezeshki M, Pizzanelli Báez M. Quaternary prevention, addressing the limits of medical practice. Wonca world conference Prague 2013 Retrieved from http://www.ph3c.org/PH3C/docs/27/000322/0000469.pdf
7. Jamoulle M, & Roland M. Quaternary prevention. From Wonca world Hong Kong 1995 to Wonca world Prague 2013. In Wonca world conference Prague 2013 (Poster). Retrieved from http://www.ph3c.org/PH3C/docs/27/000284/0000435.pdf
8. Tsoi G. Quaternary prevention (editorial). Hong Kong Pract. 2014;36(June):49–50.
9. Silva AL, Mangin D, Pizzanelli M, Jamoulle M, Wagner HL, Silva DH et al. Manifesto de Curitiba: pela Prevenção Quaternária e por uma Medicina sem conflitos de interesse. Rev Bras Med Fam Comunidade. 2014;9(33):371-374. Disponível em http://dx.doi.org/10.5712/ rbmfc9(32)1006.

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EDITORIAL

Don't just do something, stand there

Não se limite a fazer algo, esteja lá

No se limite a hacer algo, esté allí

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Imagine a (hypothetical) screening test which, done in a population of average risk, saves one person from dying from cancer out of every 10,000 people screened. Imagine as well that every one of those 10,000 pays a price in terms of time and money spent, as well as discomfort, and that some or even many of them will also have to deal with increased anxiety, repeat testing, biopsies, and in a few cases, surgery. Finally, a few will have serious adverse effects like infection or organ failure.

Presented with this information, some people would undoubtedly decline to have the test ("You mean only one out of 10,000 who get the test will benefit?!"), while others would choose to have it ("I'll put up with all that if it could save my life"). That is to say, informed patients would understand that they are making a choice between a *very rare* but *very important* benefit, that would however accrue to almost none of the people getting the test, and very frequent, but far more manageable, harms, that would have to be dealt with by almost everyone getting the test.

Now imagine a patient with osteoarthritis offered treatment with a (hypothetical) non-steroidal anti-inflammatory drug (NSAID), where the doctor notes that *most* patients would get a fairly small degree of benefit (more pain relief than with an analgesic with fewer side effects), but that perhaps one in 10,000 would suffer terrible harm (from GI bleeding, or renal failure). In this case, an informed patient would understand that this is a choice between a very small benefit that would apply to many people, and a terrible harm that would nevertheless be very rare.

The two situations are comparable, such that it would make sense that after a shared decision-making discussion with an informed physician, almost all informed patients would choose both to forgo the screening test *and* to take the NSAID, or to do just the opposite in both instances. The first combination should be the choice of individuals who are not terribly concerned about extremely rare events, no matter how important they might be, and are more interested in very common effects (harms in the case of screening, and benefits in the case of the NSAID), even if they are relatively less important. The opposite choice would be made by those who are greatly concerned about a critical problem (a hidden disease that a screening test might detect, or a terrible drug side effect), no matter how rare. There could be occasional exceptions to this pattern, but one would expect the large majority of people to make similar choices consistent with the same set of underlying values and preferences.

So how is it that in today's world most patients – and most of their doctors – automatically choose both a series of screening tests that have an extremely high number-needed-to-screen for one person to benefit, and drugs that offer only a very small additive benefit while occasionally producing life-threatening harm? (One could argue, in fact, that the two scenarios presented are both overly optimistic, since few if any screening tests actually affect overall, rather than disease-specific, mortality, and because there are very few conditions where an NSAID actually provides any advantage over acetaminophen.)

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Physicians are taught, right from the start of medical school, that medical care is a powerful weapon to be used in fighting disease. This is of course in some ways true. They are also taught that harm can occur with all sorts of individual treatments. But this is typically little more than an afterthought; medical thinking generally precedes along the lines of "*what* shall we do (as safely as possible, of course"), rather than "*should* we do something?" That is to say, while we acknowledge the possibility of harm, we viscerally believe – and have taught patients also to believe – that doing something should be the default choice whenever a patient is sick … and often even before they are actually sick.

We rely on concepts of "disease" that are in fact only risk factors, and find reassurance in "successful" treatment of surrogate markers, even when (as is the rule, rather than the exception) such success is unassociated with any change in patient-oriented outcomes. We have internalized – and again, led patients to believe almost as a matter of faith – a number of truly dangerous myths about healthcare, such as "earlier is better" (and *more* is always better), "technology will solve all our problems," "miracles are right around the corner," "once we identify genetic risk factors there will be a perfect tailored treatment for each of us," and ultimately – if we're only clever enough … and spend enough – death will soon be optional.

Quaternary prevention, or P4, offers a new paradigm, by insisting that medical harm is far from a trivial, or secondary, concern. It tells us that preventing harm from medical interventions – which has been proven to be a major cause of death and disability in "advanced" societies – deserves equal consideration as does preventing harm from disease.

This is different than the commonly cited "first do no harm," which is commonly misunderstood to mean "don't do anything that could cause harm." Quaternary Prevention, on the other hand, acknowledges the critical fact that everything we do in health care *can* cause harm – so refusing to do anything that isn't perfectly safe would mean never doing anything! That would be a terrible mistake, as medicine does indeed have a great deal to offer. But in helping patients make decisions we, and they, must consider the potential for harm every bit as prominently as we consider the potential for benefit.

Furthermore, by asking, "should we do something," we don't actually mean "do nothing." We can always offer support, and comfort, and symptomatic care – for all of which the number needed to treat to benefit one patient … approaches one. (Compare that to most chronic disease treatments, where the NNT is at least 100 … which means that with such "treatment" the likelihood that any given individual will benefit is in fact remote.)

Acknowledging this in our heads is only a tiny first step; if we want to reverse a milieu where "medicine's much hailed ability to help the sick is fast being challenged by its propensity to harm the healthy,"[1] we must incorporate, into the very DNA of medical education, and practice, P4's simple and obvious, but also revolutionary, admonishment – that doing what we can to prevent medical harm must become one of the pillars of modern healthcare. Only when we viscerally incorporate this into our practice will we become worthy contributors to truly rational shared decision-making with our patients.

References

1. Moynihan R, Doust J, Henry D. Preventing overdiagnosis: how to stop harming the healthy. BMJ. 2012 May 28;344:e3502.

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Michael S Wilkes, MD PhD. Professor de Medicina e Saúde Global. UC Davis School of Medicine. Sacramento, USA. mwilkes@ucdavis.edu

Imagine um exame de rastreamento (hipotético) que se realizado em uma população de médio risco salvasse uma pessoa de morrer de câncer em cada 10.000 pessoas rastreadas. Imagine também que cada uma dessas 10 mil pessoas pague um preço em termos de tempo e dinheiro gastos, bem como os desconfortos que ocorrerão em algumas, ou mesmo em muitas delas, e que elas também terão que lidar com o aumento da ansiedade, repetição dos testes, biópsias e, em alguns casos, cirurgias. Por fim, algumas terão efeitos adversos graves, tais como infecção ou falência de órgãos.

Apresentadas a esta informação, algumas pessoas, sem dúvida, se recusariam a fazer o exame (- "Você quer dizer que apenas um em cada 10 mil que faz o exame irá se beneficiar?!"), enquanto outras optam por fazê-lo (- "Eu me disponho a passar por tudo isso, se isso pudesse salvar minha vida"). Ou seja, os pacientes informados entenderiam que estão fazendo uma escolha entre algo *muito raro*, mas com um benefício *muito importante* que, no entanto, acometeria pouquíssimas pessoas que se submetessem ao exame. Contudo, muito frequentes, porém manejáveis, são os danos que teriam de ser tratados em quase todas as pessoas submetidas ao exame.

Agora imagine que a um paciente com osteoartrite seja oferecido tratamento (hipotético) com um anti-inflamatório não-esteroidal (AINE) onde o médico observa que a *maioria* dos pacientes teria um grau de benefício relativamente pequeno (maior alívio da dor do que com um analgésico, com menos efeitos colaterais), mas que talvez um em cada 10.000 poderia sofrer um dano terrível (hemorragia gastrointestinal, ou insuficiência renal, por exemplo). Neste caso, um paciente informado entenderia que se trata de uma escolha entre um benefício muito pequeno que ocorreria a muitas pessoas e um dano terrível que seria, porém, muito raro.

As duas situações são comparáveis, de modo que, faria sentido, depois de uma discussão com um médico informado e uma decisão compartilhada, que os pacientes, uma vez cientes, iriam recusar tanto o exame de rastreamento como o AINE, ou poderiam optar exatamente pelo oposto em ambas as circunstâncias. A primeira combinação deveria ser a escolha dos indivíduos que não estão terrivelmente preocupados com eventos extremamente raros, independente do quão importante eles possam ser, e estão mais interessados em efeitos muito comuns (danos, nos casos do rastreamento, e benefícios no caso do AINE), mesmo que sejam relativamente menos importantes. A escolha oposta seria feita por aqueles indivíduos muito preocupados com um problema sério (uma doença escondida, que um exame de rastreio pode detectar, ou um efeito colateral terrível da droga), não importando quão raro seja o evento. Pode haver exceções ocasionais a estes padrões, mas espera-se que a grande maioria das pessoas faça escolhas semelhantes, consistentes com o mesmo conjunto de valores e preferências subjacentes.

Então, como é que a maioria dos pacientes do mundo de hoje - e a maioria de seus médicos - escolhe automaticamente tanto uma gama de exames de rastreio (que têm um nível extremamente elevado do *número de pessoas necessário para rastrear* para que uma só pessoa possa se beneficiar), como,

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por exemplo, drogas que oferecem apenas um pequeno benefício a mais enquanto podem produzir ocasionalmente danos potenciais à vida das pessoas? Pode-se argumentar de fato que os dois cenários apresentados são excessivamente otimistas, uma vez que poucos (ou nenhum) exames de rastreamento realmente afetam a mortalidade global, quiçá impactam a mortalidade específica para a doença; e também, porque existem muito poucas condições em que um AINE na verdade oferece qualquer vantagem sobre o acetaminofeno.

Os médicos são ensinados, desde o início do curso de medicina, que a assistência médica é uma arma poderosa a ser utilizada no combate às doenças. Isto é de algum modo verdadeiro. Eles também são ensinados que danos podem ocorrer em todos os tipos de tratamentos individuais. Mas isso é tipicamente pouco mais do que uma reflexão tardia; o pensamento médico geralmente procede ao longo das linhas de "*o que* devemos fazer (o mais seguro possível, é claro"), ao invés de "*deveríamos* fazer alguma coisa?" Ou seja, ao mesmo tempo em que reconhecemos a possibilidade de dano, nós visceralmente acreditamos - e ensinamos também os pacientes a acreditar - que fazer algo deve ser a escolha padrão sempre que um paciente esteja doente, muitas vezes até mesmo antes deles estarem realmente doentes.

Contamos com conceitos de "doença" que são na verdade apenas fatores de risco, e asseguramos o 'sucesso' do tratamento em marcadores substitutos, mesmo quando (como é a regra, e não a exceção) tal sucesso não está associado a qualquer alteração nos resultados orientados aos pacientes. Temos internalizado - e também, levado os pacientes a acreditar quase que como uma questão de fé - uma série de mitos verdadeiramente perigosos sobre cuidados de saúde, tais como "quanto mais cedo melhor" (ou mais é sempre melhor), "a tecnologia vai resolver todos os nossos problemas," "milagres estão na esquina", "uma vez que se identifique os fatores de risco genéticos, haverá um tratamento perfeitamente adaptado para cada um de nós", e, finalmente - se formos inteligentes o bastante e gastarmos o suficiente - a morte em breve será opcional.

A prevenção quaternária, ou P4, oferece um novo paradigma, ao insistir que o dano médico está longe de ser algo trivial ou uma preocupação secundária. Ela nos diz que prevenir os efeitos nocivos das intervenções médicas - que comprovadamente são uma das principais causas de morte e incapacidade nas sociedades ditas "avançadas" - merece igual consideração que prevenir os efeitos nocivos das doenças.

Isso é diferente da comumente citada frase "*primeiro não causar dano*", muitas vezes mal compreendida no sentido de "não fazer nada que *possa* causar danos." A P4, por outro lado, reconhece o fator fundamental de que tudo o que fazemos na área da saúde pode causar danos – e desse modo, se recusar a fazer qualquer coisa que não seja perfeitamente segura, significaria nunca fazer nada! Isso seria um erro terrível, visto que a medicina de fato tem muito a oferecer. Porém, ao auxiliarmos os pacientes a tomarem decisões, nós, e eles, devemos considerar o potencial de dano em cada momento na mesma proporção em que consideramos o potencial de benefício.

Além disso, ao perguntarmos: "deveríamos fazer alguma coisa?", não significa dizer "não fazer nada." Sempre podemos oferecer apoio, conforto e tratamento sintomático, pois em todos esses casos o número necessário para tratar e beneficiar um paciente se aproxima de um (se comparado à maioria dos tratamentos para doenças crônicas, onde o NNT é, pelo menos da ordem de 100, o que significa que, em tais "tratamentos" a probabilidade de qualquer indivíduo se beneficiar é, na verdade, remota).

Reconhecer isso em nossas mentes é apenas um pequeníssimo primeiro passo. Se quisermos reverter um ambiente onde "a muito aclamada capacidade da medicina para ajudar os doentes vem sendo rapidamente desafiada por sua propensão para prejudicar os saudáveis",[1] devemos incorporar no próprio DNA da educação médica, e na prática, o simples e óbvio, mas também revolucionário, alerta da P4, - de que fazer o que está ao nosso alcance para evitar danos médicos deve se tornar um dos pilares de uma assistência à saúde moderna. Somente quando visceralmente incorporarmos isso em nossa prática é que nos tornaremos contribuintes dignos para um verdadeiro compartilhamento racional na tomada de decisão com nossos pacientes.

Referências

1. Moynihan R, Doust J, Henry D. Preventing overdiagnosis: how to stop harming the healthy. BMJ. 2012 May 28;344:e3502.

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ORIGINAL ARTICLES

The words of prevention, part I: changing the model

As palavras da prevenção, parte I: mudando o modelo

Las palabras de la prevención, parte I: cambiando el modelo

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Abstract

Objective: this part I article explores the different meanings of relevant keywords for General Practice/Family Medicine (GP/FM) in the prevention domain. The aim is to contribute to information process in GP/FM by keeping in line with the main terms used in health care organization. **Methods**: important keywords for GP/FM in the prevention domain were selected. Then, a search was carried out on the main sources in GP/FM databases, as well as in Medical Subject Heading and major terminological databases available online. **Results and Discussion**: there is discrepancy between the conceptual contents of major prevention models amongst the usual bibliographic sources of knowledge in GP/FM in particular and medicine in general. **Conclusion**: For GP/FM, distribution of preventive activities is now firmly established on a new constructivist model, privileging the doctor-patient relationships and introducing a cybernetic thinking on the health care activities with a special commitment to ethics and the positive duty of beneficence.

Keywords:
Quaternary Prevention
Family Practice
Terminology as Topics
Semantics

Resumo

Objetivo: este artigo, parte I, explora os diferentes significados de palavras-chave relevantes para a Medicina Geral/Medicina de Família (MG/MF) no campo da prevenção. O objetivo é contribuir para o processo de informação para a MG/MF, mantendo-se alinhado com os principais termos utilizados na organização dos cuidados em saúde. **Métodos**: foram selecionadas palavras-chave importantes para a MG/MF no campo da prevenção. Em seguida, foi realizada uma busca nas principais fontes no âmbito da MG/MF, bem como no Medical Subject Heading e nas principais bases de dados terminológicas disponíveis online. **Resultados e Discussão**: há discrepância entre os conteúdos conceituais dos principais modelos de prevenção entre as fontes bibliográficas usuais na área do conhecimento em MG/MF, em particular, e da medicina em geral. **Conclusão:** para a MG/MF a distribuição de atividades preventivas está firmemente estabelecida em um novo modelo construtivista, privilegiando a relação médico-paciente ao introduzir um pensamento cibernético sobre as atividades de cuidados de saúde, com um especial compromisso com a ética e o dever positivo da beneficência.

Palavras-chave:
Prevenção Quaternária
Medicina de Família e Comunidade
Terminologia como Assunto
Semântica

Resumen

Objetivo: este artículo, parte I, explora los diferentes significados de palabras clave relevantes para la Medicina General/Medicina Familiar (MG/MF) en el campo de la prevención. El objetivo es contribuir al proceso de información en MG/MF, manteniendo en línea con los principales términos utilizados en la organización sanitaria. **Métodos**: palabras clave importantes para la MG/MF fueron seleccionados en el campo de la prevención. A continuación, se realizó una búsqueda en las principales fuentes en el ámbito de la MG/MF, así como en el Medical Subject Heading y en las principales bases de datos terminológicas disponibles online. **Resultados y Discusión**: existe discrepancia entre los contenidos conceptuales de los principales modelos de prevención entre las fuentes bibliográficas habituales de conocimiento en MG/MF, en particular, y la medicina en general. **Conclusión**: para la MG/MF la distribución de las actividades preventivas se ha establecido firmemente en un nuevo modelo constructivista, que privilegia la relación médico-paciente y la introducción de un pensamiento cibernético en las actividades de atención de la salud, con un especial compromiso con la ética y el deber positivo de beneficencia.

Palabras clave:
Prevención Cuaternaria
Medicina Familiar y Comunitaria
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Introduction

The present discussion covers a wide range of issues concerning the theme of prevention addressed through two very different methodologies and for this reason it was divided in two articles. The first article relies on usual methods, whereas the second article relies on advanced semantic web technologies. The latter will explore in detail the conceptual content of some terms specifically related to the concept of Quaternary Prevention i.e. overinformation, overdiagnosis, medically unexplained symptoms, overmedicalisation, incidentaloma, overscreening, overtreatment, shared decision making, deprescribing and disease mongering.

This part I article highlights that information is to General Practice/Family Medicine (GP/FM) what technology is to consultants and specialized care.[1] In this regard, the objective of this research is to contribute to information process in GP/FM by keeping in line with the main terms used in health care organization. Firstly, it presents a brief overview of the origin of the concept of clinical prevention against an existing background of important transformation in medicine and society. Studying in depth the four definitions of prevention allows for a better understanding why their use is so confusing in online terminological databases. Secondly, it addresses the prevention concept along the usual chronological way of thinking about prevention as a continuous variable. This is contrasted by the new constructivist way of thinking, which presents the stage of prevention as a discrete variable. Thirdly, it reviews the main online terminological databases used in medicine concerning prevention domain and discusses its striking differences. Finally, it highlights that health problems and patient-doctor relationship are central to the definition of quaternary prevention.

Business and prevention

The idea of clinical prevention is rather recent in the history of medicine. Although public health based preventive quarantine first saw the light in Croatia during the 14th century, it becomes a worldwide duty at the end of the 18th century. In the face of the considerable volume of sea traffic, the English East India Company was faced with the threat of infectious diseases arriving by sea and subsequently confronted with the necessity of taking some measures against such a threat.[2] Protecting the business was a core challenge to establish preventive measures such as quarantine. A deep medicalization of quarantine measures only occurred during the first 30 years of the twentieth century.

In 1903, the term '*lazaretto*' (used especially for the plague) was substituted by the term 'health station', when in Europe - particularly in France and in Italy - the distinction between 'sick', 'suspected sick' and 'healthy' began to gain importance in medicine.[3] Until the beginning of the 20th century, prevention was an activity purely related to public health, and dealt with the understanding and control of communicable diseases.[4] Now, at the dawn of the 21st century, the subtle transformation of the disease in risk has converted prevention in a market as important as the health care one.[5] The prevention concept, although really confusing, has invaded all life, manipulated by the industry, as well by the 1930' Dr. Knock figure who stands in every doctor,[6] replaced at the end of the last century by Dr. House in an attempt to raise the medical anxiety of the population.[7]

The surge of clinical prevention

The term prevention in clinical practice was coined in the 1950s by Leavell and Clark.[8] The first intention of these authors was not to define levels of prevention, but to build an explanatory model of the natural history of disease. Quoting Perkins (1938), Gurney Clarke[9] in a paper published in 1954 about the natural history of syphilis says: '*The philosophy of prevention can be put into a single phrase: "to oppose or intercept a cause [of diseases] is to prevent or dissipate its effects*"' (p. 5).

Leavell and Clark[8] were studying disease and described in a first publication five levels of preventive measures, but soon after, they became the well-known three levels of prevention: primary, secondary and tertiary. As described by Harris in a non-published paper available on Internet,[10] those levels of prevention have varied a lot along the sensibility and interest of authors,[11,12] making confusing the distinction between the 2nd and 3rd level of prevention.[13] Froom et al. have proposed seven levels, making more complicated and unclear what they were claiming.[14] The last level proposal in this school of thinking, along the timeline and disease oriented approach, has been Jacques Bury, a Belgian psychiatrist, who proposed Quaternary Prevention for end of life and palliative care.[15]

However, Leavell and Clark chronological model suffers from several weaknesses:[16] Firstly, it relies on linearity that purely focuses on infectious diseases. Secondly, it addresses the issue only from the angle of monomorbidity (mono-disease), and finally, the authors did not take into account the semantic content implications of the term 'secondary', which is most often used in its temporal sense of 'after' and processed as a continuous variable.

Changing the model

In a short and exceptional letter to the editor of *Public Health*, Watkins, in 1985, proposes to classify prevention as a relationship of preventive activities to the health care system[17] by introducing a clear cut between the three levels and announcing the use of discrete variables for them, as proposed by Last[18] in the Dictionary of Epidemiology:

> *'Prevention: The goals of medicine are to promote health, to preserve health, to restore health when it is impaired, and to minimize suffering and distress. These goals are embodied in the word "prevention", which is easiest to define in the context of levels, customarily called primary, secondary and tertiary prevention.'* (p. 103-104)[18]

Hence, the use of discrete levels was adopted in the definition proposed in the Wonca glossary in 1995, introducing clinical prevention as the management of processes over a length of time.[19] Additionally, McWhinney[20] has proposed new perspective on doctors' activities based on the patient-centered care approach. Therefore, when these concepts are positioned in a different way, making a cross between illness and disease, it results in an interesting image. In this regard, in 1986, Jamoulle proposed crossing patients' world with doctors' world, as well as science and consciousness to delimit four nebulas.[21] The term 'nebula' is used due to the fact that the limits between health and illness and between health and disease are not a clear-cut definition. However, in day-to-day practice, the distinction is commonly used. For example, science determines whether or not a disease is present as a discrete variable; whereas patients make the distinction between sick and well generally as a continuous variable.[22] In 1994, Hellström also crossed the concepts of illness and disease in the same manner. However, in a slightly different presentation, he described four kinds of perceptions between patients and doctors and between what is sick and what is not.[23]

Thus, with inception of Quaternary Prevention, the distribution of preventive activities are now firmly established as a new model, privileging the patient-doctor relationships and introducing a cybernetic thinking on the health care activities with a special commitment to ethics[24] and the positive duty of beneficence.[25]

A terminological mismatch

Health care has become an information-intensive industry worldwide and the growing dominance of the computer industry in the health care requires a standardization of the interface between man and machine, and terminologies appear to be unavoidable.[26] Nevertheless, the terms in terminologies can have very different meanings in the worlds of reference and computational linguists speak over universe of discourse.[27,28] Semantic conflict between science and culture are at the heart of terminological sciences,[29] but variation of meaning in some health care terms along their worlds of reference, conditioned by historical perspectives, have not been analyzed properly as far as we can understand.

Moreover, the Unified Medical Language System of the US National Library of Medicine,[30] followed by SNOMED-CT[31] of the International Health Terminology Standard Development Organization (IHTSDO) are the dominant terminologies in health care. Each of them has its history which explains some of their discrepancies.[32] Additionally, the historical approach of the Medical Subject Heading, a huge terminology constructed along the time,[33,34] explains striking particularities in information retrieval in the Medline online library. In the following analysis we explore the main keywords in General Practice/Family Medicine (GP/FM) in the domain of prevention.

Methods

The Wonca dictionary was used as a published gold standard definition criterion.[35] Naturally, MeSH and MeSH definitions were also analyzed, but MeSH sometimes does not fully cover the field of GP/FM or it proposes terms whose content are historically marked. Yet in 1980, Fitzgerald argued: '*Family physicians cannot always rely entirely on Index Medicus and Medline to provide the information they require*'(p.1389).[36] We hypothesized that this is still the current reality. We explored the French multilingual resource Hetop[37] and the trilingual South American terminology DeCS,[25] indexing the Virtual Health Library database,[38] supported by the Pan-American Health Organization, which has developed several thousand non-MeSH descriptors. We have also searched into the Bioportal, the online repository of medical ontologies.[39] As family doctors are also at the interface between the health system and the patient, lay sources such as BabelNet and Wikipedia have been included into our search strategy. Table 1 summarizes the search approach into the available databases.

Table 1. Acronyms, description and URLS of some online terminological sources.

UMLS	Unified Medical Language System	
SNOMED-CT	Systematized Nomenclature of Medicine - Clinical terms	https://uts.nlm.nih.gov
NCIT	National Cancer Institute Thesaurus	
MeSH	Medical Subject Heading	http://www.nlm.nih.gov/mesh/
VHL	Virtual Health Library	http://bvsalud.org/en/
DeCS	Descritores em Ciências da Saúde	http://decs.bvs.br/
BabelNet	Dictionnary and Semantic Network	http://babelnet.org/
Hetop	Health Terminology/Ontology Portal	http://hetop.eu/
BioPortal	Repository of Biomedical Ontologies	http://bioportal.bioontology.org/
Woncadic	Wonca dictionnary 2003	http://tinyurl.com/woncadic
Scholar	Google scholar	www.scholar.google.com
Wikipedia	Online Public Encyclopedia	http://en.wikipedia.org /

Source: elaborated by the authors.

Results

Following the same lexical entries, the results are presented in terms of 'definitions' and 'scope notes' found in various databases. Through an iterative reading process comparing different term definitions, some interesting discrepancies or even huge differences amongst various definitions of the studied concepts were highlighted. These differences are discussed after the result tables (Table 2 and 3).

Table 2. Study of the conceptual content of 5 words of prevention.

	Clinical prevention
Wonca Dictionary	**Prevention** Action to avoid occurrence or development of a health problem and/or its complications. Can be divided into four categories.
MeSH	**Preventive Medicine** A medical specialty primarily concerned with prevention of disease (PRIMARY PREVENTION) and the promotion and preservation of health in the individual.
MeSH	**Prevention and control [Subheading]** Used with disease headings for increasing human or animal resistance against disease (e.g., immunization), for control of transmission agents, for prevention and control of environmental hazards, or for prevention and control of social factors leading to disease. It includes preventive measures in individual cases. Year introduced: 1966.
	Clinical prevention
MeSH	**Preventive Health Services** Services designed for HEALTH PROMOTION and prevention of disease. Year introduced: 1968.

Source: elaborated by the authors.

Table 2. Continued...

	Disease Prevention
DeCS	Set of actions aiming to eradicate, eliminate or reduce the impact of a disease or disability, or to restrain its spread. (Free translation from the original: Last, 2001).
BabelNet	**Preventive medicine · Preventive healthcare** The branch of medicine concerned with preventing disease.
Wikipedia	Preventive healthcare (alternately preventive medicine or prophylaxis) consists of measures taken for disease prevention, as opposed to disease treatment.
	Primary Prevention
	Primary prevention
Wonca Dictionary	Action taken to avoid or remove the cause of a health problem in an individual or a population before it arises. Includes health promotion and specific protection (e.g.immunization).
MeSH & DeCS & UMLS	**Primary prevention** Specific practices for the prevention of disease or mental disorders in susceptible individuals or populations. These include HEALTH PROMOTION, including mental health; protective procedures, such as COMMUNICABLE DISEASE CONTROL; and monitoring and regulation of ENVIRONMENTAL POLLUTANTS. Primary prevention is to be distinguished from SECONDARY PREVENTION and TERTIARY PREVENTION.
	Primary prevention
NCIT / Bioportal	Prevention of disease or mental disorders in susceptible individuals or populations through promotion of health, including mental health, and specific protection, as in immunization, as distinguished from the prevention of complications or after-effects of existing disease.
Includes also MeSH	Preventive medicine; Primary prevention ; Preventive health service; Health promotion ; Health education; Immunization; Vaccination; Premarital examination.
UMLS	**Primary Mental Health Prevention** Mental health programs designed to prevent onset or occurrence of mental illness in high risk or target populations.
SNOMED-CT	Primary prevention (procedure) ;
BabelNet	Health promotion ; Immunization; Vaccination; Education; Genetic testing;
Wikipedia	Primary prevention consists of “health promotion” and “specific protection.”
	Secondary Prevention
Wonca Dictionary	**Secondary prevention** Action taken to detect a health problem at an early stage in an individual or a population, thereby facilitating cure, or reducing or preventing it spreading or its long-term effects (e.g. methods, screening, case finding and early diagnosis).
MeSH & DeCS	**Secondary prevention** The prevention of recurrences or exacerbations of a disease or complications of its therapy.
UMLS/NCI	**Secondary prevention** NCI/CDISCPT	A procedure performed to avoid a subsequent occurrence of a disease condition. NCI/PT	Procedures or treatment processes designed to prevent complications (e.g., modifying a drug or surgical procedure to prevent complications).
also MeSH	Mass screening; Early diagnosis; Genetic testing ; Early detection of cancer; Incidental finding; Neonatal screening;
SNOMED-CT	**Secondary prevention** (procedure)
BabelNet	Screening; Checkup;
	Secondary Prevention
Wikipedia	Secondary prevention In medicine, it is a strategy used in a population to identify an unrecognized disease in individuals without signs or symptoms.
	Tertiary Prevention
Wonca Dictionary	**Tertiary prevention** Action taken to reduce the chronic effects of a health problem in an individual or a population by minimizing the functional impairment consequent to the acute or chronic health problem (e.g. prevent complications of diabetes). Includes rehabilitation.
MeSH & DeCS	**Tertiary prevention** Measures aimed at providing appropriate supportive and rehabilitative services to minimize morbidity and maximize quality of life after a long-term disease or injury is present. Year introduced: 2009.
	Tertiary Prevention
Also MeSH	Complications; Rehabilitation
SNOMED-CT	**Tertiary prevention** (procedure).

Source: elaborated by the authors.

Table 2. Continued...

BabelNet	Rehabilitation.
	Tertiary prevention
Wikipedia	Attempts to reduce the damage caused by symptomatic disease by focusing on mental, physical, and social rehabilitation [....] the objective of tertiary prevention is to maximize the remaining capabilities and functions of an already disabled patient.
	Quaternary Prevention
	Quaternary prevention
Wonca Dictionary	Action taken to identify patient at risk of overmedicalisation, to protect him from new medical invasion, and to suggest to him interventions, which are ethically acceptable
	Quaternary prevention
DeCS (2015)	"An action taken to identify a patient at risk of over-medicalization, to protect him (sic) from new medical invasion, and to suggest to him (sic) interventions which are ethically acceptable. (From World Organization of National Colleges, Academies and Academic Associations of General Practitioners/Family Physicians WONCA.[35] Debriefing, quality assurance, and improvement processes, which complete the cycle of prevention by collecting information about the processes, multi-disciplinary analysis of the data, deriving conclusions, and distributing them to all the involved bodies.]
	Quaternary prevention
Wikipedia	Same as in Wonca Dictionary above and: Quaternary prevention is the set of health activities to mitigate or avoid the consequences of unnecessary or excessive intervention of the health system. Social credit that legitimizes medical intervention may be damaged if doctors do not prevent unnecessary medical activity and its consequences. Quaternary prevention should take precedence over any alternative preventive, diagnostic and therapeutic, as dictated by the principle of primum non nocere.

Source: elaborated by the authors.

There is no MeSH for the term 'Quaternary Prevention'; however, searching in free text in Pubmed retrieves 27 publications since the year 2000 (on Nov 12, 2014). Two are related to the chronological concepts dealing with palliative care and 25 are related to the Wonca concept. When available, the study of the indexation by MeSH descriptors specific to the concerned domain reveals the conceptual content of the concept, seen by the indexing system of Medline (Table 3).

Table 3. MeSH descriptors and qualifiers used in indexing 25 papers about Quaternary Prevention, 2014.

Communication	Mass Screening	Preventive Medicine
Early Detection of Cancer	Patient Harm	Risk Assessment
Health Services Misuse	/prevention & control	Unnecessary Procedures
Iatrogenic Disease	Preventive Health Services	

Source: elaborated by the authors.

Discussion

Despite the four completed definitions, a careful reading of its content reveals the difficulty to understand a cluster of 'mix of idea'. Hence, using the Wonca dictionary as a gold standard we intend to clarify the following terms: clinical prevention, primary prevention, secondary prevention, tertiary prevention, and quaternary prevention. Clinical prevention refers to the activities developed by a doctor facing a patient. Clinical implies doctors' daily activities or specific processes embedded in their daily activities. From clinical point of view curative and preventive activities are often integrated during the contact with the patient. The difference between the Wonca dictionary definition and all others dictionaries of medicine lies only between health problem and disease. Wonca dictionary refers to health problem while others refer to it as disease. For a general practitioner health problem is "any concern in relation to the health of a patient as determined by the patient and/or the health care provider " (p. 70)".[35] As can be understood by this definition, family physicians are already far from disease construct.

The difference in the concept of *primary prevention* lies also essentially in the same issue: health problem *versus* disease. MeSH and DeCS definitions are more precise regarding public health duties, whereas together with National Cancer Institute Terminology (NCIT) - cited in UMLS[30] - disease or mental disorders are referred as separate entities. In reality, the content of the concept of primary prevention, as developed by general practitioners, also includes numerous different MeSH referred in the above table.

The real problem arises with the *secondary prevention* concept. Firstly, there is no clear difference in MeSH between the secondary and tertiary definitions. For instance, '*prevention of recurrences or exacerbations*' is part of secondary prevention and it is not far away from "*minimize morbidity and maximize quality*" included in the tertiary prevention. In defining secondary prevention, it is evident that the term 'secondary' is used in the acception of *'after'*, thus purely chronological. This explains why cardiologists are using secondary prevention as descriptors when dealing with '*after'* ischemic cardiopathy therapy,[40] although aspirin is used for prevention of complication, which is clearly pertaining to tertiary domain. It seems evident that this MeSH definition of secondary prevention is not related to the same definition of Wonca Dictionary, but is closely linked to the Woncadic definition of tertiary prevention. This difference is also emphasized in UMLS/NCI definition of secondary prevention, framing secondary as to '*avoid a subsequent occurrence of a disease*' or '*procedures or treatment processes designed to prevent complications*' (see Table 2).[30], which are normally within the definition of tertiary preventive actions or third domain of Wonca Dictionary definition. The lay terminologies like BabelNet and Wikipedia are not following this way as they refer correctly secondary prevention to "*screening*" or "*identifying an unrecognized disease*". Thus, for the correct use of the word as descriptor in general practice we have added the MeSH corresponding to screening and analogs to the secondary definition table.

The *tertiary prevention* definition is easier to analyze. The MeSH and DeCS definitions overlap quite well with the Wonca definition, taking into account that the MeSH secondary prevention definition has to be quoted here as well. It's interesting to note that the Wonca definition of tertiary prevention includes the usual care activities. Indeed, "*minimizing the functional impairment consequent to the acute or chronic health problem*" (p. 110)[35] is a good definition of daily care. The SNOMED-CT is not very useful for the present discussion due to its lack in term definitions. In SNOMED-CT the meaning of a term is given by its semantic relationships, which means also that the reader of a concept could understand what he contextually wants to read.

The concept of *quaternary prevention* is a relatively new one. It has been proposed at the annual meeting of Wonca International Classification Committee in Durham, 1995[41] and published in the Wonca dictionary in 2003. The style and wording of the definition has been taken from the three first ones already published in the Glossary of general practice in 1995. The quaternary definition concept reflects a constructivist view as it is based on the patient-doctor relationships and deals with the organization of health care along the time and health problems. This might explain why it is not quoted in MeSH. Quaternary prevention (confirmed by Arthur Treuherz, terminologist at BIREME) will be added to the South American DeCS in 2015, jointly with another definition quoted by Gofrit, but originated in Bury's work and following the chronological approach.[14] The GP/FM quaternary prevention concept is well developed on Wikipedia as result of an intense networking on Twitter, Facebook and various websites.

One last remark is the fact that none of the P4 definitions mention the notion of Risk. As we know risk has been equaled to disease during the last decades, but in general practice, risk and risk addressed by patient are part and parcel of the usual health problems seen in primary care settings. Quaternary prevention functions as a conceptual umbrella for several problems addressed more intensely in recent years in the international scientific literature. This will be explored in our second paper: The words of prevention, Part II: ten terms in the realm of quaternary prevention.

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References

1. Van Dormael M. Identités professionnelles en médecine générale et en soins de santé primaires. In: Hours, B, editor. Systèmes et politiques de santé. De la santé publique à l'anthropologie. France: Karthala; 2001.
2. Nair A. "An Egyptian Infection": war, plague and the quarantines of the English East India Company at Madras and Bombay, 1802. Hygiea Internationalis. 2006;8(1):7-29. [cited 2015 Jun 17]. Available from: http://www.ep.liu.se/ej/hygiea/v8/i1/a2/hygiea09v8i1a2.pdf
3. Gensini GF, Yacoub MH, Conti AA. The concept of quarantine in history: from plague to SARS. J Infect. 2004;49(4):257-61. http://dx.doi.org/10.1016/j.jinf.2004.03.002. PMid:15474622.
4. Howard-Jones N. The scientific background of the International Sanitary Conferences, 1851-1938. 5. The ninth conference: Paris, 1894. WHO Chron. 1974;28(10):455-470. PMid:4607249.
5. Welch G, Schwartz L, Woloshin S. Overdiagnosed: making people sick in the pursuit of health. Boston, USA: Beacon Press; 2012.
6. Bamforth I. Knock: a study in medical cynicism. Med Humanit. 2002;28(1):14-18. http://dx.doi.org/10.1136/mh.28.1.14. PMid:23671044.
7. Skirbekk H, Hrubos-Strøm H. Mistillit og manipulasjon hos dr. House. Tidsskr Nor Laegeforen. 2010;130(6):643. http://dx.doi.org/10.4045/tidsskr.09.0735. PMid:20349015.
8. Leavell H, Clark E. Preventive medicine for the doctor in his community an epidemiologic approach. New York: McGraw-Hill; 1958.
9. Clark EG. Natural history of syphilis and levels of prevention. Br J Vener Dis. 1954;30(4):191-197. PMid:13219335.
10. Hattis R, Law M. The five stages of prevention: a practical new classification for health planning and clinical practice. [cited 2015 Jun 17]. Available from: http://www.capreventivemed.org/wp-content/themes/eventbrite-child/documents/Stages of Prevention 1-12.pdf
11. WHO. Glossary of Terms used in health for all series. Geneva: World Health Organization; 1984.
12. Ibrahim J. Glossaire utilitaire en Education Pour la Santé. Direction régionale des affaires sanitaires et sociales de Bourgogne; 2002 [cited 2015 Jun 17]. Available from: http://episante-bourgogne.org/sites/episante-bourgogne.org/files/document_synthese/pdf/glossaire.pdf
13. Cohen L, Chehimi S. The Imperative for Primary Prevention. In: Cohen L, Chavéz V, Chehimi S. Prevention is Primary: Strategies for Community Wellbeing. 2nd ed. San Francisco State University: Prevention Institute; 2010. p. 3–24. [cited 2015 Jun 17]. Available from: http://media.wiley.com/product_data/excerpt/53/04705509/0470550953.pdf
14. Froom P, Benbassat J. Inconsistencies in the classification of preventive interventions. Prev Med. 2000;31(2):153-158. http://dx.doi.org/10.1006/pmed.2000.0689. PMid:10938216.
15. Bury J. Éducation pour la santé : concepts enjeux planifications. Bruxelles: De Boeck-Université; 1988.
16. Vaz Cardoso R. Medicação e o cuidado em saúde na estratégia de saúde da família [Master thesis]. Campinas: Universidade Estadual de Campinas; 2014 [cited cited 2015 Jun 17]. Available from: http://www.ph3c.org/PH3C/docs/27/000281/0000605.pdf
17. Watkins SJ. Reclassifying Prevention. Public Health. 1986;100(2):121. http://dx.doi.org/10.1016/S0033-3506(86)80010-5. PMid:3737851.
18. Last JM, Spasoff RA, Harri SS. A Dictionary of Epidemiology. New York: Oxford University Press; 1988.
19. Bentzen N, Bridges-Webb C. An international glossary for general/family practice. Fam Pract. 1995;12(3):341-369. http://dx.doi.org/10.1093/fampra/12.3.341 PMid:8536827.
20. McWhinney IR. A textbook of family medicine. 2rd ed. USA: Oxford University Press; 1997.
21. Jamoulle M. Infomation et informatisation en médecine générale. Namur: Presses Universitaires de Namur; 1986.
22. Kuehlein T, Sghedoni D, Visentin G, Gérvas J, Jamoulle M. Quaternary prevention: a task of the general practitioner. Prim Care. 2010;18. [cited cited 2015 Jun 17]. Available from: http://www.primary-care.ch/docs/primarycare/archiv/de/2010/2010-18/2010-18-368_ELPS_engl.pdf
23. Hellström OW. Health promotion in general practice. Eur J Public Health. 1994;4(2):119-124. http://dx.doi.org/10.1093/eurpub/4.2.119.
24. Pizzanelli Báez EM. Princípios éticos e prevenção quaternária: é possível não proteger o exercício do princípio da autonomia? Rev Bras Med Fam Comunidade. 2013;9(31):169-73. http://dx.doi.org/10.5712/rbmfc9(31)852.
25. Sharpe VA. Why "do no harm"? The Influence of Edmund D. Pellegrino's Philosophy of Medicine. Theor Med. 1997;18(1-2):197-215. http://dx.doi.org/10.1023/A:1005757606106. PMid:9129401.
26. Chute CG, Cohn SP, Campbell JR. A framework for comprehensive health terminology systems in the United States: development guidelines, criteria for selection, and public policy implications. J Am Med Inform Assoc. 1998;5(6):503-510. http://dx.doi.org/10.1136/jamia.1998.0050503. PMid:9824798.
27. Eco U. Experiences in Translation (Toronto Italian Studies). Toronto: University of Toronto Press; 2000.
28. Moffett J. Teaching the Universe of Discourse. Boston: Houghton Mifflin Company; 1967.
29. Meneghini R, Packer AL. Is there science beyond English? Initiatives to increase the quality and visibility of non-English publications might help to break down language barriers in scientific communication. EMBO Rep. 2007;8(2):112-116. http://dx.doi.org/10.1038/sj.embor.7400906. PMid:17268499.
30. Unified Medical Language System & Terminology Service (UMLS). [cited 2015 Jun 17]. Available from https://uts.nlm.nih.gov/home.html

31. Jamoulle M. Some views about SNOMED-CT by a General Practitioner. (Report to SEMINOP). 2011 [cited 2015 Jun 17]. Available from: http://hdl.handle.net/2268/173908

32. Jamoulle M, Cardillo E, Roumier J, Warnier M, Vander Stichele R. Mapping French terms in a Belgian guideline on heart failure to international classifications and nomenclatures: the devil is in the detail. Inform Prim Care. 2014;21(4):189-198. http://dx.doi.org/10.14236/jhi.v21i4.66. PMid:25479349.

33. Lipscomb CE. Medical Subject Headings (MeSH). Bull Med Libr Assoc. 2000;88(3):265-266. PMid:10928714.

34. Fee E. Information on a global scale: the National Library of Medicine. Lancet. 2014;384(9937):21-22. http://dx.doi.org/10.1016/S0140-6736(14)61118-1. PMid:25003181.

35. Bentzen N. Wonca Dictionary of General/Family Practice. Copenhagen: Maanedsskr; 2003.

36. Fitzgerald D. Searching the medical literature. Can Fam Physician. 1980;26:1386-1391. PMid:21293706.

37. Grosjean J, Merabti T, Dahamna B, Kergourlay I, Thirion B, Soualmia LF, et al. Health multi-terminology portal: a semantic added-value for patient safety. Stud Health Technol Inform. 2011;166(66):129-138. PMid:21685618.

38. Evaluation Report of 10 year operation of the VHL. Technical Working Group for the VHL Evaluation (Brazil). Sao Paulo: BIREME/PAHO/WHO. 2008. 36 p.

39. Noy NF, Shah NH, Whetzel PL, Dai B, Dorf M, Griffith N, et al. BioPortal: ontologies and integrated data resources at the click of a mouse. Nucleic Acids Res. 2009;37(Web Server issue):170-173. http://dx.doi.org/10.1093/nar/gkp440. PMid:19483092.

40. Lin KJ, De Caterina R, Rodríguez LAG. Low-dose aspirin and upper gastrointestinal bleeding in primary versus secondary cardiovascular prevention: a population-based, nested case-control study. Circ Cardiovasc Qual Outcomes. 2014;7(1):70-77. http://dx.doi.org/10.1161/CIRCOUTCOMES.113.000494. PMid:24254886.

41. Jamoulle M, Roland M. Quaternary prevention. Hong Kong-Wonca Comitê de Classificação; 1995 july 6-9; Hong Kong, CN. Bruxelas: Research Group Fédération des Maisons Médicales; 1995. p. 6. [cited 2015 Jun 17]. Available from: http://www.ph3c.org/PH3C/docs/27/000103/0000261.pdf

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ORIGINAL ARTICLES

The words of prevention, part II: ten terms in the realm of quaternary prevention

As palavras da prevenção, parte II: dez termos no âmbito da prevenção quaternária

Las palabras de la prevención, parte II: diez términos en el ámbito de la prevención cuaternaria

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Abstract

Objective: this part II article about the 'words of prevention' presents in a terminological way the content of ten current concepts used in the prevention domain which are closely linked to quaternary prevention: (1) overinformation; (2) overdiagnosis; (3) medically unexplained symptoms; (4) overmedicalization; (5) incidentaloma; (6) overscreening; (7) overtreatment; (8) shared decision making; (9) deprescribing; and (10) disease mongering. **Methods**: with the support of the laboratory team of the University of Rouen, France, which is dedicated to medical terminology and semantic relationships, it was possible to utilize a graphic user interface (called DBGUI) allowing the construction of links for each of chosen terms, and making automatic links to MeSH, if any. Those concepts are analyzed in their environment in current literature, as well as in their MeSH counterparts, if any, and related semantic online terminologies. **Results and Discussion**: the rules in terminological development aspire to cover the whole field of a concept and in the meantime, they can help to avoid the noise due to proxy and not exactly related issues. This refers to exhaustivity and specificity in information retrieval. Our finds show that referring to MeSH only in information retrieval in General Practice/Family medicine can induce much noise and poor adequacy to the subject investigated. **Conclusion**: gathering concepts in specially prepared terminologies for further development of ontologies is a necessity to enter in the semantic web area and the era of disseminated data in family medicine.

Keywords:
Quaternary Prevention
Family Practice
Terminology as Topics
Semantics

Resumo

Objetivo: este artigo parte II sobre as 'palavras da prevenção' apresenta de uma forma terminológica o conteúdo de dez conceitos atuais utilizados no domínio da prevenção, que estão intimamente ligados à prevenção quaternária: (1) sobrecarga de informação; (2) sobrediagnóstico; (3) sintomas sem explicação médica; (4) sobremedicalização; (5) incidentaloma; (6) sobrerrastreamento; (7) sobretratamento; (8) tomada de decisão compartilhada; (9) desprescrição; e (10) comercialização de doenças. **Métodos**: com o apoio da equipe do laboratório da Universidade de Rouen, França, que se dedica à terminologia médica e às relações semânticas, foi possível utilizar uma interface gráfica de usuário (chamado DBGUI) permitindo a construção de links para cada um dos termos escolhidos, fazendo ligações automáticas para o MeSH, caso houvesse. Estes conceitos foram analisados no seu ambiente na literatura corrente, bem como os seus homólogos no MeSH, caso houvesse, e terminologias semânticas online a eles relacionadas. **Resultados e Discussão**: as regras em desenvolvimento terminológico aspiram cobrir todo o campo de um conceito, ao mesmo tempo em que podem auxiliar a evitar ruídos devido a aproximações e questões não exatamente relacionadas. Isto se refere à exaustividade e especificidade na recuperação da informação. Nossos achados mostram que referir-se somente ao MeSH na recuperação de informação em medicina de família pode induzir muito ruídos e uma pobre adequação em relação ao tema investigado. **Conclusão**: reunir conceitos em terminologias especialmente preparadas para um maior desenvolvimento de ontologias é uma necessidade para se adentrar na área da rede semântica e da era de dados disseminados em medicina de família.

Palavras-chave:
Prevenção Quaternária
Medicina de Família e Comunidade
Terminologia como Assunto
Semântica

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Resumen

Objetivo: este artículo parte II de las 'palabras de prevención' presenta en una forma terminológica el contenido de diez conceptos actuales utilizados en el dominio de la prevención que están estrechamente vinculados a la prevención cuaternaria: (1) sobreinformación; (2) sobrediagnóstico; (3) síntomas sin explicación médica; (4) sobremedicalización; (5) incidentaloma; (6) sobretamizaje; (7) sobretratamiento; (8) toma de decisiones compartida; (9) deprescripción; y (10) tráfico de enfermedades. **Métodos**: con el apoyo del equipo de laboratorio de la Universidad de Rouen, Francia, que se dedica a la terminología médica y las relaciones semánticas, fue posible utilizar la interfaz gráfica de usuario (llamado DBGUI) permitiendo la construcción de enlaces para cada uno de los términos elegidos, y estableciendo vínculos automáticos al MeSH, en su caso. Esos conceptos fueran analizados en el contexto de la literatura actual, así como en sus homólogos MeSH, en su caso, y terminologías semánticos relacionados online. **Resultados y Discusión**: las reglas en el desarrollo terminológico aspiran a cubrir la totalidad del ámbito del concepto y, mientras tanto, ayudan a evitar el ruido debido al proxy y temas no relacionados con exactitud. Esto se refiere a la exhaustividad y especificidad en la recuperación de informaciones. Nuestros hallazgos muestran que al referir-se solamente al MeSH la recuperación de información en Medicina General/Medicina Familiar puede inducir a mucho ruidos y mala adecuación al tema investigado. **Conclusión**: la recopilación de conceptos en terminologías especialmente preparados para un mayor desarrollo de ontologías es una necesidad para entrar en el área de la web semántica y en la era de los datos diseminados en medicina familiar.

Palabras clave:
Prevención Cuaternaria
Medicina Familiar y Comunitaria
Terminología como Asunto
Semántica

Introduction

There are striking differences in the world of reference[1,2] of General Practice/Family Medicine comparing to those of academic and other specialized branches of medicine. These differences started to be addressed in the part I of this paper. The part I article identified some of the main words of prevention, representing the P4 paradigmatic shift from a chronological based prevention towards a constructivist view based on patient-doctor relationships. It also discussed words such as clinical prevention, primary prevention, secondary prevention, tertiary prevention, and quaternary prevention.

This part II article discusses other P4 related concepts such as overinformation, overdiagnosis, medically unexplained symptoms, overmedicalisation, incidentaloma, overscreening, overtreatment, shared decision making, deprescribing and disease mongering. Since family doctors do not use the same wording as patients, librarians or focal medical specialists (consultants), there is a need for disambiguation of meanings, which rules health information retrieval and consequently high-precision information retrieval tools are needed.[3] As a by-product of patient-doctor relationships, quaternary prevention encompasses concepts that, each of them deals with ethical issues in day to day medicine. These concepts are the focus of this paper as shown in Table 1.

Table 1. Ten terms related to quaternary prevention in the Q-Codes list available online.[4]

QD44	Quaternary Prevention	Prévention Quaternaire	Prevención Cuaternaria	Prevenção Quaternária
QD440	overinformation	surinformation	exceso de información	sobrecarga de informação
QD441	medically unexplained symptom	symptôme médicalement inexpliqué	síntoma sin explicación médica	sintoma sem explicação médica
QD442	overmedicalisation	surmédicalisation	sobremedicalización	sobremedicalização
QD443	deprescription	déprescription	deprescripción	desprescrição
QD444	shared decision making	prise de décision partagée	toma de decisiones compartida	tomada de decisão compartilhada
QD445	incidentaloma	fortuitome	incidentaloma	incidentaloma
QD446	disease mongering	fabrication de maladie	tráfico de enfermedades	comercialização de doenças
QD447	overscreening	surdépistage	sobretamizaje	sobrerrastreamento
QD448	overtreatment	surtraitement	sobretratamiento	sobretratamento
QD449	overdiagnosis	surdiagnostic	sobrediagnóstico	sobrediagnóstico

Source: elaborated by the authors, 2015.

Retrieving literature with existing MeSH descriptors can be sometimes a big challenge for the above incisive concepts in the field of GP/FM.[5] Hence, we have decided to explore the literature about those domains (Table 1) and report the most popular words in Family Medicine, echoing the research in the same domain by epidemiologists and hospital based specialists.[6] The help of the Rouen Institute for Research and Innovation in Biomedicine team[7] has been seminal in developing the relationships of those concepts with the appropriate methods, paving the way of health care semantics.

The impact of computer science on terminological issues is striking and family doctors have to understand that mastering the production and management of knowledge lies at their doorstep. They have to become familiar with semantic web technologies and related language processing as the computer will become omnipresent in their daily lives in a near future. For a GP, understanding health information gateways is as important as to understand Evidence-Based Medicine (EBM) or pharmacology. This paper highlights some basic steps necessary to master health information.

Methods

The computer laboratory of the University of Rouen, France, dedicated to medical terminology and semantic relationships, maintain 50 terminologies crossing website, linked by semantic web technologies under the URL of http://www.hetop.eu/hetop/. [8] The Medical Subject headings have been historically the first mapping of this semantic tool. The team of Rouen laboratory has put at disposal a graphic user interface, called DBGUI (Figure 1) allowing the construction of links for each chosen term and automatic link to MeSH, if any. As stated in the first part of this paper, MeSH sometimes does not fully cover the field of GP/FM or proposed terms which content are historically marked.[9] An external observer, expert in the domain of Family Medicine, has to verify the proposed links.

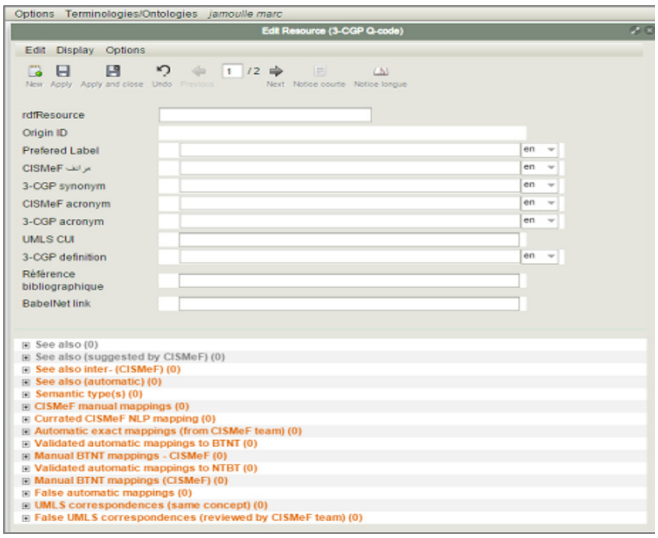

Figure 1. The DBGUI interface.
Source: Rouen computer laboratory.[7]

Gomes et al. have pointed out, in a paper on medical education in this special issue on P4, the vicious cycle identified in patient-doctor communication. The link between lay and professional terms is essential to enhance communication in primary care. This is the reason for the links of the DBGUI being completed with chosen links to Babelnet.org[10] and to Dbpedia,[11,12] one of the main nodes of the Linked data world[13] and, consequently, with Wikipedia.[14]

Gathering concepts in specially prepared terminologies for further development of ontologies is a necessity to enter in the semantic web area and the era of disseminated data.[15] The present results open the way to build a comprehensive set of main themes addressed by GPs during some conferences.[16-18] Those concepts have been identified by one author (MJ) by a careful content analysis of more than 1600 abstracts of congresses of Family Medicine. This is an ongoing work and we

have chosen to show the terminological content of ten out of 198 experimental descriptors referred as Q-Codes[5] obtained by careful analysis of GP/FMs' congresses communications. The interface allows the user to build a terminological record by entering an ID (identification number) following by the Preferred label of a term, the synonyms and acronyms, if any, the most appropriate definition with bibliographic citation, the links to Babelnet.org and to Dbpedia or to other relevant semantic links. Internal links to already existing terminologies in hetop.eu can be chosen manually (in grey in the Figure 1) or automatically proposed by the interface which allows corrections (in red in the Figure 1). All the gathered data can be expressed in Web Ontology Language (OWL),[19] the computer language used in the semantic web for Health Care and Life Sciences.[20]

Table 2. Ten terms related to quaternary prevention: links, definitions, sources and bibliographic citations, 2015.

Q-Code	QD440
Pref. Term (PT)	Overinformation (health)
Syn	Misinformation, fake information
French PT	Surinformation
Spanish PT	Exceso de información
Portuguese PT	Sobrecarga de informação
Definition	Information overload as: a perception on the part of the individual (or observers of that person) that the flows of information associated with work tasks is greater than can be managed effectively, and a perception that overload in this sense creates a degree of stress for which his or her coping strategies are ineffective. (Wilson, 2001). Healthcare delivery systems, investigators and healthcare providers may be denying their patients opportunities to make informed decisions about their health and healthcare. This occurs when they provide documents requiring reading skills that do not match patient literacy skills and runs counter to calls to provide linguistically and culturally appropriate patient information in the practice of medicine.(Calderón, 2004).
Bib. citations	Wilson, TD. "Information overload: implications for health-care services" Health Informatics Journal, 2001; 7(2):112-117 http://www.informationr.net/tdw/publ/papers/2001IOHealth.html Nogales-Gaete J, Vargas-Silva P, Vidal-Cañas I. Clinical, ethical and legal issues on medical information to patients and relatives. Rev. méd. Chile, 2013; 141(9):1190-1196. http://dx.doi.org/10.4067/S0034-98872013000900012. Calderón JL, Beltrán RA. Pitfalls in Health Communication: Healthcare Policy, Institution, Structure, & Process. Medscape General Medicine. 2004;6(1):9. http://www.ncbi.nlm.nih.gov/pmc/articles/PMC1140704/
MeSH	Qualifier needed: Information Dissemination/ethics* The circulation or wide dispersal of information.
	Qualifier needed: Information Seeking Behavior/ethics* How information is gathered in personal, academic or work environments and the resources used.
Pubmed	0 citation for "overinformation". 128,460 for "over information" (first in 1912)
Babelnet	bn:03275456n Information overload · infobesity · infoglut Information overload refers to the difficulty a person can have understanding an issue and making decisions that can be caused by the presence of too much information.
DBPedia	http://en.wikipedia.org/wiki/Information_overload
Q-Code	QD441
Pref. Term (PT)	Medically unexplained symptom
Syn	MUS
French PT	Symptôme médicalement inexpliqué
Spanish PT	Síntoma sin explicación médica
Portuguese PT	Sintoma sem explicação médica

Table 2. Continued...

Q-Code	QD440
Definition	Medically Unexplained Symptoms (MUS) that may, or may not, be due to physical disease, which capture conditions characterized by symptoms without corresponding objective findings, often associated with high costs, both direct (health care use) and indirect costs (productivity loss due to sickness absence) such as asthenia, low back pain, fibromyalgia, irritable bowel syndrome, or chronic fatigue syndrome, as well as symptoms stemming from a specific somatic disease that is more severe, more persistent, or limit functioning to a greater extent than expected, based on (objective) disease parameters. Patients with MUS often experience significant disability and have difficulty accessing appropriate care (Adapted from Olde Hartman, 2013; Aamland et al., 2014; and Rask et al., 2015).
Bib. Citations	Olde Hartman TC, Woutersen-Koch H, Van der Horst HE. Medically unexplained symptoms: evidence, guidelines, and beyond. The British Journal of General Practice. 2013;63(617):625-626. doi:10.3399/bjgp13X675241. Aamland A, Malterud K, Werner EL. Patients with persistent medically unexplained physical symptoms: a descriptive study from Norwegian general practice.BMC Fam Pract, 2014, 15(1):107doi:10.1186/1471-2296-15-107. Rask MT, Rosendal M, Fenger-Grøn M, Bro F, Ørnbøl E, Fink P. Sick leave and work disability in primary care patients with recent-onset multiple medically unexplained symptoms and persistent somatoform disorders: a 10-year follow-up of the FIP study. Gen Hosp Psychiatry, 2015;37(1):53–9. 10.1016/j.genhosppsych.2014.10.007
MeSH	None
Pubmed	958 citations for “medically unexplained symptoms” (first 1980) 239 citations for “medically unexplained symptom” (first 1987)
Babelnet	bn:03305496n Medically unexplained physical symptoms or medically unexplained symptoms are patient symptoms for which the treating physician, other healthcare providers, and research scientists have found no medical cause
DBPedia	http://dbpedia.org/page/Medically_unexplained_physical_symptoms
Q-Code	QD442
Pref. Term (PT)	Overmedicalization
Syn	Unnecessary health care, futile health care
French PT	Surmédicalisation
Spanish PT	Sobremedicalización
Portuguese PT	Sobremedicalização
Definition	Overmedicalization - an excess of exposure to – or seeking for healthcare to an extent in which does not confer any benefit in terms of health and welfare, directly related to the terms: overscreening, overdiagnosis, overtreatment (Cardoso, 2015).
Bib. Citations	Cardoso RV. Prevenção quaternária: um olhar sobre a medicalização na prática do médico de família. Rev Bras Med Fam Comunidade. 2015;10(35):1117. Disponível em: http://dx.doi.org/10.5712/rbmfc10(35)1117
MeSH	Partially related to: MeSH Medicalization A process by which nonmedical problems become defined and treated as medical problems, usually in terms of illnesses, or disorders. (Annu Rev Sociol, 1992 18:209)
Pubmed	12 citations for “overmedicalization” (first 1984) 6 for “overmedicalisation” (first in 2011) 140 for “over medicalization” (first 1979)
Babelnet	bn:15974546n Unnecessary health care; Unnecessary health care is health care provided with a higher volume or cost than is appropriate.
DBPedia	http://dbpedia.org/page/Unnecessary_health_care
Q-Code	QD443
Pref. Term (PT)	Deprescription (deprescribing)
Syn	Drug utilization review (DUR)
	Medication therapy management programs (MTM)
French PT	Deprescription
Spanish PT	Deprescripción
Portuguese PT	Desprescrição

Table 2. Continued...

Q-Code	QD440
Definition	Drug utilization review (DUR) is defined as an authorized, structured, ongoing review of prescribing, dispensing and use of medication. DUR encompasses a drug review against predetermined criteria that results in changes to drug therapy when these criteria are not met. It involves a comprehensive review of patients' prescription and medication data before, during and after dispensing to ensure appropriate medication decision-making and positive patient outcomes. As a quality assurance measure, DUR programs provide corrective action, prescriber feedback and further evaluations (Navarro, 2008).
Bib. Citations	Navarro R. Chapter 8: Drug utilization review strategies. In Managed Care Pharmacy Practice, pp. 215-229, 2008. Ai AL, Carretta H, Beitsch LM, Watson L, Munn J, Mehriary S. Medication Therapy Management Programs: Promises and Pitfalls. J Manag Care Spec Pharm. 2014;20(12):1162–82. http://www.ncbi.nlm.nih.gov/pubmed/25443511
MeSH	Drug Utilization Review: Assistance in managing and monitoring drug therapy for patients receiving treatment for cancer or chronic conditions such as asthma and diabetes, consulting with patients and their families on the proper use of medication; conducting wellness and disease prevention programs to improve public health; overseeing medication use in a variety of settings. Medication Therapy Management: Formal programs for assessing drug prescription against some standard. Drug utilization review may consider clinical appropriateness, cost effectiveness, and, in some cases, outcomes. Review is usually retrospective, but some analysis may be done before drugs are dispensed (as in computer systems which advise physicians when prescriptions are entered).
Pubmed	39 citations for "deprescribing" (first in 2007)
Babelnet	bn:16582550n Deprescribing is the process of tapering, withdrawing, discontinuing or stopping medications to reduce polypharmacy, adverse drug effects and inappropriate or ineffective medication use.
DBPedia	http://dbpedia.org/page/Deprescribing
Q-Code	QD 444
Pref. Term (PT)	Shared decision making
Syn	SDM
French PT	Prise de décision partagée
Spanish PT	Toma de decisiones compartida
Portuguese PT	Tomada de decisão compartilhada
Definition	Under a shared decision making (SDM) process, health care practitioners and patients work together to make joint decisions about a patient's care. SDM requires that patients should be educated about and understand risks and benefits of their options. SDM is an important part of patient-centered care; education is often through the use of decision aids such as pamphlets, videos, and computerized tools. (Cochrane, Légaré, 2010).
Bib. Citations	Légaré F, Ratté S, Stacey D, Kryworuchko J, Gravel K, Graham ID, et al. Interventions for improving the adoption of shared decision making by healthcare professionals. Cochrane database Syst Rev. 2010; (5):CD006732. Available from: http://www.ncbi.nlm.nih.gov/pubmed/20464744
MeSH	Wrongly related to: MeSH Decision Making The process of making a selective intellectual judgment when presented with several complex alternatives consisting of several variables, and usually defining a course of action or an idea.
Pubmed	189,688 citations for MeSH Decision making (first in 1952) 2,882 for "shared decision making"
Babelnet	bn:01657979n Shared decision-making is an approach where clinicians and patients communicate together using the best available evidence when faced with the task of making decisions, where patients are supported to deliberate about the possible attributes and consequences of options, to arrive at informed preferences in making a determination about the best action and which respects patient autonomy, where this is desired, ethical and legal.
DBPedia	http://dbpedia.org/page/Shared_decision_making
Q-Code	QD445
Pref. Term (PT)	Incidentaloma
French PT	Fortuitome
Spanish PT	Incidentaloma

Table 2. Continued...

Q-Code	QD440
Portuguese PT	Incidentaloma
Definition	Incidentaloma: used to design an incidentally discovered mass, by chance, in an asymptomatic person, which probably never will harm his/her, not excluding a real possibility of damage and a few chance of benefit. It is a form of overdiagnosis emerging from the massive use of high-resolution diagnostic imaging. In many cases, it is associated with the increased rate of new diagnoses, causes anxiety, consumes time and resources, and can even induce damage by the subsequent follow-up (Mariño M, 2015).
Bib. Citation	Mariño MA. Incidentalomas: concept, relevance and challenges for medical practice. Rev Bras Med Fam Comunidade. 2015;10(35):1053. Available at: http://dx.doi.org/10.5712/rbmfc10(35)1053
MeSH	Partially related to: Incidental findings Unanticipated information discovered in the course of testing or medical care. Used in discussions of information that may have social or psychological consequences, such as when it is learned that a child's biological father is someone other than the putative father, or that a person tested for one disease or disorder has, or is at risk for, something else.
Pubmed	926 citations for "incidentaloma"(first 1982)
Babelnet	bn:03555265n In medicine, an incidentaloma is a tumor found by coincidence without clinical symptoms or suspicion.
DBPedia	http://live.dbpedia.org/page/Incidentaloma
Q-Code	QD446
Pref. Term (PT)	Disease mongering
French PT	Fabrication de maladie
Spanish PT	Tráfico de enfermedades
Portuguese PT	Comercialização de doenças
Definition	Disease mongering is the selling of sickness that widens the boundaries of illness in order to grow markets for those who sell and deliver treatments (Moynihan et al., 2008).
Bib. Citation	Moynihan R, Doran E, Henry D. Disease Mongering Is Now Part of the Global Health DebatePLoS Med, 2008; 5(5):e106. doi:10.1371/journal.pmed.0050106
MeSH	None
Pubmed	65 citations for "disease mongering" (first in 1994)
Babelnet	bn:02354871n Disease mongering is a pejorative term for the practice of widening the diagnostic boundaries of illnesses, and promoting public awareness of such, in order to expand the markets for those who sell and deliver treatments, which may include pharmaceutical companies, physicians, and other professional or consumer organizations.
DBPedia	http://dbpedia.org/page/Disease_mongering
Q-Code	QD447
Pref. Term (PT)	Overscreening
Syn	
French PT	Surdépistage
Spanish PT	Sobretamizaje
Portuguese PT	Sobrerrastreamento
Definition	Overscreening, also called unnecessary screening, is the performance of medical screening without a medical indication to do so. Screening is a medical test in a healthy person who is showing no symptoms of a disease and is intended to detect a disease so that a person may prepare to respond to it. Screening is indicated in people who have some threshold risk for getting a disease, but is not indicated in people who are unlikely to develop a disease. Overscreening is a type of unnecessary health care (Wikipedia).
Bib. citations	Torke AM, Schwartz PH, Holtz LR, Montz K, Sachs GA. Older Adults and Forgoing Cancer Screening: "I Think It Would Be Strange". JAMA Intern Med. 2013;173(7):526-531. doi:10.1001/jamainternmed.2013.2903.

Table 2. Continued...

Q-Code	QD446
MeSH	None
Pubmed quotes #	48 citations for « overscreening » (first 1979)
Babelnet	bn:15968011n Overscreening, also called unnecessary screening, is the performance of medical screening without a medical indication to do so.
Freebase	http://www.freebase.com/m/0113zpt0
Q-Code	**QD448**
Pref. Term (PT)	Overtreatment
Syn	Futile medical treatment/ Unnecessary health care/ Pharmaceuticalisation
French PT	Surtraitement
Spanish PT	Sobretratamiento
Portuguese PT	Sobretratamento
Definitions	Overtreatment: an excessive drug load leading to a suboptimal risk-to-benefit ratio. Initiating treatment in conditions where it is not indicated. Use of excessively fast titration rates. Prescription of excessively high initial target dosages. Failure to consider conditions associated with reduced dosage requirements. Failure to consider the dose-response characteristics of the selected drug. Premature use of combination therapy. Failure to adjust the dosage to prevent or compensate for adverse pharmacokinetic or pharmacodynamics drug interactions. Failure to reduce drug load in patients who have not benefited from high dosages or polypharmacy. Continuation of drug therapy in disease-free patients (Peruka and Kwan, 2005). Futile medical treatment: treatment that is usually considered unable to produce the desired benefit either because it cannot achieve its physiological aim or because the burdens of the treatment are considered to outweigh the benefits for the particular individual. There are necessary value judgments involved in coming to an assessment of futility. These judgments must consider the individual's, or proxy's, assessment of worthwhile outcome (WHOGloss, 2004).
Bib. citations	Perucca E, Kwan P. Overtreatment in Epilepsy. CNS Drugs 2005;19(11):897–908.Available from: http://link.springer.com/10.2165/00023210-200519110-00001 Williams SJ, Martin P, Gabe J. The pharmaceuticalisation of society? A framework for analysis. Sociol Health Illn, 2011;33(5):710–25. Available from: http://www.ncbi.nlm.nih.gov/pubmed/21371048 doi:10.1111/j.1467-9566.2011.01320.x.
MeSH	none
Pubmed quotes #	2,257 citations for overtreatment » (first in 1929)
Babelnet	bn:15974546n Unnecessary health care is health care provided with a higher volume or cost than is appropriate.
DBPedia	http://dbpedia.org/page/Unnecessary_health_care
Q-Code	**QD449**
Pref. Term (PT)	Overdiagnosis
French PT	Surdiagnostic
Spanish PT	Sobrediagnóstico
Portuguese PT	Sobrediagnóstico
Definition	Overdiagnosis is the term used when a condition is diagnosed that would otherwise not go on to cause symptoms or death. Cancer overdiagnosis may have of one of two explanations: (1) the cancer never progresses (or, in fact, regresses); or (2) the cancer progresses slowly enough that the patient dies of other causes before the cancer becomes symptomatic. Overdiagnosis should not be confused with false-positive results, that is, a positive test in an individual who is subsequently recognized not to have cancer. By contrast, an overdiagnosed patient has a tumor that fulfills the pathological criteria for cancer (Welch and Black, 2010).
Bib. Citations	Welch HG, Black WC. Overdiagnosis in cancer. J Natl Cancer Inst. 2010;102:605–13. doi: 10.1093/jnci/djq099.
MeSH	None
Pubmed quotes	1,723 citations for « overdiagnosis » (first in 1970)
Babelnet	bn:02698680n Overdiagnosis is the diagnosis of "disease" that will never cause symptoms or death during a patient's lifetime.
DBPedia	http://dbpedia.org/page/Overdiagnosis

Results

The ten terms related to quaternary prevention are presented here in four languages with the links, definition(s) and their source(s) and bibliographic citation(s). Table 2 is completed by the corresponding MeSH, if any, with the MeSH definition, the count of the term in Pubmed (January 2015) and the date of first citation. Lastly, the links to Babelnet.org and Dbpedia are shown as the main connection to lay languages.

Discussion

Out of an ongoing research on the conceptual content of General Practice/Family medicine, 10 terms used by GPs in their conferences' communications have been analyzed in a terminological way with the help of a web based terminological graphic user interface. The particularity of the selected terms relates to the dangers of medicine and ethical duties of family doctors facing the epidemic of overmedicalization. Each of those ten terms is carefully related to the fourth field of prevention described in this special issue on P4.

Family doctors have to understand the basis and principles of overmedicalization, which encompass overinformation, overscreening, overdiagnosis, incidentaloma, disease mongering, and overtreatment. Each of those terms could imply the surge of possible Medically Unexplained Symptoms (MUS). For instance, shared decision making is one of the suggested tools to address the discrepancy between the doctor and the patient in the chaos described by Stacey, as quoted by Pisek & Greenhalgh,[21] when disagreement meets uncertainty. Moreover, deprescription, more frequently referred to deprescribing, is another way to introduce quality assurance and control in the therapeutic process. In this sense, all the means dedicated to establish quaternary prevention are powerful tools to avoid the chaos and the terrible waste of resources either of human or economic, leading to a more sustainable health care by effectively implementing and maintaining of evidence-based policies and activities.[22]

The rules in terminological development aspire to cover the whole field of a concept and, in the meantime, they help to avoid the noise due to proxy and not exactly related issues. This refers to exhaustivity and specificity in information retrieval. "*A great difficulty is that we cannot read the user's mind to acquire what he/she really wants"* (p. 1).[23] This exercise shows that referring to MeSH only in information retrieval in General Practice/Family medicine can induce much noise and poor adequacy to the subject investigated. Taking the search of 'Shared decision making' as an example, we could show much noise and unfruitful search. Indeed, the term 'Shared, decision making' is linked in the MesH thesaurus with the MeSH 'Decision making' whose use alone retrieve 123,265 entries. As the MeSH Decision making definition does not encompass the participation of the patient to the decision, the results obtained are not adequate. In this case, it is better to use the name of France Légaré,[24] a well-known Canadian GP, researcher in this field, as author (Légaré F[Author]) to identify the main publications relevant to the process of participation of the patient and to follow the related citations in PubMed. This will ensure narrower, but more pertinent results in a bibliographic query.

The syntagm of Medically Unexplained symptoms, although quoted 958 times for medically unexplained symptoms (first 1980) and 239 times for medically unexplained symptom (first 1987), the last one on singular, has no corresponding entry in MeSH. The word overdiagnosis counts 1,723 citations (first in 1970) in Pubmed; overtreatment 2,257 citations (first in 1929); overscreening 48 citations (first 1979); disease mongering 65 citations (first in 1994), but have no corresponding entry MeSH as well.

Overmedicalization poses different issues as we could use Conrad's definition by adding the qualifier 'ethics' to find back the ongoing meaning of the word overmedicalization. Also, its counting in Medline varies according to its orthographic typing with the European way - overmedicali**s**ation with **'S'** - reflecting more the quaternary prevention mode of the phenomenon. It is important to highlight that overmedicalization and overtreatment refer both to unnecessary health care. This broad category is coming through Babelnet quotations from Wikipedia categorization process. Indeed, the choice of Wikipedia has been to class all the above analyzed terms in the broad category of unnecessary health care.[25] Interestingly, all the ten terms are shared by lay terms terminologies as Babelnet of DBpedia, reflecting the interest of patients and general public for those problems, which are clearly at the meeting point of medicine with the public.

Naturally, all those terms reflecting overutilization and waste of resources have to be complemented by the careful analysis of their counterparts: undermedicalization, undertreatment, underscreening. These are the natural companion of the analyzed terms. Unfortunately, market driven forces are prevalent, and consequently, the trend is in the direction of overmedicalization or wrong medicalization, which occurs in low-income countries, as well.

Conclusion

It is possible to argue that the definitions proposed here are up to only one author and that careful search in published literature could retrieve more appropriate citations. Nevertheless, a lot of colleagues, acknowledged above, have contributed to this work, by spontaneous exchanges through the P4 mailing lists[26] between Europe and mainly South America. This is an open field of research and this paper is only a provocative appeal to invest more in specific terminological work dedicated to family medicine and primary care. Terminologies are evolutionary by essence and require to be adjusted to the need of corresponding domains of the researchers. They need also to be collaborative and this paper represents only a first step, a first call for more insights on methodological research in terminological field.

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References

1. Eco U. Experiences in translation. University of Toronto Press: Scholarly Publishing Division; 2000. 112 p.
2. Moffett J. Teaching the universe of discourse. Boston: Houghton Mifflin Company; 1967.
3. Ben Abacha A, Zweigenbaum P. Automatic extraction of semantic relations between medical entities: a rule based approach. J Biomed Semantics. 2011;2(Suppl 5):S4. http://dx.doi.org/10.1186/2041-1480-2-S5-S4. PMid:22166723.
4. Jamoulle M. Q-Codes, authority list of non-clinical descriptors in GP/FM. Version 20150221. [cited 2015 June 17] Available from: http://docpatient.net/3CGP/Q-codes_4_languages.htm
5. De Vito EL. Quaternary prevention, a term not yet included in the Medical Subject Heading (MESH). Medicina (B Aires). 2013;73(2):187-190. PMid:23570772.
6. Morgan DJ, Wright SM, Dhruva S. Update on medical overuse. JAMA Intern Med. 2015;175(1):120-124. PMid:25365707.
7. Rouen Institute for Research and Innovation in Biomedicine. Research Team EA 4108-TIBS: Group TIBS. LITIS. 2012. [cited 2015 Jun 17]. Available from: http://irib.univ-rouen.fr/index.php?info=entites&id=54.
8. Grosjean J, Griffon N, Dahamna B, Darmoni S. Multiterminology cross-lingual model to create the European health terminology. In: Proceedings of the 9th International Conference on Terminology and Artificial Intelligence; 2011. Paris: Institut National des Langues et Civilisations Orientales; 2011. p. 119-122.
9. Jamoulle M, Cardillo E, Roumier J, Warnier M, Vander Stichele R. Mapping French terms in a Belgian guideline on heart failure to international classifications and nomenclatures: the devil is in the detail. Inform Prim Care. 2014;21(4):189-198. http://dx.doi.org/10.14236/jhi.v21i4.66. PMid:25479349.
10. Navigli R, Ponzetto SP. BabelNet: The automatic construction, evaluation and application of a wide-coverage multilingual semantic network. Artif Intell. 2012;193:217-250. http://dx.doi.org/10.1016/j.artint.2012.07.001.
11. Yamamoto Y, Yamaguchi A, Yonezawa A. Building Linked Open Data towards integration of biomedical scientific literature with DBpedia. J Biomed Semantics. 2013;4(1):8. http://dx.doi.org/10.1186/2041-1480-4-8. PMid:23497538.
12. Lehmann, J, Isele, R, Jakob, M, Jentzsch, A, Kontokostas D, Mendes PN, et al. DBpedia–A large-scale, multilingual knowledge base extracted from Wikipedia. Semant Web. 2015;6:167-195. http://dx.doi.org/10.3233/SW-140134.
13. Bizer C, Heath T, Berners-Lee T. Linked Data—the story so far. Int J Semantic Web Inf Syst. 2009;5(3):1-22. http://dx.doi.org/10.4018/jswis.2009081901.

14. Maskalyk J. Modern medicine comes online: how putting Wikipedia articles through a medical journal's traditional process can put free, reliable information into as many hands as possible. Open Med. 2014;8(4):e116-e119. PMid:25426179.

15. Jiang G, Solbrig HR, Chute CG. Using semantic web technology to support icd-11 textual definitions authoring. J Biomed Semantics. 2013;4(1):11. http://dx.doi.org/10.1186/2041-1480-4-11. PMid:23601451.

16. Jamoulle M. Attempt to classify main descriptors of GP/FM job. Proposal for a metaclinical classification. In: Proceedings of the Wonca Europe Conference; 2007. Paris, France: Wonca Europe; 2007. 502 p.

17. Jamoulle M. Or25 using ICPC and the core content Classification For General Practice (3CGP) to index Wonca Lisbon abstracts. In: Proceedings of the Wonca Europe Conference; 2014. Lisbon, Portugal: Wonca Europe; 2014.

18. Jamoulle M. Using the International Classification for Primary Care (ICPC) and the Core Content Classification for General Practice (3CGP) to classify conference abstracts. Rev Port Med Geral Fam. 2013; 29(5):66-67.

19. Wikipedia. Web ontology language. 2015 May 21 [cited 2015 Jun 17]. Available from: http://en.wikipedia.org/wiki/Web_Ontology_Language.

20. Cheung K-H, Prud'hommeaux E, Wang Y, Stephens S. Semantic web for health care and life sciences: a review of the state of the art. Brief Bioinform. 2009;10(2):111-113. http://dx.doi.org/10.1093/bib/bbp015. PMid:19304871.

21. Plsek PE, Greenhalgh T. Complexity science: The challenge of complexity in health care. BMJ. 2001;323(7313):625-628. http://dx.doi.org/10.1136/bmj.323.7313.625. PMid:11557716.

22. Schell SF, Luke DA, Schooley MW, Elliott MB, Herbers SH, Mueller NB, et al. Public health program capacity for sustainability: a new framework. Implement Sci. 2013;8(1):15. http://dx.doi.org/10.1186/1748-5908-8-15. PMid:23375082.

23. Tao X. Associate a user 's goal: exhaustivity and specificity information retrieval using ontology. In: Proceedings of the 4th International Conference on Active Media Technology (AMT06); 2006. Brisbane: Queensland University of Technology; 2006. p. 448-450. [cited 2015 Jun 17]. Available from: http://eprints.qut.edu.au/6030/1/6030_1.pdf.

24. Légaré F, Ratté S, Stacey D, Kryworuchko J, Gravel K, Graham ID, et al. Interventions for improving the adoption of shared decision making by healthcare professionals. Cochrane Database Syst Rev. 2010;(5):CD006732. PMid:20464744.

25. Wikipedia. Category: unnecessary health care. [cited 2015 Jun 17]. Available from: http://en.wikipedia.org/wiki/Category:Unnecessary_health_care.

26. Primary Health Care Classification Consortium (PH3C). Quaternary prevention. 2013 Dec 20 [cited 2015 Jun 17]. Available from: www.ph3c.org/P4.

REVISTA BRASILEIRA DE MEDICINA DE FAMÍLIA E COMUNIDADE
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ORIGINAL ARTICLES

Impact of quaternary prevention as a brief intervention in medical students' clinical decisions: experience from Vietnam

Impacto da prevenção quaternária como intervenção breve nas decisões clínicas de estudantes de medicina: experiência do Vietnã

Impacto de la prevención cuaternaria como intervención breve en las decisiones clínicas de estudiantes de medicina: experiencia de Vietnam

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Abstract

Objective: to evaluate undergraduate medical students' clinical decision-making process after a brief intervention lecture on quaternary prevention (P4). **Methods**: quantitative self-controlled intervention study carried out with fifth-year medical students of Pham Ngoc Thach University, Hochiminh city, Vietnam. The medical students were asked to list their eventual interventions based on three different simulated clinical scenarios. The survey was conducted before and after the intervention. Student's propositions were classified into one of the four groups of prevention, according to Jamoulle's model. **Results**: 115 students participated, resulting in 211 answered sheets. The interventions proposed by the students were mostly centered on prevention groups 1, 2 and 3; the three clinical scenarios partially explained student's intentions of counseling, screening and palliative care. Comparing the data of second phase survey, the intervention was associated with changes in students' aptitude on clinical decision-making, which was especially more important for prevention group 1 (OR = 7.5) and prevention group 4 (OR = 30.05). There was no statistically significant difference in changing students' decision for prevention group 2 (OR = 0.95 p = 0.466) and prevention group 3 (OR = 2.29 p = 0.932). **Conclusion**: introducing quaternary prevention to the undergraduate medical course can help to steer clinical decisions toward primary prevention and to avoid inappropriate medical interventions.

Keywords:
Quaternary Prevention
Decision Making
Education, Medical
Vietnam
Family Medicine

Resumo

Objetivo: avaliar o processo de tomada de decisão clínica por estudantes de graduação em medicina após uma breve intervenção sobre prevenção quaternária (P4). **Métodos**: estudo quantitativo de intervenção autocontrolada realizado com estudantes do quinto ano do curso de medicina da Pham Ngoc Thach University, na cidade de Hochiminh, Vietnam. Os estudantes foram convidados a listar suas eventuais intervenções com base em três diferentes cenários clínicos simulados. A pesquisa foi realizada antes e depois da intervenção. As proposições dos estudantes foram classificadas em um dos quatro grupos de prevenção, de acordo com o modelo de Jamoulle. **Resultados**: participaram 115 estudantes, resultando em 211 folhas de respostas. As intervenções propostas pelos estudantes foram principalmente centradas nos grupos de prevenção 1, 2 e 3; esses três cenários clínicos explicaram parcialmente as intenções dos estudantes para aconselhamento, rastreamento e cuidados paliativos. Comparando com os dados da segunda fase do estudo, a intervenção foi associada a mudanças na aptidão dos alunos no processo de tomada de decisão clínica, que foi especialmente importante para o grupo de prevenção 1 (OR = 7,5) e para o grupo de prevenção 4 (OR = 30,05). Não houve diferença estatisticamente significativa na mudança de decisão dos alunos para o grupo de prevenção 2 (OR = 0,95 p = 0,466) e para o grupo de prevenção 3 (OR = 2,29 p = 0,932). **Conclusão**: a introdução da prevenção quaternária no curso de graduação em medicina pode auxiliar a orientar as decisões clínicas em direção à prevenção primária e também a evitar intervenções médicas desnecessárias.

Palavras-chave:
Prevenção Quaternária
Tomada de Decisões
Educação Médica
Vietnã
Medicina de Família e Comunidade

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Resumen

Objetivo: evaluar el proceso de toma de decisiones clínicas hecho por estudiantes de pregrado en medicina después de una breve intervención sobre la prevención cuaternaria (P4). **Métodos**: Estudio cuantitativo de intervención auto-controlado llevado a cabo con estudiantes de quinto año de medicina de la Pham Ngoc Thach Universidad en la ciudad de Hochiminh, Vietnam. Se pidió a los alumnos que enumerasen sus posibles intervenciones basadas en tres diferentes escenarios clínicos simulados. La encuesta se realizó antes y después de la intervención. Las proposiciones de los estudiantes se clasificaron en uno de los cuatro grupos de prevención, de acuerdo con el modelo de Jamoulle. **Resultados**: 115 estudiantes participaron, lo que resultó en 211 hojas de respuesta. Las intervenciones propuestas por los alumnos se centraron principalmente en los grupos de prevención 1, 2 y 3; estos tres escenarios clínicos explican parcialmente las intenciones de los estudiantes para la consejería, el cribado/tamizaje y la atención paliativa. En comparación con los datos de la segunda fase del estudio, la intervención se asoció con cambios en la capacidad de los estudiantes en el proceso de toma de decisiones clínicas, que fue especialmente importante para el grupo de prevención 1 (OR = 7,5) y para el grupo de prevención 4 (OR = 30,05). No hubo diferencia estadísticamente significativa en el cambio de decisión de los estudiantes para el grupo de prevención 2 (OR = 0,95 p = 0,466) y para el grupo de prevención 3 (OR = 2,29 p = 0,932). **Conclusión**: la introducción de la prevención cuaternaria en el pregrado en medicina puede ayudar a guiar las decisiones clínicas hacia la prevención primaria y también para evitar intervenciones médicas innecesarias.

Palabras clave:
Prevención Cuaternaria
Toma de Decisiones
Educación Médica
Vietnam
Medicina Familiar y Comunitaria

Introduction

In the last decades medical practice underwent an explosion of scientific facts that brought medicine to a new era of experiential science, known as evidence-based medicine (EBM).[1] The EBM paradigm prompted medical practice into a new culture of protocols, technical procedures, heavy equipment, or simply of scientific evidence with intellectual information processing.[2] In this scenario, patients sometimes are not at the centre of caregivers' concerns leading to a medical decision that might be decontextualized from patient's perspectives on their health needs.[3] Thus, this health care model seems to be unsustainable in the quest for a best practice modern medicine ideal.

The EBM has also radically altered the patient's role in many respects. For instance, doctor-patient relationship has changed from the patient's dependent status (i.e. in traditional medicine where health professionals were more in control over clinical decision-making and clinical intervention), to a mutual decision sharing model or holistic model where patients take a privileged role. That requires health professionals to involve actively and effectively the patient's participation in clinical decision-making process whenever possible.[3] Payton et al.,[4] have pointed out that patients participation is based on the "recognition of the values of self-determination and the worth of individuals". Hence, physicians need to develop their own approaches to doctor-patient relationship by involving their patients in decision-making processes, as well as by understanding their patients' rights and responsibilities.

In this same stream of thoughts, in 1986, Jamoulle[5] introduced a new concept into doctor-patients decision-making process. According to his model, built on the 2×2 crosstab (Figure 1), there is an interaction between doctor's judgment as an 'objective' view and patient's judgment as a 'subjective' view. Based on this interface, he expressed four fields of healthcare preventive activities. Jamoulle's important contribution refers to the fourth field which became known as quaternary prevention (P4).[5] In its first version, quaternary prevention aimed to avoid over-medicalization and to protect patients from unnecessary interventions. As this concept was further explored, P4 has become more comprehensive, entailing also issues such as under-medicalization and prevention of iatrogenesis.[6-8] In this way, the current concept of P4 helps to harmonize some of commonly accepted general medical practices reinforcing that medical evidence should be 'tamed' by patient-centred approach. Thus, P4 concept has become a useful tool to strengthen the holistic approach of family medicine,[9] particularly for undergraduate medical students.

In 2013, P4 concept was introduced for the first time in the curriculum of postgraduate family medicine training programme at Pham Ngoc Thach University of Medicine in Hochiminh city, Vietnam[10] Since then, P4 was further integrated into the fifth-year of the undergraduate medical programme, raising some interesting development in research and medical education activities. This has also allowed for more medical students to benefit from this new reflective activity, which might potentially impact on students' future profession activities as well. The present article evaluates the fifth-year undergraduate medical student's attitude in medical decision-making process with the introduction of P4 concept on the course module: *'Screening and Prevention for Individual and Family'*.

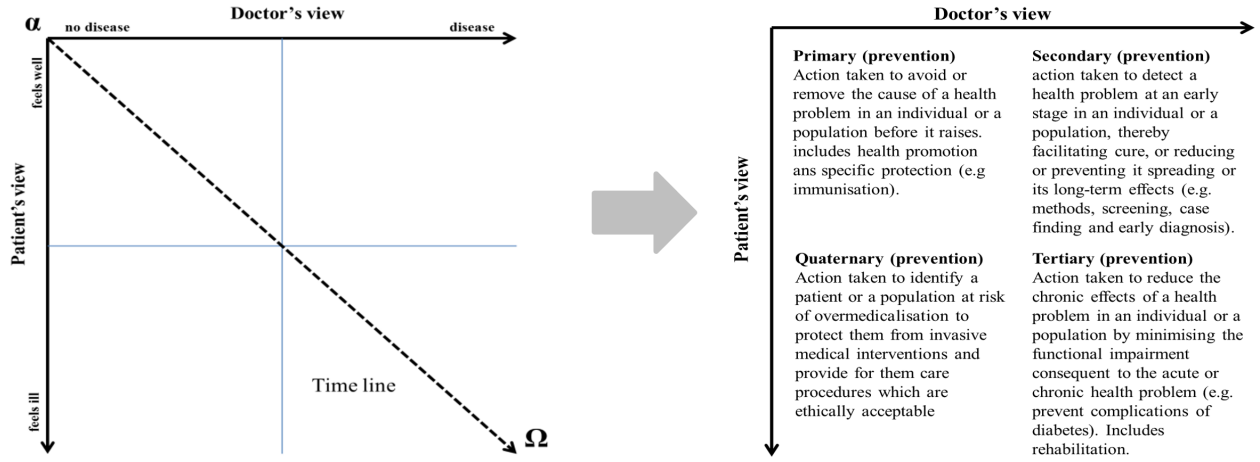

Figure 1. Jamoulle's quaternary prevention concept (P4) definition, reproduced with author's permission.[8]

Methods

Study design

This is a quantitative self-controlled intervention study carried out with fifth-year medical students of Pham Ngoc Thach University in Hochiminh city, Vietnam in September, 2014. A short pre-test and post-test survey was performed in order to assess the introduction of a lecture on P4 concept to the medical students. This lecture consisted of two slides addressing the P4 concept; followed by a talk about the differences between patient's and doctor's health perspectives; and finally some explanation on P4 concept applied as a tool in everyday clinical practice and its relation to other principles of family medicine.

To assess the impact of P4 concept on medical student decision-making process, three different simulated clinical scenarios were used as prompt to medical students. These three clinical vignettes were based on open-end scenarios with non-specified diseases, allowing students for more than one proposition or decision (Table 1). The medical students were asked to list their eventual interventions on two of three different simulated clinical scenarios. Students' propositions were classified into one of the four groups of prevention, according to Jamoulle's model.

In the above scenarios, based on voluntary participation, students were asked for writing down (on free-text) about their interventions/propositions prompted by an open question such as: "If you were a clinician/physician, which interventions would you have recommend for this patient?" These three simulated clinical scenarios were randomly assigned to the medical students in a way that each student would not have the same clinical scenario for the pre-test and post-test evaluation. The questionnaire collected no personal information of respondents, keeping all the students anonymised.

Based on Jamoulle's predefined four prevention groups, another researcher coded whatever the students have or not specified one of the four prevention groups. The student would be considered for having interest in specific a prevention group if they had at least one concerned proposition. In this way, for each student, it was expected to have four dichotomous 'Yes/No' variables for every pre-test – post-test evaluation. This research protocol had been verified and approved by the family medicine department of Pham Ngoc Thach University of Medicine, Hochiminh city, Vietnam.

Table 1. Simulated clinical scenarios, Pham Ngoc Thach University, Hochiminh city, Vietnam, 2014.

Scenario 1:	30-year-old woman who had been having a dental radiography of her tooth and had found to have a positive result of pregnancy quick-stick test.
Scenario 2:	52-year-old healthy man coming to see his doctor just for an annual medical check-up.
Scenario 3:	55-year-old man who was at his last stage of liver cancer and had a heavy pain in upper right abdomen.

Logistic regression model and variable selection method

The output variables are dichotomous which receive two possible outcomes: "yes" and "no". Therefore, the linking function for the output variable can be a logistic regression. For instance, student "i" has a probability P(i,j) of having a proposition classified in group "j" of prevention. In the same manner, the probability of not having a proposition classified in group "j" of prevention must be 1-P(i,j). Hence, the logistic regression function with random error variables should come in the following formula:

$$\log\left(\frac{P(i,j)}{1-P(i,j)}\right) = f(i,j) = f(\theta_i, \alpha_j)$$

Where α_j is an error variance for specific prevention, θ_i represents the impact of covariates in the function. The left part of this function represents the odds ratio (OR) of having a positive answer for a specific prevention group. The more this value is high, the more students are in favour of this group of prevention. Conversely, the right part of this function reserves to evaluate the impact of included parameters. In this case, the P4 lecture's impact is our main object of interest in this study. Further, we included clinical scenarios in the function as confounding factors.

As one simulated clinical scenario can generate four different groups of prevention, there were four logistic regression functions for each student. These functions were solved in parallel and shared some of the same proprieties of the included parameters. With this function, the coefficient θ gives directly an estimation OR of this factor on the clinical decisions, as shown in Table 2.

Table 2. The coefficient θ as a direct estimation OR on clinical decisions.

When $\theta = 0$, so OR = 1, it means that the probability of a positive decision and of a negative decision are equal.
When $\theta < 0$, so OR < 1, it means that the probability of a positive decision is less important than probability of a negative decision.
When $\theta > 0$, so OR > 1, it means that the probability of a positive decision is more important than probability of a negative decision.

Statistics analysis

All statistic tests were performed in the SPSS software, version 22. To estimate the coefficients in the logistic linking function, we applied a Bayesian approach with Markov chain Monte Carlo methods (MCMC). A more detailed description of this method can be found elsewhere.[11,12] Therefore, to make the MCMC inferences, we used Winbugs version 1.4.[13] There was a burn-out phase using a 50,000 first update to set up a prior value, therefore, a further 100,000 update was used to store the estimated parameters. A statistical decision threshold was conventionally set at p = 0.05.

Results

Data properties

A total of 115 fifth-year medical students attended the course module '*Screening and Prevention for Individual and Family*' resulting 230 answered questionnaires. From this, 10 pre-test survey questionnaires and 9 post-test survey questionnaires were not filled by students. Therefore, these 19 questionnaires were excluded off our data. This resulted in 211 answered questionnaires for data analysis comprising 109 pre-test and 102 post-test survey questionnaires (Table 3).

Table 3. Characteristics of the data presented corresponding to the three clinical scenarios.

Clinical scenarios	Questionnaires (%)		total
	Pre-test	Post-test	
Female, 30y old, pregnant + X-ray (1)	38 (34.9)	32 (31.4)	70 (33.2)
Male, 52y old, healthy (2)	40 (36.7)	36 (35.3)	76 (36.0)
Male, 55y old, liver cancer (3)	31 (28.4)	34 (33.3)	65 (30.8)
Total	109	102	211

Between these three simulated scenarios, the number of questionnaires was equally distributed; there was no significant difference in distribution ($p = 0.650$, using One-sample chi-square test at theory distribution ratio of 1:1:1). The same finding occurred within subgroup pre-test and post-test surveys and the statistical tests showed no significance in results $p = 0.541$ and $p = 0.889$, respectively. Comparing between two pre-test and post-test surveys, the difference was not significant as well ($p = 0.729$, Chi-square test).

Groups of prevention

Students' propositions were coded into one of the four groups of prevention according to Jamoulle's model. With the combined data of the two periods, results showed out that a majority of students proposed predominantly their actions in prevention groups 1 and 2 (Table 4). Concerning the third scenario, 34% of students had one or more interventions classified in prevention group 3, which corresponds to the patient with last-stage of liver cancer coming to see a doctor for pain relief.

Table 4. Proportion of students who had at least one clinical intervention corresponding to each group of prevention.

Scenarios Group 1		Groups of prevention (presented in percentage % of the students answering to the specific scenario)				Students
		Group 1	Group 2	Group 3	Group 4	
Female, 30y old, pregnant + X-ray (1)	Pre-test	29 (76.3)	34 (89.5)	11 (28.9)	36 (5.3)	38
	Post-test	26 (81.3)	28 (87.5)	16 (50.0)	22 (31.3)	32
Male, 52y old, healthy (2)	Pre-test	27 (57.5)	38 (95.0)	6 (15.0)	39 (2.5)	40
	Post-test	33 (91.7)	36 (100)	2 (5.6)	36 (100)	36
Male, 55y old, liver cancer (3)	Pre-test	13 (41.9)	21 (67.7)	24 (77.4)	23 (25.8)	31
	Post-test	22 (64.7)	18 (52.9)	29 (85.3)	6 (82.4)	34

Clinical scenarios

Since each scenario has its prior properties they might have influenced the students' preventive intervention proposition. In this data, the results of the logistic regression function have the purpose to figure out the expected intentions of these scenarios (Figure 2). For instance, in the first two scenarios, there were tendencies to have actions on health promotion (Group 1), whereas screening for health risk problems tended to occur in Group 2. Since these two simulated patients did not manifest any relevant disease, they attributed a negative coefficient of action for prevention groups 3 and 4. In the third scenario, the analysis gives a positive coefficient for prevention group 2 and group 3, where actions should be concentrated on curative treatments and palliative care, which reflects the true medical needs of this simulated patient at later stage of liver cancer.

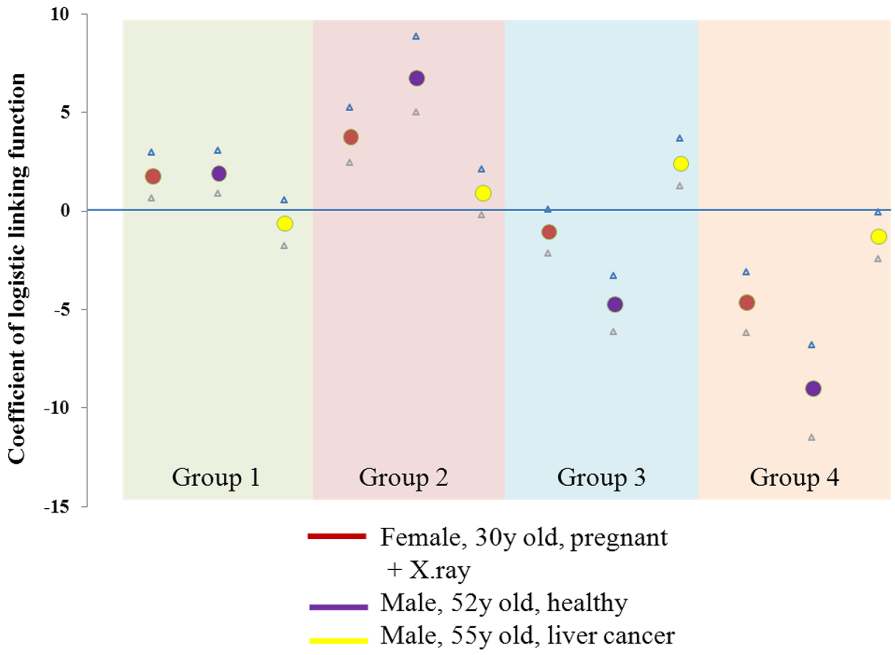

Figure 2. Coefficient of logistic regression function that determines the intention to propose an intervention in each prevention group in accordance to three clinical scenarios (coefficient > 0 means students having more intention to take action in the corresponding prevention group and vice-versa).

Impact of P4 in the 'Screening and Prevention for Individual and Family' course module

Table 5 presents the independent effects of a lecture on P4 concept when it was introduced in the course module. There were important OR for the intervention in the prevention groups 1 and 4. For this specific experience, after our lecture, the students might have significantly 7.46 times more likely to propose an action in prevention group 1. Further, this effect was as high as 30.05 times more likely to propose an action in prevention group 4. Meanwhile, the lecture had almost no influence on the student's proposition of action to prevention group 2 (OR = 0.95 p = 0.466) and prevention group 3 (OR = 2.29 p = 0.932).

Table 5. Coefficient of the logistic function attributed to the introduction of P4 concept in the course, presented by each group of prevention.

	Coefficient	Standard deviation	OR *	p
Group 1	2.01	0.526	7.46	<0.001
Group 2	-0.05	0.641	0.95	0.466
Group 3	0.83	0.558	2.29	0.932
Group 4	3.40	0.680	30.05	<0.001

* odd ratio (OR), is estimated by the natural log base "e" to the exponent of the correspondent coefficient. OR means how important the introduction of P4 concept has an influence on the student's proposition toward specific group of prevention. "p" value indicates the statistical level of significance of Z-test for the hypothesis of the difference of coefficient from 0. Note that when p > 0.05, which statistically corresponds to no significant effect of lecture on the student's proposition.

Discussion

In 2003, for the first time, a prevention approach to overmedicalization and inappropriate medical interventions was recognized as the new preventive concept in WONCA's dictionary: the quaternary prevention.[6] As P4 operates in a different logic of the previous prevention concepts (which are bound to linear time construct), its new reflective approach to prevention

fills the gap within doctor-patient relationship and also supports an important role of patients' active involvement in health care decision-making process.

The importance of the introduction of P4 in Vietnamese medicine course

Currently, P4 concept is gaining its momentum in medical professional around the world,[8,14,15] and has just been recently introduced in Vietnam. For instance, during the six years of undergraduate medical programme in Vietnam, students have a disproportionate medical and clinical formation based on focal-specialists (consultants) and a hospital type of care environment. Since most clinical practice is carried out in hospital context, medical students are exposed only to inpatient and referred hospitalized diseases (usually rare in community based settings). Meanwhile, students have not the privilege to get in contact with patients where they would have opportunity to understand the whole aspects of patients' health; a place where they could build up a confident relationship with patients to ensure a continuity of care; and where patients could share their concerns as well as get the opportunity to play a more active role in health decision-making process. Hence, the introduction of P4 in the undergraduate medical course might help in seeding a family medicine approach to patients care.

In this regard, P4 concept can better represent patient's advocacy role of general practitioners/family doctors. The long term relationship with a patient gives an opportunity to primary health care providers who can study the biopsychosocial model of their patients to explain and to understand patients' medical needs.[9] Further, by managing the interface with other medical specialties – as there are permanent concerns about the efficient use of health care resources and the iatrogenic risk of unnecessary medical interventions - the general practitioners' advocacy role ensures a protection and guides patients through the complexities of the health care system.[16] Thus, this has resonance with quaternary prevention, explaining its widespread use by general practice and family medicine.[6,8]

Moreover, P4 has a different logic in the definition of prevention, comparing to previous levels, which has the potential to strengthen the communication between patients and doctors in a shared decision-making process. In respect to this approach, patients can present their concerns, their specific social-familial situation, and their knowledge about their own body; while doctors can use practice wisdom and the best available medical evidence as reference for mutual decision-making. This mutual decision sharing practice is equally one of the characteristics of patient-centred care model.[16] For this reason, in our perspective, P4 should be used as a reasoning framework rather than just a classical fourth level of prevention.

Interpretation of findings

This study has just analysed P4 concept as a brief intervention, presented within a usual lecture on prevention. Despite this brief intervention, the differences found between pre-test and post-test questionnaire survey showed that changes in students' aptitude on the clinical decision can be attributed to the P4 lecture intervention. This means that P4 framework might change the clinical reasoning and decisions of medical students. For instance, students were more naturally concerned about the foetus' risk of an invasive diagnosis procedure on pregnant women, as well as about the use of unnecessary scanner image on a patient at later cancer stage. These significant results may provide two interesting findings.

First, the introduction of P4 reasoning framework might stimulate medical students in a holistic reasoning process, which is one of the principles of family medicine.[16] Students might also become more self-directed searchers for acquiring cognitive competencies in order to analyse relevant information on medical interventions based on patients' needs. Second, the introduction of P4 concept in the course module might contribute to students as future caregivers in the clinical decision-making process. Therefore, there is a potential for reproducing the same pedagogical effect to other health professionals.

Our findings suggest a positive behavioural change in students' decision-making process. For instance, the pre-test survey gave an important proportion of proposed clinical interventions, which are categorized only in the prevention groups 1, 2, and 3 of Jamoulle's model. These were not necessarily wrong decisions, but not the best practice either. How can a doctor be considered of having a good practice when he demands intensive laboratory tests/examinations without the required justifications that these interventions would necessarily lead to more benefit than harm?[15] This clinical practice could equally be recognized at all levels of Vietnam's national healthcare system,[10] which might be explained by the international trend of hospital-centrism described in the WHO 2008 report.[17]

Strengths and limitations

This is the first research attempt applying Jamoulle's quaternary prevention model as a tool for improving medical students' decision-making process. This is important for strengthening the core values of family medicine (i.e. patient-centred approach). However, it has some weaknesses in the applied research methodology as the pre-test/post-test survey during the lecture could have been exposed to subjective bias. For instance, students might have the tendency to give a positive answer corresponding to the lecture's content and teachers' opinions. Furthermore, the sample was limited only to the fifth-year undergraduate medical students who would have neither enough real experience of clinical decision nor concern of their professional responsibilities when facing a more complex clinical scenario.

Implications for further research

The significant impact of P4 framework on the clinical decision was measured just after the lecture. We have no information to support the retaining of this effect for long term. Additionally, our approach was based only on three simulated scenarios which were not appropriate to evaluate clinical aptitude, especially for P4 framework as it demands: (a) professional health care clinical context; (b) appropriate patient's information; and above all (c) patient participation in clinical decision. For these reasons, future researches should be conducted in order to explore these aspects.

Conclusion

Introducing quaternary prevention framework in the undergraduate medical course can help to steer clinical decisions toward the patient-centred model. Hence, quaternary prevention framework can be used as one of the reasoning tools to demonstrate family medicine principles and to avoid inappropriate medical interventions in clinical decision.

References

1. Greenhalgh T, Howick J, Maskrey N, Evidence Based Medicine Renaissance Group. Evidence based medicine: a movement in crisis? BMJ. 2014;348:g3725. http://dx.doi.org/10.1136/bmj.g3725. PMid:24927763.
2. Gérvas J, Starfield B, Violán C, Minué S. GPs with special interests: unanswered questions. Br J Gen Pract. 2007;57(544):912-917. http://dx.doi.org/10.3399/096016407782317865. PMid:17976293.
3. Higgs J, Jones MA. Clinical decision making and multiple problem spaces. In: Higgs J, Jones MA, Loftus S, Christense N, editors. Clinical reasoning in the health professions. 3rd ed. Boston: Elsevier Health Sciences; 2008. p.3-17.
4. Payton OD, Nelson CE, Ozer MN. Patient participation in program planning: a manual for therapist. Philadelphia: Davis; 1990.
5. Jamoulle M. Information et informatisation en médecine générale. Les informa-g-iciens. 1986:193-209.
6. Bentzen N. WONCA Dictionary of general/family practice. Copenhagen: Laegeforeningens Forlag; 2003.
7. Porta M. A Dictionary of epidemiology. 6th ed. Oxford University Press; 2014.
8. Jamoulle M, Roland M. Quaternary prevention-From Wonca world Hong Kong 1995 to Wonca world Prague 2013. Prague: Wonca World Prague; 2013.
9. McWhinney IR. A textbook of family medicine. New York: Oxford University Press; 1989.
10. Vo LT. Développement de la médecine de famille au Vietnam. Liège: Université de Liège; 2013.
11. Ntzoufras I. Bayesian modeling using WinBUGS. Hoboken: John Wiley & Sons; 2009.
12. Rijmen F, Tuerlinckx F, Meulders M, Smits DJ, Balázs K. Mixed model estimation methods for the Rasch model. J Appl Meas. 2005;6(3):273-88. PMID: 15942071.
13. Lunn DJ, Thomas A, Best N, Spiegelhalter D. WinBUGS: a Bayesian modelling framework. Concepts, structure, and extensibility. Stat Comput. 2000;10(4):325-337. http://dx.doi.org/10.1023/A:1008929526011
14. Jamoulle M. Quaternary prevention, an answer of family doctors to overmedicalization. Int J Health Policy Manag. 2015;4(2):61-64. http://dx.doi.org/10.15171/ijhpm.2015.24
15. Pandve HT. Quaternary prevention: need of the hour. J Family Med Prim Care. 2014;3(4):309-310.
16. WONCA EUROPE. The European definition of general practice/Family medicine. London; 2011 [cited 2013 Sept 4] Available from: http://www.woncaeurope.org/sites/default/files/documents/Definition%203rd%20ed%202011%20with%20revised%20wonca%20tree.pdf
17. World Health Organization. Primary health care: now more than ever. Geneva: World Health Organization; 2008.

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ORIGINAL ARTICLES

Quaternary prevention: a gaze on medicalization in the practice of family doctors

Prevenção quaternária: um olhar sobre a medicalização na prática dos médicos de família

Prevención cuaternaria: una mirada a la medicalización en la práctica de los médicos de familia

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Abstract

The medicalization is a complex and widespread social phenomenon which involves different agents and institutions, such as the pharmaceutical and medical industry, governments, health systems, health professionals, and citizens. In this regard, doctors and health professionals play an important role in reproducing and struggling with medicalization, by recognizing that medicine and health care can generate as much harm as benefits. Family doctors have to deal with overmedicalization and its associated phenomena (i.e. overdiagnosis, overtreatment, disease mongering) on a daily basis as they act as gatekeepers of health systems. As the first point of contact, family physicians and their health teams get the demands and social needs brought by individuals and communities under their care, which usually are influenced by the health marketing and an interventionist medical perspective. This article discusses some key concepts of medicalization and its determinants, especially the contributions of biomedical science and its epistemological basis to the phenomenon. It also briefly develops some thoughts on the medicalization, in the Brazilian context. Finally, it analyses the quaternary prevention approach to medicalization which proposes changes in its object and attitude to medical practice in order to avoid unnecessary interventions, thus, protecting patients from the excesses of medicine.

Keywords:
Medicalization
Overmedicalization
Physician-Patient Relations
Quaternary Prevention
Family Medicine

Resumo

A medicalização é um fenômeno social complexo e disseminado no qual estão envolvidos diferentes agentes e instituições, tais como a indústria médica/farmacêutica, governos, profissionais/sistemas de saúde e cidadãos. Por sua vez, médicos e profissionais de saúde desempenham importante papel na reprodução e no enfrentamento da medicalização, haja visto que a medicina e os cuidados em saúde podem gerar tanto danos como benefícios. Médicos de família lidam diariamente com a sobremedicalização e seus fenômenos associados (i.e. sobrediagnóstico, sobretratamento, comercialização de doenças) por desempenharem função-filtro nos sistemas de saúde. Por ser o primeiro ponto de contato, esses profissionais e suas equipes acolhem as demandas e necessidades sociais trazidas pelas pessoas e comunidades sob seus cuidados, que comumente estão influenciadas por uma perspectiva médica intervencionista e pelo marketing da saúde. Este artigo discute alguns conceitos principais da medicalização e seus determinantes, em especial as contribuições da ciência biomédica e suas bases epistemológicas para o fenômeno. Ele também desenvolve, sucintamente, algumas reflexões sobre a medicalização na prática do médico de família e comunidade, no contexto brasileiro. Por fim, analisa o enfoque da prevenção quaternária acerca da medicalização, que propõe mudanças de objeto e de atitude na prática médica, evitando, assim, intervenções desnecessárias e protegendo os pacientes dos excessos da medicina.

Palavras-chave:
Medicalização
Sobremedicalização
Relações Médico-Paciente
Prevenção quaternária
Medicina de Família e Comunidade

Resumen

La medicalización es un fenómeno social complejo y diseminado que involucra a diferentes agentes e instituciones, tales como la industria farmacéutica y médica, los gobiernos, los profesionales/sistemas de salud y los ciudadanos. En este sentido, los médicos y profesionales de la salud desempeñan un papel importante en la reproducción y en el enfrentamiento de la medicalización, dado el hecho de que la medicina y la asistencia sanitaria pueden generar tanto daños como beneficios. Los médicos de familia tienen que lidiar diariamente con la sobremedicalización y sus fenómenos asociados (es decir, el sobrediagnóstico, sobretratamiento, tráfico de enfermedades), ya que desempeñan función-filtro en los sistemas de salud. Como primer punto de contacto, estos profesionales y sus equipos de salud reciben las demandas y necesidades sociales interpuestos por las personas y comunidades bajo su cuidado, que suelen ser influenciados por la comercialización de la salud y una perspectiva médico-intervencionista. Este artículo discute algunos conceptos clave de la medicalización y sus determinantes, en especial las contribuciones de la ciencia biomédica y su base epistemológica para el fenómeno. También desarrolla brevemente algunas reflexiones sobre la medicalización de la práctica diaria de los médicos de familia y comunidad en el contexto brasileño. Por último, se analiza el enfoque de la prevención cuaternaria a la medicalización, que propone cambios en su objeto y en la actitud de la práctica médica con el fin de evitar intervenciones innecesarias, y por lo tanto, proteger a los pacientes de los excesos de la medicina.

Palabras clave:
Medicalización
Sobremedicalización
Relaciones Médico-Paciente
Prevención Cuaternaria
Medicina familiar y Comunitaria

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Introduction

> *A newcomer family in the community (a couple with five to six children/adolescents) sought medical assistance in the health centre, all with the same complaints: "headache, stomach pain and nervousness". This, in advance, caught our attention. The thirteen years old daughter and the twenty years old son were seen by me. A colleague took care of the eight years old boy accompanied by his mother. With the teenage girl, I managed to expand my approach, addressing some of her concerns with no need for drug prescriptions, suffice some advice and guidance. In regard to the young man, my assessment was that he was having a mood problem and "stomach pain". I have explored his food intake pattern, labour and financial issues, family relationship, but nothing remarkable was appointed out by him. So, I ended up prescribing him a proton pump inhibitor (free of charge in our health centre pharmacy), making several dietary and other related orientations. What a surprise when my colleague - who saw the boy accompanied by his mother, complaining the same symptoms of my two patients – told me that they were going hungry. The child spoke as follows: - "I already know all that doctors are telling us to eat every three hours, but at home we only eat twice a day...". Children usually tell the truth. Were the others ashamed to talk about such deprivation even when being asked about it? Did I have the skills required to address such issues? I felt really bad, "I'm treating hunger with omeprazole...". Author's narrative about a medical consultation performed during her specialty training programme.* (Adapted from Cardoso).[1]

To investigate the medicalization in the context of Primary Health Care (PHC) may seem, at first, paying attention to a less significant process in this level of attention and more expressive in hospital and specialised (consultant-based) care. However, as we live in an industrialized, secular, globalized and, according to several authors, medicalized world, as well as PHC is the gateway to the national health systems, we can consider that medicalization is equally (or more) present in this level of attention as it is in others.[2-4]

Indeed, the medicalization process is significant in PHC and, depending on the knowledge, practices, forms of organisation of services and institutions - and the consequent relationships established between people - health professionals and other staff who work in the health field, including family doctors, can medicalize more, or less. It is important to recognize the complexity and multiplicity of available scenarios and that besides the coexistence of medicalization and the demedicalization in the same situation, we may find circumstances where doctors medicalize to demedicalize and vice-versa. The phenomenon and its antithesis are always associated and varying in degrees of prevalence.[5-7]

Excessive use of *hard technologies* such as tests/examinations, medications, procedures - the maximalist medicine - is one of the expressions of medicalization, but not the phenomenon as a whole. It can be based on "social control" (control of people's lives by health institutions and government), on people's dependence of health professionals and services, on people's knowledge expropriation about their own health, on the use of medical technologies to treat psychosocial suffering, among other expressions of this phenomenon, with profound impact on contemporary social setting, generating not only clinical, but also social and cultural iatrogenics.[1,3]

Large part of family doctors realise these dynamics in their daily practice and, although the study of medicalization has arisen in the social sciences in the mid-twentieth century, it is within family medicine and public/collective health that have emerged great contributions in this area.[8-10] Family and Community Medicine (FCM), in particular, has proposed some theoretical models and methods that look for ways to face this process in clinical practice, among which stands out the quaternary prevention.[11,12]

This article aims to discuss the concept of medicalization and some aspects of this phenomenon in primary health care in Brazilian context. Provides a brief analysis of how quaternary prevention perceives the phenomenon and makes some reflections for the transformation of the scenario in the clinical field. It derives from a qualitative study carried out by the author during her master's degree, for which was used a literature review on the topic and a case study with participant observation (in a family health team in a small town in the interior of Brazil) to apprehend some forms of medicalization in Brazilian PHC.[1]

Conceptualizing medicalization

The term Medicalization has arisen and consolidated between the 1960s and 1970s to refer to a social phenomenon emerging with the advent of scientific medicine and the establishment of medical profession/institution and its association with state policies.[3,13-16] The term was a synonym to the expansion of the limits of medicine, "a medical invasion" into the context of everyday life, body and behaviour, through the power achieved by medical corporation over health-disease definition and the intervention on this process. It specially referred to "social control" – enhanced with the birth of social medicine – and to the impacts of biomedicine and its clinical model focused on diseases.[3,17] Currently, medicalization is related to the greater influence of medicine in people's lives, with outstanding importance of agents outside medical profession, such as medical and pharmaceutical industry, healthcare services, mass media, citizens, consumers and the government.[16,18-23]

Therefore, medicalization, a complex social process which may refer either to the phenomenon, as well as to the causes and consequences of it, has multiple meanings. In general, the literature acknowledge the contribution of biomedicine - and its epistemological foundations and praxis - to the genesis of medicalization (Table 1).[3, 24-30]

The characteristics listed in Table 1 show a knowledge-practice with great potential for medicalization. Among them, the concealment of social conflicts and problems (with their consequent individualization and depoliticization) is one of the most questionable aspects of ethical and social justice, subsequent to the *modus operandi* of biomedicine. The "control of the social" is still a relevant process of medicalization, although the medical power and its discourse are diffuse among different agents and institutions in the contemporary world, no longer concentrated in medical institutions and the State.[17,18,26]

In trying to find a unique concept, Peter Conrad, an authority on the subject, presents the medical definition as the central element of medicalization: *"medicalization occurs when a medical frame or definition has been applied to understand or manage a problem"* (p. 211),[31] or moreover, "*a process by which nonmedical problems become defined and treated as medical problems, usually in terms of illnesses or disorders*" (p. 209).[31] These concepts are quite relevant to the medical literature as they refer to the creation of new diseases and the expansion of their limits (e.g. "pre-diseases") in the era of clinical epidemiology, big pharmas and relevant medical classifications such as the *Diagnostic and Statistical Manual of Mental Disorders (DSM)*. These understandings of medicalization are well incorporated by the discussion of *disease mongering*.[32-34]

Table 1. Epistemological basis and characteristics of biomedical praxis that predispose it to medicalize.

Epistemological basis
Positivism.
Biological reductionism.
Production of generalized abstractions about sickness.
Dualistic division between mind and body.
Metaphor of human body as a machine.
Ontological conception of disease.
Disconnection between "illness" and "disease".
Standardization of pathological and normal according to biomedical and quantitative parameters independent of the existence of suffering ("*pathos*", *illness*).
Praxis characteristics
Prioritization of (label) diagnosis to therapy.
Undervaluing the psychosocial dimensions of illness and the singularity of the ailment or illness process.
Assumption of disease abstractions as "real".
Simplification of the clinic, focused on objective and quantifiable parameters ("clinimetrics").
Development of a reductionist therapy (almost restricted to pharmaceutical or behavioural prescriptions).
Reaffirmation of heteronomy and asymmetry in the doctor-patient relationship with enhanced dependence.
Appreciation of *hard technologies* (tests, drugs, procedures) over *soft technologies* (doctor-patient relationship, psychosocial interventions, etc).
Disqualification of illness in the absence of a recognised disease (treating it as syndromes, somatization or denying patients' suffering).
Concealment of psychosocial causation of disease by overemphasizing biological factors

Source: elaborated by the author based on references 3, 24-30.

Nevertheless, there has been increasing concerns about medicalization definition as it refers to a social process that can produce as many benefits as harms. Some authors use the term "overmedicalization" to communicate" an over-expansion of medicine's professional jurisdiction", and an excess of healthcare related to market expansion, such as treatment (and pathologization) of risk factors, behaviours, social suffering, and natural/physiological stages of life (i.e. childbirth, aging and bereavement), in order to generate profit instead of addressing healthcare needs. [3,4(p. 1943),15]

Therefore, *overmedicalization* could also be defined as an excess of exposure to or seeking for health care to the extent that it does not confer any benefit in terms of health and well-being (Gavilán and Jamoulle, 2014, personal communication, see Acknowledgments*). This term is directly related to overscreening, overdiagnosis, overtreatment, overmedication, overprevention and many other neologisms under increasing attention in medical literature. All these terms refer to "clinical issues" of the medicalization phenomenon, and the daily challenges faced by family doctors.

Figure 1 highlights the dimensions of medicalization: conceptual, institutional and interactional;[31] and contain some key features, such as resulting practices, social agents (institutions), epistemological framework of biomedical science, macro-structural and micro determinants (interactional), which co-produce and determine it, acting sometimes as cause, either as consequence.[1,31,35] This combination of elements points to the complexity of medicalization.

According to Conrad and Schneider (1980 apud Conrad, 1992)[31] the conceptual dimension is the use of vocabulary or medical model to define a problem that would not necessarily have an applicable medical treatment. In the institutional dimension, organisations would adopt a medical approach to treat a variety of problems, whereas the interactional dimension occurs in the doctor-patient encounter, "*when a physician defines a problem as medical (i.e. gives a medical diagnosis) or treats a "social" problem with a medical form of treatment."* (p. 211).[31]

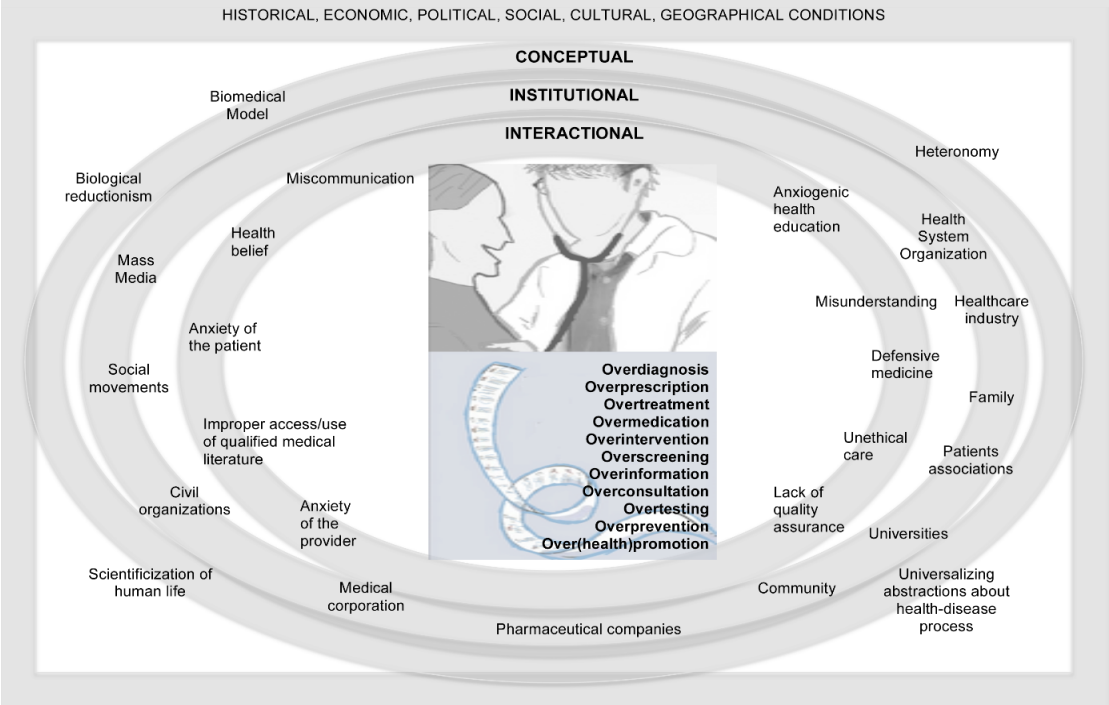

Figure 1. Medicalization dimensions from the perspective of family doctors: the resulting phenomena and their causes/determinants and agents.
Source: developed by the author based on Conrad,[31] Jamoulle,[35] and Cardoso.[1]

Medicalization in the practice of family and community doctors

Although doctors are still important agents in the medicalization process and deal with it daily, medicalization may not be easily perceived, and therefore faced, in PHC clinical practice. In this context, medicalization has been commonly associated with excessive and inappropriate use of medications (prescribed or not) and clinical malpractice (related to ethical violations or insufficient biomedical knowledge) with medicalized people and pharmaceutical industry as its main agents. However, the phenomenon has deeper roots in science itself, being widespread in many levels, institutions and discourses of contemporary society.

Even PHC attributes can either favour the confrontation of medicalization or strengthen it. If the care provided in this level of attention is strictly focused on disease and its biological dimension (and other practice characteristics cited in Table 1), broad access and multiple contacts along one or more episodes of care might lead not only to clinical harms, as well as social and cultural damages. Illich[5] argues that the doctor-patient relationship, and the pastoral care (exhortation of lifestyles, habits and self-care) by itself, already expropriate the knowledge-power of people about their self-care:

> [...] *There is no doubt that most of this care convinces the patients that whatever they themselves have changed in their life-style they owe to you* [the doctor]. *Rather than being healthier, which always means being more autonomous, your client, through your care, becomes more dependent, more a patient. Most general care advances the medicalization of the patient's life.* (p. 464-465)[5]

In the Brazilian National Health System (SUS), family doctors, nurses and community health workers (CHW) are the front-line professionals. This Family Health Strategy (FHS) team has been understood as a dispositive for overcoming the doctor-centred health care (focused on the disease) and for developing practices under the biopsychosocial model.[36] However, it is recognized that the multidisciplinary team as the main strategy is insufficient to address the medicalization. Health professions, in general, share the same epistemological basis of biomedicine, a common social scenario of market interests, institutional settings and management that would favour medicalization, even though considering ethical professional practices.[1,37,38]

In Brazil, the proportion of doctor-people registered (average of 3000 or 4000 people per FHS team) hinders not only the user access to PHC services, but also a comprehensive, coordinated and continued health care. Additionally, non-medical professionals still play a marginal role in substitutive tasks, working predominantly with preventive and surveillance activities.[37,39,40]

The inadequate team dimensioning favours an excessive demand pressure - and the perception of an inexhaustible demand - increasing the medicalization due to the following situations: (1) the access restriction to PHC, which induces people to seek healthcare attention elsewhere in more iatrogenic levels of care, such as emergency rooms, hospitals, specialty clinics and private services; (2) the high pressure for health assistance that favours a reductionist, interventionist and low quality clinical care in PHC, which diverts professionals' attention to acute conditions, risk factors and diseases of epidemiological interest, losing the comprehensiveness and patient-centred approach; and (3) the predominance of preventive actions over curative ones - in Brazilian government official guidelines and many clinical settings - points to the dispute between overmedicalization and undermedicalization and the consequent ethical dilemma of providing attention to healthy people instead of focusing our efforts on caring for the sick ones.[1,41,42] It is important to acknowledge the existence of institutional iatrogenic in this context, secondary to the health system inadequacies. An over-emphasis on inadequate quantitative targets and on fragmented, unethical and anxiogenic screening campaigns can also result in institutional iatrogenesis.[35,43]

Beyond the health system influences, citizens and health professionals act in a dialectic relationship between medicalization and demedicalization. The technological fetish, the impulse/need for consumption and the atmosphere/marketing created by the private sector, foster the dependence, generating unrealistic expectations by patients about the benefits and harms of medical interventions and the demand for access to consumer goods (i.e. consultations, medical procedures).[33,44] This demand for consumption is renamed as autonomy in a complex relationship in which family doctors and the users of health services are deeply intertwined.

Doctors have great difficulty in dealing with patients' expectations and their health needs: "The demands generate anxiety and anguish among health staff either due to its quantity (unmet demand, unhealthier population by living conditions, demand for technological consumption, etc) as for its content (pain, suffering, poverty, violence, madness, etc)" (p. 16).[45] Professionals justify the excessive intervention by the lack of time to address the causes of problems, the inability to intervene in psychosocial causal problems, and also by the imperative to respond to peoples' expectations.[1,12] Indeed, the challenges are great in responding to health needs and demands since:

> [...] *interests and desires cannot be purely fought or ignored in the day-to-day health care* [activities], *as these can escalate into violence, broken relationship, etc., neither be reinforced or met globally, since this would only further medicalize the situation, resulting in counterproductivity and more dependence.* (p. 142).[30]

The inability of health professionals (even those working in PHC) in dealing with disease complexity is evident, and even more challenging to dialogue with people and their illnesses in contexts of great socio-economic and cultural vulnerability. This requires skills and competencies from doctors and other health professionals that have not been necessarily taught-learned during their professional training.

Quaternary prevention and overmedicalization

The concept of quaternary prevention (P4) was born from a real and practical need of family medicine, especially in dealing with people and their illnesses in situations *"that completely escape any statistical authority and any predictability"* (p. 398).[11] Proposed by the Belgium GP Marc Jamoulle,[11] quaternary prevention relates to the other levels of prevention proposed by Leavell and Clark, and establishes a set of public health efforts aiming to identify people at risk for excessive medicalization (overmedicalization) in order to protect them from "new medical invasions" and to suggest ethically acceptable interventions, stemming from different perspectives and the relation between people (patients) and doctors (Figure 2).[11,46]

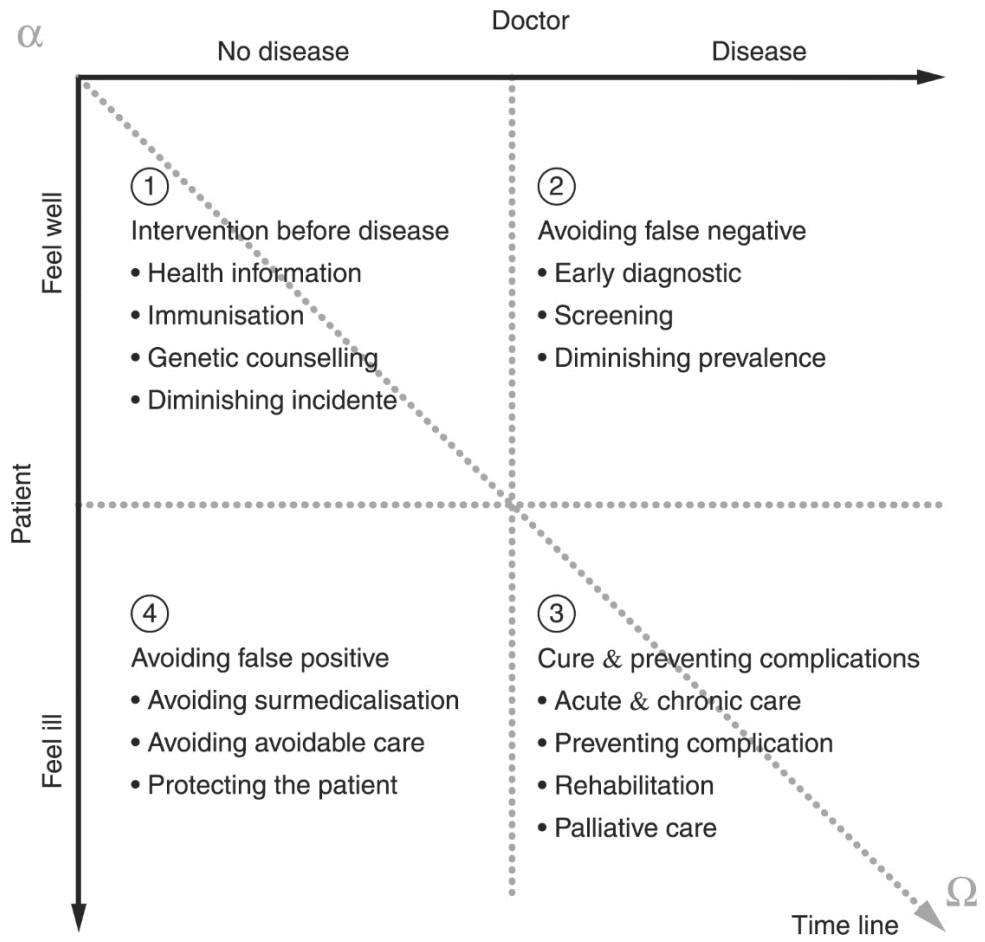

Figure 2. Specification of health activities according to four levels of prevention in the quaternary prevention model. Source: adapted from Jamoulle and Roland.[46]

Quaternary prevention recognizes medicalization in one of its earlier understandings, as "invasion" or "medical imperialism", although its concept and graphical representation in a table 2x2 (Figures 2 and 3) allow for comprehending medicalization in all its complexity, even in its most contemporary expressions that emphasize the importance of a "medical definition". Quaternary prevention also exposes possible outcomes (and harms) of different perceptions of health-disease process in clinical practice, *illness* ("feeling sick") and *disease* ("disease from a medical gaze"), under the risk of disease and its ontologization taking priority over individuals patients and their suffering. This constitutes a central element of the medicalization process.[1] Therefore, P4 identifies the "feeling sick", in the absence of "disease from a medical gaze" as the most susceptible moment for overmedicalization; hence, vulnerable to unnecessary interventions, labels and inappropriate diagnosis, as well as to the medicalization of psychosocial suffering/problems.[30]

Although in its graphic representation the actions of "avoid unnecessary care" seem limited only to quadrant 4, the P4 points to other levels of prevention as responsible for people feeling ill and also for iatrogeny, without, however, ignoring patients' active role in the medicalization process (Figure 3).[35] Quaternary prevention actions should be carried out in different stages of the health-disease process, whereby individuals are at "risk of overmedicalization" at any time of their health care.

Norman and Tesser[47] propose guidelines for P4 operationalization in the practice of family and community doctors. According to the authors, the more the potential for people's suffering is projected into the "future" the more the need for P4 actions, thus indicating a hierarchy of these actions. For instance, they are most needed in primary and secondary prevention levels, exploring future illnesses and risk factors (quadrants 1 and 2 in Figure 2). These actions can also be used in tertiary prevention level, which deals with people with medical conditions ranging from moderate to well-defined

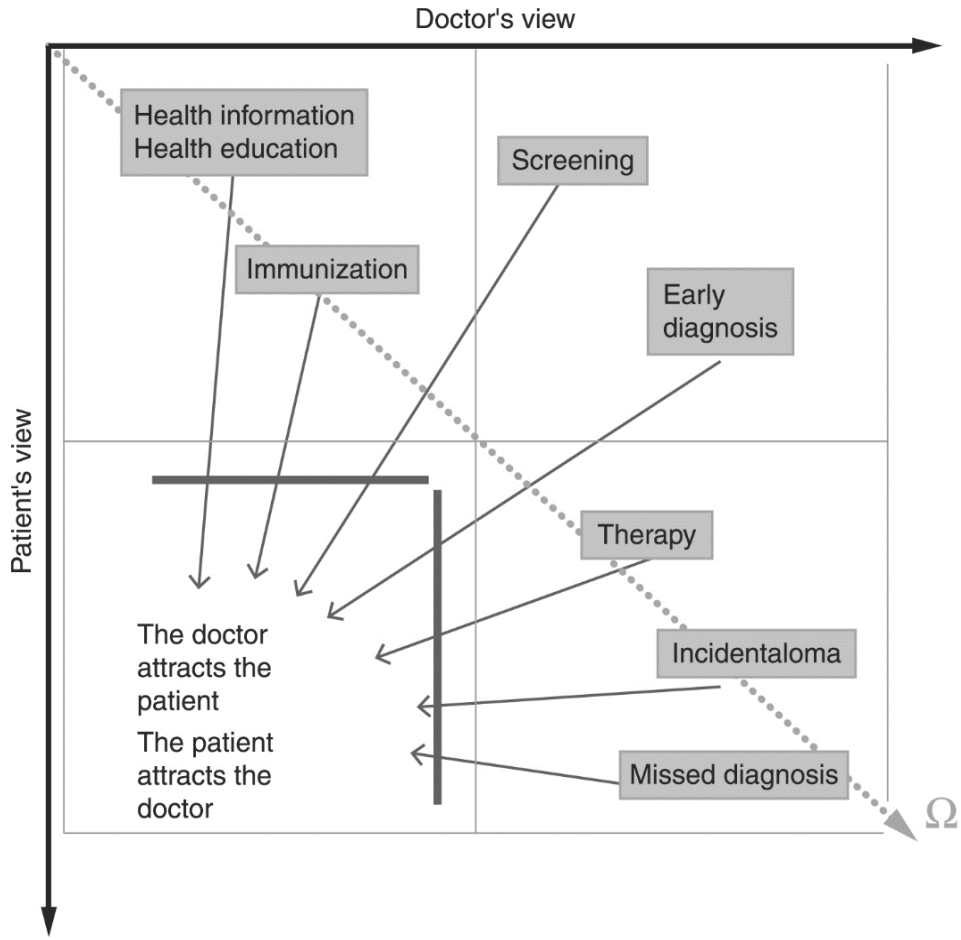

Figure 3. Preventive actions that lead health professionals and users to the scope of quaternary prevention. Source: adapted from Jamoulle.[35]

in biomedicine (quadrant 3 in Figure 2). However, between these extremes there is an array of clinical conditions with semiological expression of complex and undefined signs/symptoms that also require intense P4 actions (quadrant 4 in Figure 2).[25,47] This analysis points to the differences between "preventive contract" and "curative contract" in the clinical relationship and P4 activities: limiting damage and reducing interventions in preventive actions are compelling ethical duties (prevention tolerates no damage), while curative actions carry a higher damage tolerance threshold, justified by the intention to recover health.[42]

Quaternary prevention also highlights the importance of the doctor-patient relationship by: (a) recognising person's uniqueness and autonomy; (b) valuing a shared decision-making process; (c) adopting a clinical method focused on the person;[10] and (d) developing relational and communicational skills in the clinical encounter, that can result either in medicalization or coproduction of health and autonomy.[12] P4 particularly systematizes actions to challenge the interactional dimension of medicalization, although it also contributes to the recognition and critics to its conceptual and institutional dimensions (Figure 1).

In quaternary prevention it is common the presence of "P4 fighters" (as the P4 enthusiasts define themselves)that emphasize the market's needs and evidence-based medicine data (the latter as an antidote) in the battle against overmedicalization, though, with little attention to clinical relationship. As stated by Jamoulle:

> *There is no difference between the* [socially organised] *movements on the issue of overdiagnosis and selling-sickness* [disease mongering] *and the battle against health gangsters (such as those gangster, banksters,* [and] *drugsters* [TV] *series). To emphasize the approach on "over"* [diagnosis, treatment, etc.] *is really important, and in fact, one of the axes of P4. But I ask you to not forget the soul of P4, which is the patient-doctor relationship. Please consider the axis of the patient* (see acknowledgments to Jamoulle, 2013**).

In fact, the occurrence of medicalization at the "interactional level, derives less from a lack of recognition that there are other factors co-producing illness, than from techniques, knowledge, emotional resources and organisational conditions to deal with it". In other words, P4 set of actions "is less cognitive [...] and more related to the skills, attitudes, and feelings of professionals, as well as to the context of services", that mediate the relationship between doctors and the people under their care (p. 207-208).[1]

Conclusion

The medicalization phenomenon has achieved great attention in family medicine. In this sense, quaternary prevention proposes a series of actions to family and community doctors to "protect the patient of medical excesses" and to prevent themselves of overmedicalizing. Quaternary prevention has taken a lead role as an important movement in medicine that goes beyond the dissemination of medical knowledge and its limits. Its great contribuition lies in repositioning health professionals' practices main object, not focused anymore on disease - its quantification or diagnostic methods - but on individuals and their sufferings/illnesses.

McWhinney[24] emphasizes the protagonist role of family medicine to the necessary changes in science and medical practices, by highlighting its potencies for this transformation, such as: the doctor-patient relationship, the overcoming of mind-body dualism and mechanistic view of life, the attention to the person's singularity, the adoption of complex thought, and the person-centred clinical method.[10] Although a person-centred approach is needed it is insufficient to meet these challenges, since there are other unsolved social needs that cross medical practice, also a social practice.

Family and community doctors are potential agents of medicalization and, therefore, it is necessary to adopt an ethical, reflective, critical and person-centred approach in practice in order to minimize the damage of their actions. Quaternary prevention requires that doctors have a permanent and longitudinal self-assessment that brings to their consciousness the potential biopsychosocial harms that they can cause to patients, families and communities under their care, even if not intentional.[12]

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References

1. Cardoso RV. Medicalização e o cuidado em saúde na estratégia de saúde da família [thesis online]. Campinas: Universidade Estadual de Campinas; 2014. 268 p. Available from: http://www.ph3c.org/PH3C/docs/27/000281/0000605.pdf.
2. Foucault M. Crise da medicina ou crise da antimedicina. Verve [online]. 2010 [cited 2014 Sept 20];18:167-194. Available from: http://revistas.pucsp.br/index.php/verve/article/view/8646
3. Illich I. A expropriação da saúde – Nêmesis da Medicina. 3rd ed. Rio de Janeiro: Nova Fronteira; 1975.
4. Conrad P, Mackie T, Mehrotra A. Estimating the costs of medicalization. *Soc Sci Med*. 2010;70(12):1943-1947. http://dx.doi.org/10.1016/j.socscimed.2010.02.019. PMid:20362382.
5. Illich, I. Medicalization and primary care. *J R Coll Gen Pract*. 1982:463-470. PMCID: PMC1972593.
6. Torres JMC. Medicalizing to demedicalize: lactation consultants and the (de)medicalization of breastfeeding. *Soc Sci Med*. 2014;100:159-166. http://dx.doi.org/10.1016/j.socscimed.2013.11.013. PMid:24444851.
7. Halfmann D. Recognizing medicalization and demedicalization: discourses, practices and identities. Health. 2011;**3**:1-22. http://dx.doi.org/10.1177/1363459311403947.
8. Campos GWS. A clínica do sujeito: por uma clínica reformulada e ampliada [online] [cited 2014 Nov 17]. Available from: http://www.hc.ufmg.br/gids/textos_seminarios/clinica_do_sujeito.pdf.
9. Bedrikow R, Campos GWS. Clínica: a arte de equilibrar a doença e o sujeito. Rev Assoc Med Bras. 2011;57(6):610-613. http://dx.doi.org/10.1590/S0104-42302011000600003.
10. Stewart M, Brown JB, Weston WW, Mc Whinney IA, Mc William CL, Freeman TR. Medicina centrada na pessoa: transformando o método clínico. 2nd ed. Porto Alegre*: ArtMed;* 2010.
11. Jamoulle M. Prevenção quaternária: a propósito de um desenho. Rev Port Med Geral Fam. [online]. 2012 [Cited 2014 Nov 15];28:398-399. Available from: http://www.apmgf.pt/ficheiros/rpmgf/v28n6a/v28n6a02.pdf.
12. Jamoulle M. Quaternary prevention, an answer of family doctors to overmedicalization. *Int J Health Policy Manag*. 2015;4(2):61-64. http://dx.doi.org/10.15171/ijhpm.2015.24. PMid:25674569.
13. Foucault M. O nascimento da clínica. Rio de Janeiro: Forense Universitária; 2013.
14. Zola IK. Medicine as an institution of social control. *Sociol Rev*. 1972;20(4):487-504. http://dx.doi.org/10.1111/j.1467-954X.1972.tb00220.x. PMid:4645802.
15. Nye RA. The evolution of the concept of medicalization in the late twentieth century. *J Hist Behav Sci*. 2003;39(2):115-129. http://dx.doi.org/10.1002/jhbs.10108. PMid:12720322.
16. Conrad P. The shifting engines of medicalization. *J Health Soc Behav*. 2005;46(1):3-14. http://dx.doi.org/10.1177/002214650504600102. PMid:15869117.
17. Foucault M. Microfísica do poder. Rio de Janeiro: Edições Graal; 1979.
18. Poli P No, Caponi S. Medicalização: revisitando definições e teorias. In: Tesser CD, editor. Medicalização social e atenção à saúde no SUS. São Paulo: Hucitec; 2010. p. 35-51.
19. Metzl JM, Herzig RM. Medicalisation in the 21st century: introduction. *Lancet*. 2007;369(9562):697-698. http://dx.doi.org/10.1016/S0140-6736(07)60317-1. PMid:17321315.
20. Nogueira RP. Higiomania: a obsessão com a saúde na sociedade contemporânea. In: Vasconcelos EM, editor. A Saúde nas palavras e nos gestos: reflexões das redes de educação popular e saúde. São Paulo: Hucitec; 2001. p. 63-72.
21. Bell SE, Figert AE. Medicalization and pharmaceuticalization at the intersections: Looking backward, sideways and forward. *Soc Sci Med*. 2012;75(5):775-783. http://dx.doi.org/10.1016/j.socscimed.2012.04.002. PMid:22633161.
22. Nogueira RP. Da medicina preventiva à medicina promotora. In: Arouca S, editor. O dilema preventivista: contribuição para a compreensão e crítica da medicina preventiva. São Paulo: UNESP; Rio de Janeiro: Fiocruz; 2003. p. 175-182.

23. Zorzanelli RT, Ortega F, Bezerra B Jr. An overview of the variations surrounding the concept of medicalization between 1950 and 2010. Cienc saude colet. 2014;19(6):1859-1868. http://dx.doi.org/10.1590/1413-81232014196.03612013

24. McWhinney IR. William Pickles Lecture 1996. The importance of being different. *Br J Gen Pract*. 1996;46(408):433-436. PMid:8776918.

25. Camargo KRA Jr. A biomedicina. Physis [online]. 2005 [cited 2014 Sept 8];15(Suppl):177-201. Available from: http://www.scielo.br/pdf/physis/v15s0/v15s0a09.pdf.

26. Camargo KR Jr. As armadilhas da "Concepção Positiva de Saúde". Physis [online]. 2007 [cited 2014 Sept 8];;76(1):63-76. Available from: http://www.scielo.br/pdf/physis/v17n1/v17n1a05.pdf.

27. Cunha GT. A construção da clínica ampliada na atenção básica. 2nd ed. São Paulo: Hucitec; 2007.

28. Canguilhem G. O normal e o patológico. 7th ed. Rio de Janeiro: Editora Forense Universitária; 2011.

29. Puttini RF, Pereira A Jr. Além do mecanicismo e do vitalismo: a "normatividade da vida" em Georges Canguilhem. Physis. 2007;17(3):451-464. http://dx.doi.org/10.1590/S0103-73312007000300003.

30. Tesser CD. A biomedicina e a crise da atenção à saúde: um ensaio sobre a desmedicalização [thesis online]. Campinas: Universidade Estadual de Campinas; 1999. Available from: http://www.bibliotecadigital.unicamp.br/document/?code=vtls000199171.

31. Conrad P. Medicalization and social control. *Annu Rev Sociol*. 1992;18:209-232. http://dx.doi.org/10.1146/annurev.so.18.080192.001233.

32. Rose G. Estratégias da medicina preventiva. Porto Alegre: Artmed; 2010.

33. Moynihan R, Heath I, Henry D. Selling sickness: the pharmaceutical industry and disease mongering. BJM. [online]. 2002 [cited 2013 Oct 12];324(7342):886-891. PMID: 11950740.

34. Conrad P, Bergey MR. The impending globalization of ADHD: notes on the expansion and growth of a medicalized disorder. *Soc Sci Med*. 2014;122:31-43. http://dx.doi.org/10.1016/j.socscimed.2014.10.019. PMid:25441315.

35. Jamoulle M. From Illich to Moynihan, medicine can be dangerous for your health. In: Jamoulle M, Tsoi G, Heath I, Mangin, D, Pezeshki M, Báez MP. Quaternary prevention, addressing the limits of medical practice. Proceedings of the Wonca World Conference. Prague; 2013. [cited 2013 Nov 2]. Available from: http://www.ph3c.org/PH3C/docs/27/000322/0000469.pdf.

36. Ministério da Saúde (BR), Secretaria de Atenção à Saúde, Departamento de Atenção Básica. PNAB: Política Nacional de Atenção Básica. Brasília: Ministério da Saúde; 2012. [cited 2014 Aug 20]. Available from: http://bvsms.saude.gov.br/bvs/publicacoes/politica_nacional_atencao_basica.pdf.

37. Franco TB, Merhy EE. PSF: contradições e novos desafios. Belo Horizonte: 1999. [cited 2013 Nov 20]. http://www.uff.br/saudecoletiva/professores/merhy/artigos-17.pdf

38. Merhy EE. Gestão da produção do cudiado e clínica do corpo sem órgãos: novos compontentes dos processos de produção do cuidado em saúde. Desafios para os modos de produzir o cuidado centrados nas atuais profissões. 2007. [cited 2013 Aug 25]. Available from: http://www.uff.br/saudecoletiva/professores/merhy/artigos-25.pdf.

39. Gérvas J, Pérez-Fernández M. Como construir uma Atenção Primária Forte no Brasil? Resumo Técnico para Políticos, Gestores e Profissionais de Saúde com responsabilidade em organização e docência do relatório de: É possível transformer o círculo vicioso de má qualidade em um círculo virtuoso de boa qualidade, no trabalho clínico e comunitário na Atenção Primária no Brasil. 2011. [cited 2014 Jan 15]. Available from: http://www.sbmfc.org.br/media/file/Visita_Espanhois_2011/Brasil,%20Relatorio%20Resumo%20final%202011.pdf.

40. Starfield B. Atenção Primária: equilíbrio entre necessidades de saúde, serviços e tecnologia. Brasília: Ministério da Saúde/UNESCO; 2002.

41. Tesser CD, Poli P No, Campos GWS. Acolhimento e (des)medicalização social: um desafio para as equipes de saúde da família. *Cien Saude Colet*. 2010;15(3 Suppl 3):3615-3624. http://dx.doi.org/10.1590/S1413-81232010000900036. PMid:21120349.

42. Gérvas J. Cómo mantener la calidad de la atención médica ante pacientes exigentes y frente a una sociedad expectante? Belo Horizonte.; 2012. [cited 2014 Nov 5]. Available from: http://equipocesca.org/pt/como-mantener-la-calidad-de-la-atencion-medica-ante-pacientes-exigentes-y-frente-a-una-sociedad-expectante/.

43. Mangin D, Toop L. The quality and outcomes framework: what have you done to yourselves? *Br J Gen Pract*. 2007;57(539):435-437. PMid:17550665.

44. Hoffmann TC, Del Mar C. Patients' expectations of the benefits and harms of treatments, screening, and tests: a systematic review. *JAMA Intern Med*. 2015;175(2):274-286. http://dx.doi.org/10.1001/jamainternmed.2014.6016. PMid:25531451.

45. Matumoto S, Fortuna CM, Mishima SM, Pereira MJB, Domingos NAM. Supervisão de equipes no Programa de Saúde da Família: reflexões acerca do desafio da produção de cuidados. Interface, Comun., Saúde, Educ. 2005;9(16):9-24. http://dx.doi.org/10.1590/S1414-32832005000100002.

46. Jamoulle M, Roland M. Quaternary prevention; from Wonca World Hong Kong 1995 to Wonca World Prague 2013. Poster# 336. Wonca World Congresso; 2013; Prague. [cited 2014 Nov 20]. Available from: http://www.ph3c.org/PH3C/docs/27/000284/0000439.pdf.

47. Norman AH, Tesser CD. Prevenção quaternária: as bases para sua operacionalização na relação médico-paciente. Rev Bras Med Fam Comunidade. 2015;10(35). In press. http://dx.doi.org/10.5712/rbmfc10(35)1011.

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Prevenção quaternária: um olhar sobre a medicalização na prática dos médicos de família

Quaternary prevention: a gaze on medicalization in the practice of family doctors

Prevención cuaternaria: una mirada a la medicalización en la práctica de los médicos de familia

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Resumo

A medicalização é um fenômeno social complexo e disseminado no qual estão envolvidos diferentes agentes e instituições, tais como a indústria médica/farmacêutica, governos, profissionais/sistemas de saúde e cidadãos. Por sua vez, médicos e profissionais de saúde desempenham importante papel na reprodução e no enfrentamento da medicalização haja visto que a medicina e os cuidados em saúde podem gerar tanto danos como benefícios. Médicos de família lidam diariamente com a sobremedicalização e seus fenômenos associados (i.e. sobrediagnóstico, sobretratamento, comercialização de doenças) por desempenharem função-filtro nos sistemas de saúde. Por serem o primeiro ponto de contato, esses profissionais e suas equipes acolhem as demandas e necessidades sociais trazidas pelas pessoas e comunidades sob seus cuidados, que comumente estão influenciadas por uma perspectiva médica intervencionista e pelo marketing da saúde. Este artigo discute alguns conceitos principais da medicalização e seus determinantes, em especial as contribuições da ciência biomédica e suas bases epistemológicas para o fenômeno. Ele também desenvolve, sucintamente, algumas reflexões sobre a medicalização na prática do médico de família e comunidade, no contexto brasileiro. Por fim, analisa o enfoque da prevenção quaternária acerca da medicalização, que propõe mudanças de objeto e de atitude na prática médica, evitando, assim, intervenções desnecessárias e protegendo os pacientes dos excessos da medicina.

Palavras-chave:
Medicalização
Sobremedicalização
Relações Médico-Paciente
Prevenção Quaternária
Medicina de Família e Comunidade

Abstract

The medicalization is a complex and widespread social phenomenon which involves different agents and institutions, such as the pharmaceutical and medical industry, governments, health systems, health professionals, and citizens. In this regard, doctors and health professionals play an important role in reproducing and struggling with medicalization, by recognizing that medicine and health care can generate as much harm as benefits. Family doctors have to deal with overmedicalization and its associated phenomena (i.e. overdiagnosis, overtreatment, disease mongering) on a daily basis as they act as gatekeepers of health systems. As the first point of contact, family physicians and their health teams get the demands and social needs brought by individuals and communities under their care, which usually are influenced by the health marketing and an interventionist medical perspective. This article discusses some key concepts of medicalization and its determinants, especially the contributions of biomedical science and its epistemological basis to the phenomenon. It also briefly develops some thoughts on the medicalization in the daily practice of family and community doctors in the Brazilian context. Finally, it analyses the quaternary prevention approach to medicalization, which proposes changes in its object and attitude to medical practice in order to avoid unnecessary interventions, thus, protecting patients from the excesses of medicine.

Keywords:
Medicalization
Overmedicalization
Physician-Patient Relations
Quaternary Prevention
Family Medicine

Resumen

La medicalización es un fenómeno social complejo y diseminado que involucra a diferentes agentes e instituciones, tales como la industria farmacéutica y médica, los gobiernos, los profesionales/sistemas de salud y los ciudadanos. En este sentido, los médicos y profesionales de la salud desempeñan un papel importante en la reproducción y en el enfrentamiento de la medicalización, dado el hecho de que la medicina y la asistencia sanitaria pueden generar tanto daños como beneficios. Los médicos de familia tienen que lidiar diariamente con la sobremedicalización y sus fenómenos asociados (es decir, el sobrediagnóstico, sobretratamiento, tráfico de enfermedades), ya que desempeñan función-filtro en los sistemas de salud. Como primer punto de contacto, estos profesionales y sus equipos de salud reciben las demandas y necesidades sociales interpuestos por las personas y comunidades bajo su cuidado, que suelen ser influenciados por la comercialización de la salud y una perspectiva médico-intervencionista. Este artículo discute algunos conceptos clave de la medicalización y sus determinantes, en especial las contribuciones de la ciencia biomédica y su base epistemológica para el fenómeno. También desarrolla brevemente algunas reflexiones sobre la medicalización de la práctica diaria de los médicos de familia y comunidad en el contexto brasileño. Por último, se analiza el enfoque de la prevención cuaternaria a la medicalización, que propone cambios en su objeto y en la actitud de la práctica médica con el fin de evitar intervenciones innecesarias, y por lo tanto, proteger a los pacientes de los excesos de la medicina.

Palabras clave:
Medicalización
Sobremedicalización
Relaciones Médico-Paciente
Prevención Cuaternaria
Medicina familiar y Comunitaria

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Introdução

> *Uma família recém-chegada na área (pai, mãe e 5 ou 6 crianças e adolescentes) procurou atendimento na unidade de saúde, todos com as mesmas queixas: "dor de cabeça, dor no estômago e nervosismo". Isto, de antemão, já nos chamou a atenção. Atendi a filha de 13 anos e o filho de 20. Minha colega atendeu o filho de 8 anos acompanhado pela mãe. Com a menina, adolescente, consegui ampliar mais a consulta, abordei alguns conflitos que ela trouxe e não prescrevi nada, apenas aconselhamento e orientações. Quanto ao rapaz de 20 anos, achei-o mais comprometido, do ponto de vista do humor e da "dor no estômago", explorei a questão da alimentação, questões de trabalho, financeira, relação familiar, mas nada foi apontado pelo rapaz. Assim, acabei medicando-o com um inibidor de bomba de prótons (disponível gratuitamente na farmácia básica na unidade de saúde), fazendo várias orientações dietéticas e afins. Qual a minha surpresa quando minha colega, que atendeu a criança acompanhada da mãe e tinha as mesmas queixas "dor de cabeça, dor no estômago e nervosismo", abordou-me após as duas consultas e disse que eles passavam fome, que a criança falou "eu já sei de tudo, os médicos ficam falando para a gente comer de 3 em 3 horas, mas lá em casa a gente só come duas vezes por dia...". Crianças geralmente dizem a verdade. Ficaram os outros envergonhados de falar sobre tamanha privação mesmo tendo sido perguntados sobre? Eu não tive habilidades suficientes para abordar tais questões? Me senti péssima: "estou tratando fome com omeprazol...". Relato da autora sobre um atendimento realizado durante sua residência médica. (*Adaptado de Cardoso).[1]

Investigar a medicalização no contexto da Atenção Primária à Saúde (APS) pode parecer, em um primeiro momento, atentar para um processo pouco significativo neste nível de atenção e expressivo no contexto hospitalar e de atenção especializada. Todavia, ao contextualizar que vivemos em um mundo industrializado, secularizado, globalizado e, segundo diversos autores, medicalizado, e que a APS é a porta de entrada dos sistemas nacionais de saúde, podemos considerar que a medicalização é tão (ou mais) presente neste nível de atenção quanto nos demais.[2-4] De fato, o processo de medicalização é expressivo na APS e, a depender dos saberes, práticas, formas de organização dos serviços e instituições - e das consequentes relações que se estabelecem entre as pessoas - os profissionais e outros agentes que atuam no campo da saúde, incluindo os médicos de família, podem medicalizar mais ou menos. Há que se reconhecer a complexidade e a multiplicidade de cenários disponíveis, pois além da coexistência de medicalização e desmedicalização em uma mesma situação, também encontramos circunstâncias em que se medicaliza para desmedicalizar e vice-versa. O fenômeno e sua antítese estão sempre associados e variam em graus de predominância.[5-7]

O uso excessivo de tecnologias duras como exames, medicamentos, procedimentos - a medicina maximalista - é uma das expressões da medicalização, porém não a totaliza. Ela pode estar baseada no "controle (do) social" (controle da vida das pessoas pelas instituições de saúde e pelo governo), na dependência dos profissionais e serviços de saúde, na expropriação do saber das pessoas sobre sua própria saúde, no uso de tecnologias médicas para tratar sofrimentos psicossociais, entre outras expressões deste fenômeno com profundo impacto na configuração social contemporânea, gerando iatrogenias não apenas clínicas, mas também sociais e culturais.[1,3]

Boa parte dos médicos de família percebe essas dinâmicas no cotidiano de sua prática e, apesar de o estudo da medicalização ter surgido nas ciências sociais em meados do século XX, é no seio da medicina de família e da saúde pública/coletiva que têm nascido grandes contribuições nesta área.[8-10] A medicina de família e comunidade (MFC), em especial, tem proposto alguns modelos teóricos e métodos que buscam formas de enfrentamento deste processo na prática clínica, dentre os quais se destaca a prevenção quaternária.[11,12]

Este artigo tem por objetivo discutir o conceito de medicalização e alguns aspectos deste fenômeno na atenção primária à saúde, no contexto brasileiro. Realiza uma breve análise sobre como o fenômeno é percebido na ótica da prevenção quaternária e faz algumas reflexões para a transformação do cenário no campo da clínica. Ele é derivado de estudo qualitativo realizado pela autora durante o seu mestrado, que utilizou revisão de literatura sobre o tema e um estudo de caso com observação participante - em uma equipe de saúde da família em uma pequena cidade no interior do Brasil - para apreender algumas formas de expressão da medicalização na APS brasileira.[1]

Conceituando a medicalização

O termo medicalização surgiu e se consolidou entre as décadas de 1960 e 1970 com referência a um fenômeno social que emerge com o advento da medicina científica e com o estabelecimento da profissão/instituição médica e sua associação com políticas estatais.[3,13-16] O termo era sinônimo da expansão dos limites da medicina, uma "invasão médica" no âmbito da vida cotidiana, do corpo e do comportamento, por meio do poder alcançado pela corporação médica sobre a definição de saúde-doença e a intervenção sobre este processo. Ele se referia especialmente ao "controle social" – potencializado com o nascimento da medicina social – e aos impactos da biomedicina e do modelo clínico centrado na doença.[3,17] Atualmente a medicalização está relacionada a uma grande influência da medicina na vida das pessoas com destacada importância a agentes externos à profissão médica, como as indústrias médica e farmacêutica, serviços de saúde, mídia, cidadãos, consumidores e governos.[16,18-23]

São múltiplos, portanto, os sentidos de medicalização, um complexo processo social que pode se referir tanto a fenômenos quanto às causas e consequências destes. De forma geral, há concordância na literatura quanto à contribuição da biomedicina, suas bases epistemológicas e práxis na gênese da medicalização (Quadro 1).[3,24-30]

As características listadas no Quadro 1 evidenciam um saber-prática com grande potencial medicalizador. Dentre elas, o ocultamento de conflitos e de problemas sociais (com consequente individualização e despolitização) é um dos mais questionáveis aspectos éticos e de justiça social consequente ao *modus operandi* da biomedicina. O controle (do) social é ainda um processo relevante de medicalização, embora no mundo contemporâneo o discurso e o poder médicos estejam difusos entre diferentes instituições e agentes, não mais concentrados nas instituições médicas e no Estado.[17,18,26]

Na tentativa de encontrar um conceito único, Peter Conrad, uma autoridade no assunto, apresenta a definição médica como o elemento central da medicalização: *"medicalização ocorre quando um arcabouço ou definição médica é aplicado para entender ou manejar um problema"* (p. 211),[31] ou ainda, *"um processo pelo qual problemas não-médicos são definidos ou tratados como problemas médicos, usualmente em termos de doenças, ou transtornos"* (p. 209).[31] Tais conceitos são bastante relevantes para a literatura médica por se referirem à criação de novas doenças e à expansão dos limites das enfermidades (por exemplo, "pré-enfermidades") na era da epidemiologia clínica, das *Big Pharmas* (grandes companhias farmacêuticas) e de classificações médicas importantes como o *Diagnostic and Statistical Manual of Mental Disorders* (*DSM*). Estes entendimentos de medicalização estão bem incorporados pela discussão acerca de *disease mongering* (comercialização da doença).[32-34]

Quadro 1. Bases epistemológicas e características da práxis biomédica que a predispõe a medicalizar.

Bases epistemológicas
Positivismo.
Reducionismo biológico.
Produção de abstrações generalizantes sobre a doença.
Divisão dualística entre corpo e mente.
Metáfora do corpo como máquina.
Concepção ontológica da doença.
Desconexão entre doença (disease) e enfermidade (illness).
Normatização do normal e do patológico de acordo com parâmetros biomédicos e quantitativos independentes da existência de sofrimento (*"pathos", illness*).
Características da práxis
Priorização do (rótulo) diagnóstico à terapia.
Subvalorização das dimensões psicossociais do adoecimento e da singularidade deste.
Adoção das abstrações das doenças como o real.
Simplificação da clínica, foco em parâmetros objetivos e quantificáveis ("clinimetria").
Desenvolvimento de uma terapêutica reducionista (quase restritas a medicamentos ou medidas comportamentais).
Reafirmação da heteronomia e da assimetria na relação profissional-paciente com reforço da dependência.
Valorização das tecnologias duras (exames, medicamentos, procedimentos) em detrimento de tecnologias leves (relação médico-paciente, intervenções psicossociais, entre outras).
Desqualificação do adoecimento "sem doença" (tratando como síndromes, somatização ou negando o sofrimento da pessoa).
Ocultamento da causalidade psicossocial da doença pela sobrevalorização dos fatores biológicos.

Fonte: elaborado pela autora a partir das referências 3, 24-30.

A despeito destes, tem havido crescente preocupação quanto à definição de medicalização, visto que esta se refere a um processo social que pode tanto trazer benefícios, quanto danos. Alguns autores utilizam o termo *sobremedicalização* (do inglês "*overmedicalization*") para comunicar "uma 'sobre-expansão' da jurisdição da profissão médica" e um excesso de cuidado em saúde relacionado à expansão do mercado, voltados mais para o lucro do que para as necessidades de saúde, tais como o tratamento (e a patologização) de fatores de risco, de comportamentos, de estágios naturais e fisiológicos da vida (i.e. nascimento, o envelhecimento e o luto) e do sofrimento social.[3,4(p. 1943),15]

A sobremedicalização poderia ainda ser definida como um excesso de exposição a ou de procura por cuidados em saúde em uma extensão na qual não confere benefícios em termos de saúde e bem-estar (Gavilán e Jamoulle, 2014, comunicação pessoal, ver Agradecimentos*). Este termo se alinha aos fenômenos de sobrerrastreamento, sobrediagnóstico, sobretratamento e outros (neologismos do inglês *overscreening*, *overdiagnosis*, *overtreatment*, etc), sob crescente atenção na literatura médica. Todos estes termos referem-se a "questões clínicas" do fenômeno de medicalização, desafios diariamente enfrentados pelos médicos de família e comunidade.

A Figura 1 destaca as dimensões de medicalização: conceitual, institucional e interacional;[31] e apresenta alguns elementos importantes, tais como práticas resultantes, agentes sociais (instituições), arcabouço epistemológico da ciência biomédica, determinantes macro e micro-estruturais (interacionais), que se coproduzem e se determinam, atuando por vezes como causa e por vezes como consequência.[1,31,35] Essa combinação de elementos aponta para a complexidade da medicalização.

Para Conrad e Schneider (1980 apud Conrad, 1992)[31] a dimensão conceitual seria o uso do vocabulário ou modelo médico para definir um problema para o qual não haveria, necessariamente, um tratamento médico aplicável. Na dimensão institucional, organizações adotariam uma abordagem médica para tratar uma variedade de problemas; enquanto que a dimensão interacional ocorreria no encontro médico-paciente, "quando um médico define um problema como [sendo um problema] médico (por exemplo, faz um diagnóstico médico) ou trata um problema 'social' com uma forma de tratamento médico" (p. 211).[31]

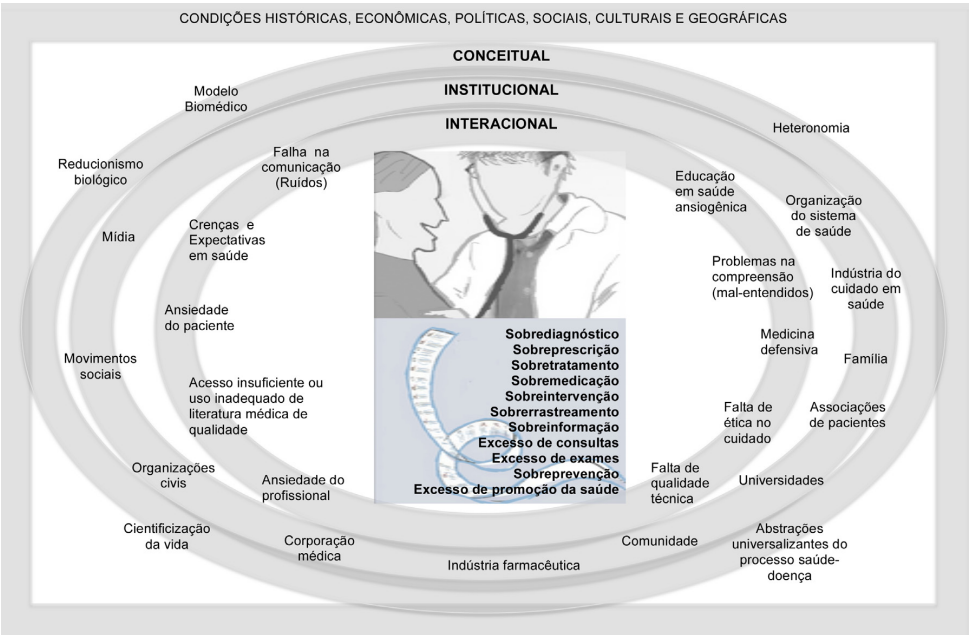

Figura 1. Dimensões da medicalização na perspectiva do médico de família e comunidade: os fenômenos resultantes e suas causas/determinantes e agentes. Fonte: elaborado pela autora, a partir de Conrad,[31] Jamoulle,[35] e Cardoso.[1]

A medicalização na prática dos médicos de família e comunidade

Apesar de os médicos ainda serem importantes agentes deste processo e lidarem com este fenômeno diariamente, a medicalização pode não ser tão facilmente percebida e, portanto, enfrentada, na prática clínica na atenção primária. Nesse sentido, a medicalização tem sido comumente associada ao uso excessivo e inadequado de medicamentos (prescritos ou não) e à má prática clínica (relacionada a infrações éticas ou conhecimento biomédico insuficiente), tendo os usuários medicalizados e a indústria farmacêutica como principais agentes. No entanto, o fenômeno tem raízes mais profundas, na própria ciência, e está disseminado em diversos planos, instituições e discursos da sociedade contemporânea.

Os próprios atributos da APS podem tanto favorecer o enfrentamento da medicalização quanto reforçá-la. Se os cuidados prestados nos serviços deste nível de atenção forem estritamente centrados na doença e em sua dimensão biológica (e demais características da práxis citadas no Quadro 1), o amplo acesso e os múltiplos contatos ao longo de um ou vários episódios de cuidado podem levar não apenas a danos clínicos, mas também culturais e estruturais. Illich[5] argumenta que o vínculo médico-paciente, o cuidado e a relação pastoral (de exortação quanto a estilos de vida, hábitos, autocuidado), por si só, expropriam o saber-poder do cuidado de si mesmo:

> [...] *não há dúvida de que a maior parte deste cuidado convence os pacientes de que, o que quer que seja que eles próprios mudem em seu estilo de vida, eles devem isso a você* [*o médico*]. *Ao invés de se tornar mais saudável, o que sempre significa ser mais autônomo, seu cliente, por meio do seu cuidado, torna-se mais dependente, mais um paciente. A maior parte do cuidado geral promove a medicalização da vida do paciente*. (p. 464-465)[5]

No Sistema Único de Saúde (SUS), médicos de família, profissionais de enfermagem e agentes comunitários de saúde (ACS) são os profissionais de linha de frente. Esta equipe da Estratégia Saúde da Família (ESF) tem sido entendida como um dispositivo para superar o modelo médico-centrado (focado na doença) e desenvolver práticas biopsicossociais.[36] No entanto, percebe-se que a equipe multidisciplinar como principal estratégia é insuficiente para fazer frente à medicalização. As profissões da saúde, em geral, comungam das mesmas bases epistemológicas da biomedicina, de um cenário social comum de interesses mercadológicos e de configurações institucionais e de gestão que podem favorecer a medicalização, mesmo considerando práticas profissionais éticas.[1,37,38]

No Brasil, a proporção de médicos por pessoas cadastradas (média de 3000 ou 4000 pessoas por equipe de ESF) dificulta não apenas o acesso dos usuários aos serviços de APS, mas também a integralidade, a coordenação e a continuidade do cuidado. Soma-se ao problema da cobertura populacional o fato de os profissionais não-médicos que nela atuam ainda exercerem tarefas substitutivas de forma marginal, desempenhando predominantemente ações preventivas e de vigilância em saúde.[37,39,40]

O dimensionamento inadequado da equipe favorece uma pressão de demanda excessiva - e a percepção desta como inesgotável – potencializando a medicalização devido às seguintes situações: (1) restrição de acesso na APS que induz à busca de cuidados à saúde em níveis de atenção mais iatrogênicos, tais como prontos-socorros, hospitais, ambulatórios de especialidades e serviços privados; (2) alta pressão por assistência à saúde que favorece um cuidado clínico reducionista, intervencionista e de baixa qualidade na APS e que redireciona a atenção dos profissionais para condições agudas, fatores de risco e patologias de interesse epidemiológico, prejudicando uma abordagem abrangente/integral e centrada na pessoa; e (3) predomínio de ações preventivas - nas diretrizes oficiais brasileiras e em muitos contextos assistenciais - em relação às curativas, o que aponta para a disputa entre sobremedicalização e submedicalização e o consequente dilema ético de oferecer atenção a pessoas saudáveis em vez de voltarmos nossa atenção para as pessoas doentes.[1,41,42] É preciso reconhecer a existência de iatrogenia institucional neste contexto, secundária às inadequações do sistema de saúde. Uma ênfase excessiva em metas quantitativas inadequadas e em campanhas de rastreamento fragmentadas, antiéticas e ansiogênicas, também pode resultar em iatrogenia institucional.[35,43]

Além das influências do sistema de saúde, os cidadãos e profissionais de saúde agem em uma relação dialética entre medicalização e desmedicalização. O fetiche tecnológico, o impulso/necessidade pelo consumo e a atmosfera/marketing criados pelo setor privado fomentam a dependência, gerando expectativas irreais pelos pacientes acerca dos benefícios e danos das intervenções médicas e demanda por acesso a bens de consumo (i.e. consultas, procedimentos).[33,44] Esta demanda por consumo é rebatizada de autonomia, em uma complexa relação na qual médicos de família e usuários dos serviços de saúde estão profundamente implicados.

Os médicos têm grandes dificuldades em lidar com as expectativas dos pacientes conjuntamente às necessidades de saúde: "As demandas geram ansiedades e angústias nos trabalhadores tanto pela quantidade (demanda reprimida, população mais adoecida pelas condições de vida, demanda por consumo tecnológico, etc), quanto por seu conteúdo (dores, sofrimentos, pobreza, violência, loucura, etc)" (p. 16).[45] Os profissionais justificam a intervenção excessiva pela falta de tempo em abordar as causas dos problemas, pela inabilidade em intervir em problemas de causalidade psicossocial e também pelo imperativo em responder às expectativas das pessoas.[1,12] De fato, são grandes os desafios em responder às necessidades e demandas em saúde:

> [...] *são interesses e desejos que não podem ser puramente combatidos ou ignorados no cotidiano da atenção à saúde, sob pena de violência, quebra de vínculo, etc., nem reforçados ou atendidos globalmente, pois isso só medicalizaria ainda mais a situação, gerando contra produtividade e mais dependência.* (p. 142).[30]

A inabilidade dos profissionais de saúde (mesmo daqueles que atuam na APS) em lidar com a complexidade da doença é evidente, sendo ainda mais desafiador dialogar com as pessoas e seus adoecimentos em contextos de grande vulnerabilidade socioeconômica e cultural, o que requer habilidades e competências dos médicos e demais profissionais da saúde que não foram necessariamente ensinadas-aprendidas durante sua formação profissional.

Prevenção quaternária e sobremedicalização

O conceito de prevenção quaternária (P4) nasceu de uma necessidade real e prática da medicina de família, especialmente para lidar com as pessoas e seus adoecimentos em situações "*que escapam completamente a qualquer autoridade estatística e a qualquer previsibilidade*" (p. 398).[11] Proposta pelo médico de família belga Marc Jamoulle,[11] a prevenção quaternária se relaciona com os demais níveis de prevenção propostos por Leavell e Clark e estabelece um conjunto de ações em saúde voltadas para a identificação de pessoas sob risco de medicalização excessiva (sobremedicalização) com o objetivo de protegê-las de "novas invasões médicas" e sugerir intervenções eticamente aceitáveis, partindo das diferentes perspectivas e da relação entre pessoas (pacientes) e médicos (Figura 2).[11,46]

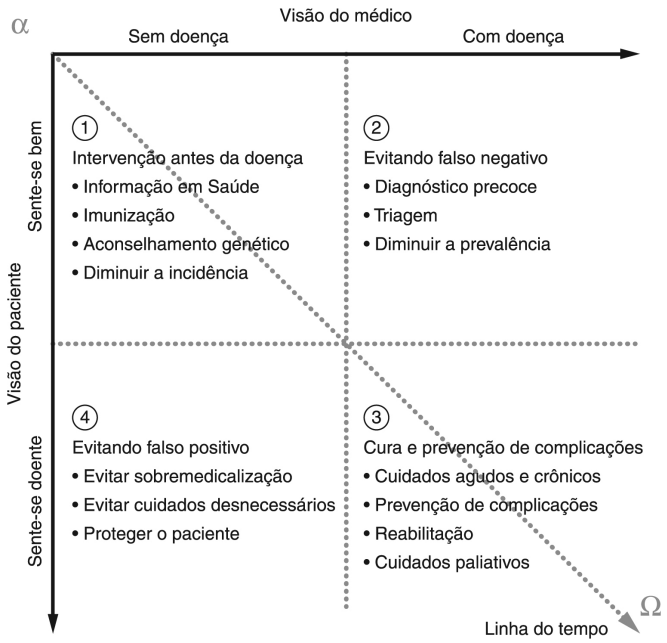

Figura 2. Especificação das ações em saúde de acordo com os quatro níveis de prevenção segundo o modelo da prevenção quaternária
Fonte: adaptado a partir de Jamoulle e Roland.[46]

A prevenção quaternária reconhece a medicalização em um dos seus primeiros entendimentos, como "invasão" ou "imperialismo médico", embora seu conceito e representação gráfica em uma tabela 2x2 (Figuras 2 e 3) permitam a apreensão da medicalização em toda a sua complexidade, mesmo nas suas expressões mais contemporâneas, que enfatizam a importância da "definição médica". A prevenção quaternária expõe os possíveis resultados (e danos) das diferentes percepções do processo de adoecimento na prática clínica *illness* ("sentir-se doente") e *disease* ("doença como visão do médico") sob pena de que a doença e sua ontologização assumam prioridade sobre os pacientes individuais e seus sofrimentos. Isto se constitui como um dos elementos centrais do processo de medicalização.[1] Assim sendo, a P4 identifica o "sentir-se doente" na ausência de "doença na visão do médico" como o momento mais suscetível à sobremedicalização; portanto, vulnerável a intervenções desnecessárias, a rótulos e diagnósticos inapropriados, bem como a medicalização de problemas/sofrimentos psicossociais.[30]

Embora na representação gráfica as ações de "evitar cuidados desnecessários" pareçam limitar-se apenas ao quadrante 4, a P4 aponta para os demais níveis de prevenção como responsáveis pelas pessoas se sentirem enfermas e por iatrogenias, sem, no entanto, ignorar o papel ativo dos pacientes no processo de medicalização (Figura 3).[35] As ações de P4 deveriam ser realizadas nos diferentes estágios do processo saúde-doença, visto que em qualquer momento do cuidado em saúde os indivíduos se encontram sob "risco de sobremedicalização".

Norman e Tesser[47] propõem diretrizes para a operacionalização da P4 na prática dos médicos de família e comunidade. Segundo os autores, ações de P4 são mais necessárias quanto mais projetado no "futuro" estiver o potencial de sofrimento das pessoas, indicando assim uma hierarquização dessas ações. Por exemplo, elas são mais necessárias nas prevenções primária e secundária, que exploram adoecimentos futuros e fatores de risco (quadrantes 1 e 2 da Figura 2). Tais ações podem também ser utilizadas na prevenção terciária, que lida com pessoas com quadros clínicos que vão desde moderados a bem definidos pela biomedicina (quadrante 3 da Figura 2). No entanto, entre esses extremos existe uma gama de quadros clínicos com expressão semiológica de sinais/sintomas indefinidos e complexos que também requerem intensas ações de P4 (quadrante 4 da Figura 2).[25,47] Esta análise aponta para as diferenças entre "contrato preventivo" e "contrato curativo" na relação clínica e nas atividades de P4: limitar o dano e reduzir intervenções nas ações preventivas são deveres éticos imperiosos (a prevenção não tolera danos), enquanto as ações curativas carregam um maior limite de tolerância aos danos, justificado pela intenção de se recuperar a saúde.[42]

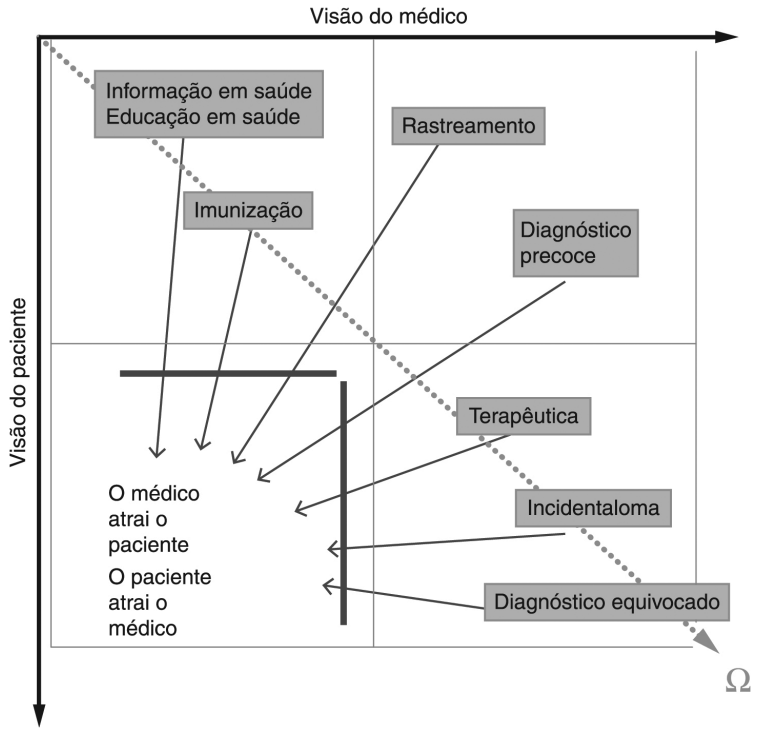

Figura 3. Ações preventivas que conduzem os profissionais de saúde e usuários ao escopo da prevenção quaternária. Fonte: Adaptado de Jamoulle.[35]

A prevenção quaternária destaca ainda a importância da relação médico-paciente por: (a) reconhecer a pessoa, sua singularidade e autonomia; (b) valorizar o processo de decisão conjunta/compartilhada; (c) adotar um método clínico centrado na pessoa;[10] e (d) desenvolver habilidades relacionais e de comunicação no encontro clínico, que podem resultar tanto na medicalização como na coprodução de saúde e autonomia.[12] A P4 sistematiza ações para combater, em particular, a dimensão interacional da medicalização, embora ofereça subsídios para a crítica e o reconhecimento também de suas dimensões conceitual e institucional (Figura 1).

Na prevenção quaternária é comum a presença dos "combatentes" ("P4 fighters", como seus entusiastas se definem) que enfatizam os interesses do mercado e os dados da medicina baseada em evidências (estes como um antídoto) na batalha contra o excesso de medicalização, embora com pouca atenção para a relação clínica. Como afirma Jamoulle:

> *Não há diferença entre os movimentos* [sociais organizados] *em torno da questão do overdiagnosis e selling-sickness* [disease mongering] *e a batalha contra os gangsters da saúde (como naquelas séries* [de TV] *de gangsters, banksters,* [e] *drugsters*). *Enfatizar a abordagem do "sobre"* [diagnóstico, tratamento, etc] *é realmente importante, e de fato, um dos eixos da P4. Mas eu peço que vocês não esqueçam a alma da P4, que é a relação médico-paciente. Por favor, considerem o eixo do paciente* (ver agradecimentos a Jamoulle, 2013**).

De fato, a ocorrência de medicalização "no nível interacional, decorre muito menos da falta de reconhecimento de que há outros fatores coproduzindo o adoecimento, do que de técnicas, saberes, recursos emocionais e condições organizacionais para lidar com ele". Em outras palavras, o conjunto de ações da P4 "é menos cognitivo [...] e mais relacionado às habilidades, atitudes, e sentimentos dos profissionais, bem como ao contexto dos serviços" (p. 207-208),[1] que mediam o relacionamento entre os médicos e as pessoas sob seus cuidados.

Conclusão

O fenômeno da medicalização tem alcançado grande atenção na medicina de família. Nesse sentido, a prevenção quaternária propõe uma série de ações para os médicos de família e comunidade "protegerem o paciente dos excessos da medicina", bem como para prevenirem a si próprios de sobremedicalizar. A P4 tem protagonizado um importante movimento na medicina, para além da disseminação do conhecimento médico e seus limites. Sua grande contribuição é o reposicionamento do objeto central da prática dos profissionais de saúde, não mais a doença - sua quantificação ou métodos diagnósticos - mas, os indivíduos (sujeitos) e seus sofrimentos/adoecimentos.

McWhinney[24] enfatiza o protagonismo da medicina de família nas mudanças necessárias à ciência e as práticas médicas, ressaltando as potências da medicina de família para esta transformação, tais como: a relação médico-paciente, a superação do dualismo mente-corpo e da visão mecanicista da vida, a atenção à singularidade da pessoa, a adoção do pensamento complexo e do método clínico centrado na pessoa.[10] Apesar de uma abordagem centrada na pessoa ser necessária esta é insuficiente para fazer frente a esses desafios, visto que existem outras necessidades sociais não resolvidas que cruzam a prática médica, esta também uma prática social.

Médicos de família e comunidade são agentes potenciais de medicalização e, portanto, há que se adotar uma prática ética, reflexiva, crítica e centrada na pessoa a fim de minimizar os danos de suas ações. A prevenção quaternária exige autoavaliação permanente e longitudinal por parte dos médicos, para torná-los conscientes dos potenciais danos biopsicossociais que podem causar a pacientes, famílias e comunidades sob seus cuidados, mesmo que de modo não intencional.[12]

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Referências

1. Cardoso RV. Medicalização e o cuidado em saúde na estratégia de saúde da família [thesis online]. Campinas: Universidade Estadual de Campinas; 2014. 268 p. Available from: http://www.ph3c.org/PH3C/docs/27/000281/0000605.pdf.
2. Foucault M. Crise da medicina ou crise da antimedicina. Verve [online]. 2010 [cited 2014 Sept 20];18:167-194. Available from: http://revistas.pucsp.br/index.php/verve/article/view/8646
3. Illich I. A expropriação da saúde – Nêmesis da Medicina. 3rd ed. Rio de Janeiro: Nova Fronteira; 1975.
4. Conrad P, Mackie T, Mehrotra A. Estimating the costs of medicalization. Soc Sci Med. 2010;70(12):1943-1947. http://dx.doi.org/10.1016/j.socscimed.2010.02.019. PMid:20362382.
5. Illich, I. Medicalization and primary care. J R Coll Gen Pract. 1982:463-470. PMCID: PMC1972593.
6. Torres JMC. Medicalizing to demedicalize: lactation consultants and the (de)medicalization of breastfeeding. Soc Sci Med. 2014;100:159-166. http://dx.doi.org/10.1016/j.socscimed.2013.11.013. PMid:24444851.
7. Halfmann D. Recognizing medicalization and demedicalization: discourses, practices and identities. Health. 2011;3:1-22. http://dx.doi.org/10.1177/1363459311403947.
8. Campos GWS. A clínica do sujeito: por uma clínica reformulada e ampliada [online] In: Campos GWS. Saúde paidéia. São Paulo: Hucitec; 2003. p. 55. Available from: http://www.hc.ufmg.br/gids/textos_seminarios/clinica_do_sujeito.pdf.
9. Bedrikow R, Campos GWS. Clínica: a arte de equilibrar a doença e o sujeito. Rev Assoc Med Bras. 2011;57(6):610-613. http://dx.doi.org/10.1590/S0104-42302011000600003.
10. Stewart M, Brown JB, Weston WW, Mc Whinney IA, Mc William CL, Freeman TR. Medicina centrada na pessoa: transformando o método clínico. 2nd ed. Porto Alegre: ArtMed; 2010.
11. Jamoulle M. Prevenção quaternária: a propósito de um desenho. Rev Port Med Geral Fam. [online]. 2012 [Cited 2014 Nov 15]; 28:398-399. Available from: http://www.apmgf.pt/ficheiros/rpmgf/v28n6a/v28n6a02.pdf.
12. Jamoulle M. Quaternary prevention, an answer of family doctors to overmedicalization. Int J Health Policy Manag. 2015;4(2):61-64. http://dx.doi.org/10.15171/ijhpm.2015.24. PMid:25674569.
13. Foucault M. O nascimento da clínica. Rio de Janeiro: Forense Universitária; 2013.
14. Zola IK. Medicine as an institution of social control. Sociol Rev. 1972;20(4):487-504. http://dx.doi.org/10.1111/j.1467-954X.1972.tb00220.x. PMid:4645802.
15. Nye RA. The evolution of the concept of medicalization in the late twentieth century. J Hist Behav Sci. 2003;39(2):115-129. http://dx.doi.org/10.1002/jhbs.10108. PMid:12720322.
16. Conrad P. The shifting engines of medicalization. J Health Soc Behav. 2005;46(1):3-14. http://dx.doi.org/10.1177/002214650504600102. PMid:15869117.
17. Foucault M. Microfísica do poder. Rio de Janeiro: Edições Graal; 1979.
18. Poli P No, Caponi S. Medicalização: revisitando definições e teorias. In: Tesser CD, editor. Medicalização social e atenção à saúde no SUS. São Paulo: Hucitec; 2010. p. 35-51.
19. Metzl JM, Herzig RM. Medicalisation in the 21st century: introduction. Lancet. 2007;369(9562):697-698. http://dx.doi.org/10.1016/S0140-6736(07)60317-1. PMid:17321315.
20. Nogueira RP. Higiomania: a obsessão com a saúde na sociedade contemporânea. In: Vasconcelos EM, editor. A Saúde nas palavras e nos gestos: reflexões das redes de educação popular e saúde. São Paulo: Hucitec; 2001. p. 63-72.
21. Bell SE, Figert AE. Medicalization and pharmaceuticalization at the intersections: Looking backward, sideways and forward. Soc Sci Med. 2012;75(5):775-783. http://dx.doi.org/10.1016/j.socscimed.2012.04.002. PMid:22633161.
22. Nogueira RP. Da medicina preventiva à medicina promotora. In: Arouca S, editor. O dilema preventivista: contribuição para a compreensão e crítica da medicina preventiva. São Paulo: UNESP; Rio de Janeiro: Fiocruz; 2003. p. 175-182.
23. Zorzanelli RT, Ortega F, Bezerra B Jr. An overview of the variations surrounding the concept of medicalization between 1950 and 2010. Cienc saude colet. 2014;19(6):1859-1868. http://dx.doi.org/10.1590/1413-81232014196.03612013
24. McWhinney IR. William Pickles Lecture 1996. The importance of being different. Br J Gen Pract. 1996;46(408):433-436. PMid:8776918.
25. Camargo KRA Jr. A biomedicina. Physis [online]. 2005 [cited 2014 Sept 8];15(Suppl):177-201. Available from: http://www.scielo.br/pdf/physis/v15s0/v15s0a09.pdf.
26. Camargo KR Jr. As armadilhas da "Concepção Positiva de Saúde". Physis [online]. 2007 [cited 2014 Sept 8];;76(1):63-76. Available from: http://www.scielo.br/pdf/physis/v17n1/v17n1a05.pdf.
27. Cunha GT. A construção da clínica ampliada na atenção básica. 2nd ed. São Paulo: Hucitec; 2007.
28. Canguilhem G. O normal e o patológico. 7th ed. Rio de Janeiro: Forense Universitária; 2011.

29. Puttini RF, Pereira A Jr. Além do mecanicismo e do vitalismo: a "normatividade da vida" em Georges Canguilhem. Physis. 2007;17(3):451-464. http://dx.doi.org/10.1590/S0103-73312007000300003.

30. Tesser CD. A biomedicina e a crise da atenção à saúde: um ensaio sobre a desmedicalização [thesis online]. Campinas: Universidade Estadual de Campinas; 1999. Available from: http://www.bibliotecadigital.unicamp.br/document/?code=vtls000199171.

31. Conrad P. Medicalization and social control. Annu Rev Sociol. 1992;18:209-232. http://dx.doi.org/10.1146/annurev.so.18.080192.001233.

32. Rose G. Estratégias da medicina preventiva. Porto Alegre: Artmed; 2010.

33. Moynihan R, Heath I, Henry D. Selling sickness: the pharmaceutical industry and disease mongering. BJM. [online]. 2002 [cited 2013 Oct 12];324(7342):886-891. PMID: 11950740.

34. Conrad P, Bergey MR. The impending globalization of ADHD: notes on the expansion and growth of a medicalized disorder. Soc Sci Med. 2014;122:31-43. http://dx.doi.org/10.1016/j.socscimed.2014.10.019. PMid:25441315.

35. Jamoulle M. From Illich to Moynihan, medicine can be dangerous for your health. In: Jamoulle M, Tsoi G, Heath I, Mangin, D, Pezeshki M, Báez MP. Quaternary prevention, addressing the limits of medical practice. Proceedings of the Wonca World Conference. Prague; 2013. [cited 2013 Nov 2]. Available from: http://www.ph3c.org/PH3C/docs/27/000322/0000469.pdf.

36. Ministério da Saúde (BR), Secretaria de Atenção à Saúde, Departamento de Atenção Básica. PNAB: Política Nacional de Atenção Básica. Brasília: Ministério da Saúde; 2012. [cited 2014 Aug 20]. Available from: http://bvsms.saude.gov.br/bvs/publicacoes/politica_nacional_atencao_basica.pdf.

37. Franco TB, Merhy EE. PSF: contradições e novos desafios. Belo Horizonte; 1999. [cited 2013 Nov 20]. http://www.datasus.gov.br/cns/temas/tribuna/PsfTito.htm.

38. Merhy EE. Gestão da produção do cudiado e clínica do corpo sem órgãos: novos compontentes dos processos de produção do cuidado em saúde. Desafios para os modos de produzir o cuidado centrados nas atuais profissões. Rio de Janeiro: UFF; 2007. [cited 2013 Aug 25]. Available from: http://www.uff.br/saudecoletiva/professores/merhy/artigos-25.pdf.

39. Gérvas J, Pérez-Fernández M. Como construir uma Atenção Primária Forte no Brasil? Resumo Técnico para Políticos, Gestores e Profissionais de Saúde com responsabilidade em organização e docência do relatório de: É possível transformer o círculo vicioso de má qualidade em um círculo virtuoso de boa qualidade, no trabalho clínico e comunitário na Atenção Primária no Brasil. Rio de Janeiro: SBMFC; 2011. [cited 2014 Jan 15]. Available from: http://www.sbmfc.org.br/media/file/Visita_Espanhois_2011/Brasil,%20Relatorio%20Resumo%20final%202011.pdf.

40. Starfield B. Atenção Primária: equilíbrio entre necessidades de saúde, serviços e tecnologia. Brasília: Ministério da Saúde/UNESCO; 2002.

41. Tesser CD, Poli P No, Campos GWS. Acolhimento e (des)medicalização social: um desafio para as equipes de saúde da família. Cien Saude Colet. 2010;15(3 Suppl 3):3615-3624. http://dx.doi.org/10.1590/S1413-81232010000900036. PMid:21120349.

42. Gérvas J. Cómo mantener la calidad de la atención médica ante pacientes exigentes y frente a una sociedad expectante? Madrid: Equipo CESCA; 2012. [cited 2014 Nov 5]. Available from: http://equipocesca.org/pt/como-mantener-la-calidad-de-la-atencion-medica-ante-pacientes-exigentes-y-frente-a-una-sociedad-expectante/.

43. Mangin D, Toop L. The quality and outcomes framework: what have you done to yourselves? Br J Gen Pract. 2007;57(539):435-437. PMid:17550665.

44. Hoffmann TC, Del Mar C. Patients' expectations of the benefits and harms of treatments, screening, and tests: a systematic review. JAMA Intern Med. 2015;175(2):274-286. http://dx.doi.org/10.1001/jamainternmed.2014.6016. PMid:25531451.

45. Matumoto S, Fortuna CM, Mishima SM, Pereira MJB, Domingos NAM. Supervisão de equipes no Programa de Saúde da Família: reflexões acerca do desafio da produção de cuidados. Interface, Comun., Saúde, Educ. 2005;9(16):9-24. http://dx.doi.org/10.1590/S1414-32832005000100002.

46. Jamoulle M, Roland M. Quaternary prevention; from Wonca World Hong Kong 1995 to Wonca World Prague 2013. Poster# 336. Wonca World Congresso; 2013; Prague. [cited 2014 Nov 20]. Available from: http://www.ph3c.org/PH3C/docs/27/000284/0000439.pdf.

47. Norman AH, Tesser CD. Prevenção quaternária: as bases para sua operacionalização na relação médico-paciente. Rev Bras Med Fam Comunidade. 2015;10(35). In press. http://dx.doi.org/10.5712/rbmfc10(35)1011.

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Attention-deficit hyperactivity disorder: preventing overdiagnosis and overtreatment

Déficit de atenção e hiperatividade: prevenindo o sobrediagnóstico e o sobretratamento

Déficit de atención e hiperactividad: previniendo el sobrediagnóstico y el sobretratamiento

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Abstract

The first part of this article focuses on the wide variations in the diagnosis of attention-deficit hyperactivity disorder (ADHD) that are observed between countries and between regions within the same country. Diagnosing ADHD is more problematic than is commonly thought. For instance, younger American children in the same grade at school are 64% more likely to receive the diagnosis and symptoms can result from many underlying causes. Furthermore, ADHD can be confused with many other health issues. As a result it is largely overdiagnosed and overtreated. The second part of the article reviews recent studies showing that anti-ADHD drugs lack long-term effectiveness and come with important adverse events. Overall, and in the long run, the pharmacologic treatment of ADHD is likely to cause more harm than good.

Keywords:
Attention Deficit Disorder with Hyperactivity
Medicalization
Effectiveness / adverse effects
Quaternary Prevention

Resumo

A primeira parte deste artigo concentra-se nas grandes variações no diagnóstico de transtorno de déficit de atenção e hiperatividade (TDAH), que são observadas entre países e entre regiões de um mesmo país. O diagnóstico de TDAH é mais problemático do que normalmente se pensa. Por exemplo, crianças norte-americanas mais jovens no mesmo grau escolar são 64% mais propensas a receber o diagnóstico e os sintomas podem resultar de muitas causas subjacentes. Além disso, o TDAH pode ser confundido com muitas outras questões de saúde. Como resultado, o TDAH é amplamente sobrediagnosticado e sobretratado. A segunda parte do artigo revisa estudos recentes que mostram que as drogas anti-TDAH não têm eficácia de longo prazo e contam com eventos adversos importantes. No geral, e no longo prazo, o tratamento farmacológico do TDAH é susceptível de causar maiores danos do que benefícios.

Palavras-chave:
Transtorno do Déficit de Atenção com Hiperatividade
Medicalização
Efetividade / efeitos adversos
Prevenção Quaternária

Resumen

La primera parte de este artículo se centra en las amplias variaciones en el diagnóstico del trastorno de hiperactividad por déficit de atención (TDAH) que se observan entre países y entre regiones dentro de un mismo país. El diagnóstico de TDAH es más problemático de lo que se piensa comúnmente. Por ejemplo, los niños estadounidenses más jóvenes en el mismo grado en la escuela son 64% más propensos a recibir el diagnóstico y los síntomas pueden ser el resultado de muchas causas subyacentes. Además, el TDAH se puede confundir con muchas otras cuestiones de salud. Como resultado, el TDAH és ampliamente sobrediagnosticado y sobretratado. La segunda parte del artículo revisa estudios recientes que muestran que las drogas anti-TDAH carecen de eficacia a largo plazo y cuentan con eventos adversos importantes. En general, y en el largo plazo, el tratamiento farmacológico del TDAH es probable que cause más daños que beneficios.

Palabras clave:
Trastorno por Déficit de Atención con Hiperactividad
Medicalización
Efectividad / efectos adversos
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Introduction

Close to one child out of five has been diagnosed with attention-deficit hyperactivity disorder (ADHD) in Kentucky.[1] At the other end of the spectrum, Cohen and many others consider that it is not a valid mental disorder,[2] and according to *Der Spiegel*, psychiatrist Leon Eisenberg, the 'scientific father' of ADHD, declared a few months before he died that 'it is a prime example of a fictitious disease'.[3] It is not our purpose here to address this specific aspect of the debate although some children do have problems of inattention, impulsivity and hyperactivity and do need help. Our purpose here is to argue that 'ADHD' is largely overdiagnosed and overtreated, which most likely causes more harm than good.

Variations that cast a long shadow over the diagnosis

In the last two decades, rates of ADHD have skyrocketed, especially in the United States, with a tenfold increase in the use of medications.[4] The market for anti-ADHD drugs went from $15 million in the mid-nineties to $9 billion in 2012.[5]

Wide variations in diagnosis have been observed between countries. In France, the *Haute Autorité de Santé* (HAS) estimates prevalence at around 2%.[6] The Centers for Disease Control and Prevention report that 11% of children 4-17 years of age received an ADHD diagnosis by a health care provider in 2011.[1] Furthermore, prevalence varies extensively by state, from a low of 5.6% in Nevada to a high of 18.7% in Kentucky.[1] In Québec, close to 13% of high school students have had an ADHD diagnosis confirmed by a doctor. In the United States, boys are 2.4 times more likely to be diagnosed than girls,[1] while in Québec 16% of boys received the diagnosis, versus 9% for girls.[7]

Prevalence also varies according to the diagnostic tool used. The *Diagnostic and Statistical Manual of Mental Disorders* (DSM) generally gives rise to rates between 5% and 10%, while the International Classification of Diseases (ICD) of the World Health Organisation gives rise to rates varying from 0.4% to 4.2%,[6] which is 2.5 to 13 times less for ICD, whose criteria are much more restrictive.[8] Insofar as France is concerned, it uses *The French Classification of Child and Adolescent Mental Disorders*.

These wide variations are indicative of the subjective nature of the diagnosis, which explains, in part, why it is so controversial. Adding to the controversy, it has never been proved that it is a genetic disorder implying a deficit of dopamine[9]. Indeed, David Kupfer, Chairman of DSM-5, concedes that 'biological and genetic markers that provide precise diagnoses that can be delivered with complete reliability and validity [are still] disappointingly distant'. In other words, there are no such things as biological markers for any DSM diagnosis.[10]

There is more than we might think when it comes to diagnosing ADHD. The Attention Deficit Clinic of Rivière-des-Prairies Hospital in Montréal receives patients referred by a doctor suspecting or having diagnosed ADHD. In 2006, after evaluation, close to 40% of diagnoses were withdrawn;[11] recently, that figure has gone up to 60%.[a]

There is clear evidence and many compelling reasons to believe ADHD is overdiagnosed. First, inattention, impulsivity and hyperactivity are common among young children and adolescents. Where do we put the cursor between what's 'normal' and what's not? Second, it is easily confused with some developmental disorders like dyslexia and many medical conditions such as apnea; third, these symptoms can be the result of many underlying causes, like stressful living conditions, ecological hazards, etc.; fourth, the criteria outlined in DSM are redundant giving the diagnosis a false sense of validity.

A question of maturity or ADHD?

Children in the same grade at school may almost have a year in age difference. For the United States, Todd Elder's study showed that 8.4% of children born just before the cut- off date for kindergarten eligibility (kids five to six) are diagnosed with ADHD, compared to 5.1% of children born in the month after the cut-off date.[12] In other words, the youngest and most developmentally immature children are 64% more likely to be diagnosed with ADHD. The consequences are far reaching: 'the youngest children in fifth and eighth grades are nearly twice as likely as their older classmates to regularly use stimulants prescribed to treat ADHD'.[12] About one million kids are potentially overdiagnosed or misdiagnosed. This is consistent with what was found in Iceland. In a group of children 7 to 14 years of age, the youngest in their class were 50% more likely to be diagnosed with ADHD.[13] The younger the child, the more he or she is likely to be overdiagnosed.

The identification of what looks like ADHD symptoms in grade one is a poor predictor of ADHD later on. A Swedish study screened 422 first graders by asking parents and teachers to answer the Conners 10-item scale on ADHD. Half the first graders who screened positive 'ended up with a formal diagnosis in the fourth grade'.[14] Guidelines from the US National Institute of Mental Health (NIMH) instructing health professionals, and ultimately teachers, were used to evaluate ADHD by comparing children in the same grade at school, are another driver of overdiagnosis.

Mild to moderate ADHD?

According to Centers for Disease Control and Prevention, 86% of kids would have mild to moderate ADHD, which represents an important pool of potential overdiagnosis. Mild or moderate symptoms could easily be confused with normal behavior and with the fact that school might not be adapted to the needs of a lot of children. Many children are more active and less attentive than average. Does that mean they are disordered? Moreover, as happens relatively frequently with DSM, many are diagnosed without fulfilling diagnostic criteria.[15] Many times the diagnosis does not take into account the impairment criterion. When researchers considered this factor instead of focusing on symptoms only, they reduced the 16.1% prevalence of ADHD to 6.8%.[16] In North Carolina, after applying the impairment criterion, researchers estimated that 6.2% of children (n=1 422) met ADHD criteria while 7.3% were using stimulants; 'over 57% of those who received medication did not meet the criteria'.[17]

The distinction between mild to moderate and severe forms is left to the subjective judgment of health professionals since there are no tests or criteria to distinguish between severe ADHD and its 'light and moderate' forms. In many instances, the diagnosis is made in sub-optimal conditions. Swanson's estimate of 1% 'real ADHD' is based on three trained observers seeing the same thing.[8] What is worrisome is that the severity of symptoms does not seem to really impact the type of treatment, since 87% of children who had an ADHD diagnosis in the United States were medicated in 2010.[15]

Is it ADHD, a developmental issue, a somatic problem?

Inattention, impulsivity and hyperactivity can easily be confused with a developmental disorder like dyslexia. Furthermore, many studies have shown a link between sleeping difficulties due to apnea, tonsils,[18] hearing or sight problems and ADHD symptoms. During his 50 years of practice, neurologist Richard Saul was confronted with this problem frequently: 'Over the course of my career, I have found more than 20 conditions that can lead to symptoms of ADHD, each of which requires its own approach to treatment'.[19]

Is it ADHD or something else? The problem of comorbidity

The Canadian ADHD Resource Alliance (CADDRA) estimates that 87% of children get at least two diagnoses and 67% at least three.[20] Among those are: generalized anxiety, major depression, conduct disorder, oppositional defiant disorder, etc. As a result, many children and adolescents are polymedicated with potentially disastrous consequences, since each additional drug increases the risk of adverse events.

The problem of comorbidity raises many questions. First, DSM diagnoses are considered discrete entities with more or less clearly defined borders, an idea which has been widely challenged. You may have a cardiovascular disease, pneumonia and osteoarthritis. These are three different illnesses and tests are available to diagnose them, but there are no tests for DSM diagnoses. When a child gets an ADHD diagnosis with generalized anxiety and major depression, does he or she have three different illnesses or are these three different expressions of the same suffering? What is disturbing, at least in Québec, is that a doctor can overbill if his patient gets more than one diagnosis and/or when he or she administers scales used to diagnose ADHD.

Second, do inattention and hyperactivity come first or are they the result of something else, like stressful living conditions (overwhelmed parents, dysfunctional families, a difficult divorce, child abuse, lack of support, poverty)? It is well known that poverty generates a lot of stress. One of the pioneers of ADHD research in the United States, Alan Sroufe, followed

kids from poor neighbourhoods for many years; he observed that they are 75% more likely to be diagnosed with ADHD than the national average.[21] It's normal for kids coming from poor and/or dysfunctional families to feel anxious, moody, hyperactive or inattentive. You have to look for underlying causes: social, ecological, medical, iatrogenic and likely dietary. Some recent studies have brought evidence that pesticides, heavy metals, pollution, exposure to cigarette smoke in the womb, can induce ADHD-like symptoms.[22] Third, the criteria for an ADHD diagnosis are flawed. The inattentive type requires six out of nine criteria which are summarized in Table 1.

Table 1. DSM-5 criteria for ADHD, inattentive type.

1. 'Often fails to give close attention to details.
2. Often has difficulty sustaining attention in tasks or play.
3. Often does not seem to listen when spoken to.
4. Is often easily distracted by extraneous stimuli.
5. Is often forgetful in daily activities.
6. Often does not follow through on instructions.
7. Often has difficulty organising tasks and activities.
8. Often avoids, dislikes or is reluctant to engage in tasks that require sustained mental effort.
9. Often loses things necessary for tasks or activities.'

Source: American Psychiatric Association, DSM-5, p. 59.

DSM-5 has added more examples, but the criteria have not changed. However it has changed the age for symptom onset from seven years of age to 12, which increases the risk for more overdiagnosis. The purpose of multiple criteria is to raise the threshold for a diagnosis, '… making it appear that the *DSM* standards will ensure validity'.[23] A careful reading reveals that the first five criteria are redundant. After the first criterion, each of the following four essentially repeats the first: the subject is inattentive because he lacks attention in different contexts. It looks more like a tautology than different criteria. The same remarks go for the impulsivity and hyperactivity type. Furthermore, why six symptoms out of nine? Why not five or seven? And what is meant by 'often'?

By focusing on symptoms the individual is cut off and isolated from what defines him, his social, ecological and psychological environment. He is reduced to the role of carrier of symptoms and separated from what makes every one of us a human being.

A good part of the psychiatric establishment has disqualified or taken its distance from DSM. For diametrically different reasons, outside of the scope of this article, Thomas Insel, director of the National Institute of Mental Health, has disqualified DSM because it is using symptoms as a basis for diagnosis.[24] His stance has created a real storm in the world of psychiatry. Allen Frances, editor-in-chief of DSM-IV, pressed for a boycott of the latest version of the manual;[5] in 2007, Robert Spitzer who presided over the destinies of the third version has taken its distance from the 'bible', admitting that many disorders included in DSM-III might be normal reactions.[25]

Effectiveness of anti-ADHD drugs

Experience and short-term trials sponsored by drug makers have shown that anti-ADHD drugs increase attention, memory, note-taking, etc. From these observations, pharmaceutical promotion resolved that anti-ADHD drugs improve academic results and behaviors, protect against losing employment, delinquency and crime. These risks are supposedly greater than the risks of adverse drug events from psychostimulants. In 2008, FDA sent a warning letter to five manufacturers of psychostimulants asking them to withdraw claims that psychostimulants improve academic performance:

> *'This presentation is misleading because it implies that use of Concerta will lead to an improvement in academic performance throughout the day when this has not been shown by substantial evidence or substantial clinical experience'.*[26]

The long-term effectiveness (in real life as opposed to 'efficacy' in clinical trials) of psychostimulants has been challenged by non-industry long-term studies. The first one is the famous 1999 Multimodal Treatment ADHD study (MTA), sponsored by the National Institute of Mental Health. It recruited close to 600 subjects divided in four groups: (1) Drug only; (2) Therapy

only; (3) Combination of 1 and 2; (4) Usual care, (67% were on stimulants). The first phase lasted 14 months and the children were followed-up for eight years. To the dismay of the authors, the follow-up conclusions were very different from the initial ones. At 14 months they found that medicated children had better outcomes, but 10 months later, at two years: 'Approximately half of the initial advantage had dissipated'; and at three years 'treatment groups did not differ significantly on any measure'.[27] The 'psychiatric, academic or social functioning outcomes' were no different, and kids on ADHD drugs fared no better in spite of increasing the dose by 41%. Moreover, from the beginning, the blinded observer did not find differences between groups on most measures.

The Raine study came out in 2010. It was sponsored by the Western Australian government. It was a longitudinal study of 2878 children ages six to 14 followed for eight years. Among them, 131 were diagnosed with ADHD. The children diagnosed with ADHD and receiving psychostimulants were 10.5 times more likely to be failing school than those with ADHD and never medicated. Those who were medicated had slightly worse outcomes in terms of depression, social functioning and self-esteem; and very importantly, those who were medicated on a regular basis had a diastolic blood pressure 10.79 mm HG higher than children who never received medication.[28] Although the risk is lower for children, according to a study published in *Lancet* in 2002, '…increases in diastolic blood pressure of more than 1 mm Hg raise the risk for heart attack by 10 percent and stroke by 7 percent in middle-aged adults…'.[29]

Janet Currie from Princeton University and her team used a Canadian longitudinal study that followed children for 14 years. The results published in 2013, showed that those who were medicated were more liable to repeat grades, had worse results in maths, experienced a deterioration of relations with parents, exhibited slightly more anxiety, depression and sadness, especially girls.[30] Children in Québec, where proportionally more stimulants are prescribed, fared worse than those in the rest of Canada.

Finally, the follow-up of the Preschool ADHD Treatment Study (PATS), sponsored by NIMH, published in 2013, determined that psychostimulants did not work for 89% of pre-school children. After six years, most of those who were medicated exhibited a little more (a few percentage points) ADHD symptoms than those who were not.[31]

Adverse drug events

Some adverse drug events of psychostimulants are well-known: stunted growth, reduction in appetite, increase in insomnia, anxiety, irritability and emotional outbursts. In the MTA study, 11% stopped treatment because of moderate to severe side effects. In 2010, a survey of 325 participants indicated that 48% reported at least one side effect, most often loss of appetite, insomnia and mood swings. Twenty-one percent were considered 'very bothersome' or 'extremely bothersome'.[32]

In Canada, the *Toronto Star* put a lot of effort into getting a data base from Health Canada. Over a ten-year period, the regulator received close to 600 notifications of serious adverse events where anti-ADHD drugs are the number one suspect. David Kessler, formerly FDA commissioner, considered that 1% of serious adverse events are reported.[33] Here is an incomplete list of serious adverse events: seven suicides, 76 suicide attempts, 24 convulsions, 48 hallucinations, 28 cardiac problems, 23 liver complications.[34] More than half of these cases were reported during the last two years before 2012.

Between 2008 and 2012, FDA received many reports of serious adverse drug events in children under age 18, concerning two stimulants, lisdexamfetamine (Vyvanse) and methylphenidate (Concerta), as well as atomoxetine (Strattera) which is a failed antidepressant recycled as an anti-ADHD drug. These three drugs were listed among the 15 for which adverse reactions were most frequently reported. Table 2 summarizes those events.

Atomoxetine shares a suicidal behavior warning with other antidepressants, but not the stimulants. The three have warnings about psychosis and hallucinations. The prescribing information contains a warning about sudden death for methylphenidate but 'the literature is mixed'.[35] Cardiac events (chest pain, syncope, QT interval prolongation) were reported with atomoxetine. Seventeen cases of movement disorders were reported with lisdexamfetamine. These reports do not prove a causal relation between the drug and the adverse event. However, their multiplication is a sure sign that these events are not pure coincidences and that something is amiss and warrants thorough investigation and circulation of the information.

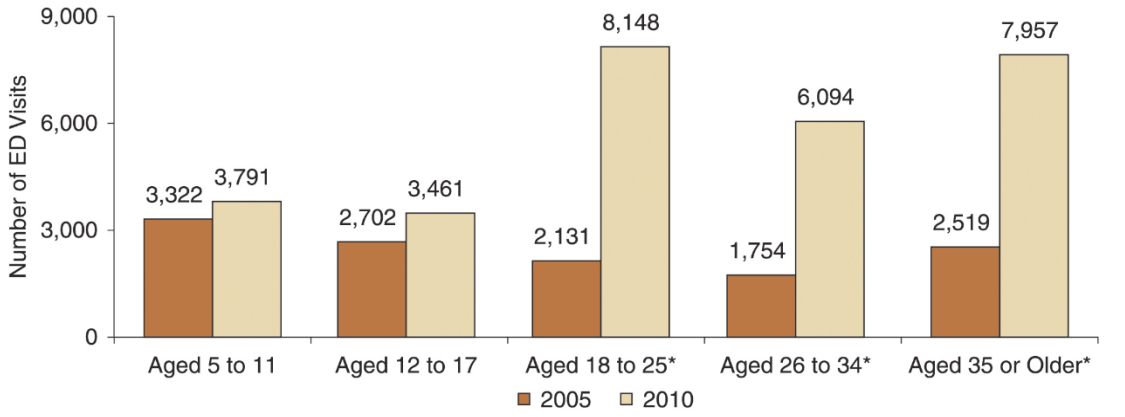
Table 2. Most frequent serious adverse reactions for three anti-ADHD drugs, 2008-2012.

Rank	Drug name	No. of cases	Most freq ADR	2nd most freq ADR
6	Methylphenidate (Concerta)	418	Sudden death	Aggression
8	Lisdexamfetamine (Vyvanse)	314	Suicidal ideation	Aggression
12	Atomoxetine (Strattera)	227	Suicidal ideation	Chest pain

Source: Institute for Safe Medication Practices, Quarter Watch, Monitoring FDA MedWatch Report. Available at: www.ismp.org/QuarterWatch/, January 16, 2014.[35]

In the last few years the number of emergency visits has mushroomed especially among people 18 and older. The figures in Graph 1 are from a branch of the US Department of Health and Human Services. Emergency room visits involving nonmedical use made up half of visits and nearly tripled during this time to close to 15600.[36]

A consortium of psychostimulants manufacturers opposed the suggestion by the European Medicines Agency to test their safety in long-term studies.[37] If the adverse events linked to anti-ADHD drugs are banal and if the benefit/risk profile is favorable why object to such a study?



Graph 1. Emergency visits after taking Anti-ADHD drugs. United States, 2005-2010. Source: Substance Abuse and Mental Health Services Administration, http://www.samhsa.gov/data/2k13/dawn073/sr073-add-adhd-medications.htm, January 2013.[38]

Alternatives

There are well documented alternatives to medication for children who experience problems of inattention and hyperactivity: parent training, social skills training, cognitive control, and so on.

Conclusion

There is clear evidence that ADHD is overdiagnosed. If anti-ADHD drugs are efficient in the short term, they lose this capacity in the medium to long-term. These drugs are linked to some serious adverse events. Their profile benefit/risk is likely negative.

Note

a. Personal communication by Joël Monzée, doctor in neurology and psychotherapist.

References

1. Centers for Disease Control and Prevention (CDC). Data and statistics. New data: medication and behavior treatment [Internet]. Clifton Road Atlanta, GA: United States. U.S. Department of Health & Human Services; 2015 [cited 2015 Jun 18]. available from: http://www.cdc.gov/ncbddd/adhd/data.html
2. Cohen D. ADHD in France and in America [Internet]. In: Mad in America: Science, Psychiatry and Community. 2013 [cited 2013 Sept 30]. Available from: http://www.madinamerica.com/2013/09/adhd-france-america/
3. Von Blech J. Schwermut ohne Scham. Der Spiegel, 2012 Jun 2. 2015 [cited 2015 June 18] Available from: http://www.spiegel.de/spiegel/print/d-83865282.html.
4. Rettner R. Doc Shouldn't Give ADHD Drugs to Healthy Kids [Internet]. In: Live Science. 2013 [cited 2013 Mar 13]. Available from: http://www.livescience.com/27884-adhd-drugs-healthy-kids-prescribing.html
5. Papin F. "N'achetez pas le DSM-5", recommande le Dr Allen Frances, père du DSM-IV [Internet]. In: Institut du développement de l'enfant et de la famille. 2013 [cited 2013 Sep 30]. Available from: https://www.facebook.com/permalink.php?story_fbid=10151899309383841&id=252682718840
6. Haute Autorité de Santé. Conduite à tenir devant un enfant ou un adolescent ayant un déficit de l'attention et/ou un problème d'agitation. 2012 [cited 2015 Jun 18]. Available from: http://www.afpssu.com/wp-content/uploads/2013/07/trouble-de-lattention-de-lenfant_note_de_cadrage.pdf
7. Institut de la statistique du Québec. L'Enquête québécoise sur la santé des jeunes du secondaire. Tome 2: Le visage des jeunes d'aujourd'hui: leur santé mentale et leur adaptation sociale 2010-2011. Québec, FR: Institut de la statistique du Québec; 2013.
8. Swanson JM, Sergeant JA, Taylor E, Sonuga-Barke EJS, Jensen PS, Cantwell DP. Attention-deficit hyperactivity disorder and hyperkinetic disorder. Lancet. 1998;351(9100):429-433.[Accessed Jun 18 2015]. http://dx.doi.org/10.1016/S0140-6736(97)11450-7. PMid:9482319.
9. Gonon F, Cohen D. Le trouble déficitaire de l'attention avec hyperactivité : La génétique est-elle impliquée? Med Sci (Paris). 2011;27(3):315-317. http://dx.doi.org/10.1051/medsci/2011273315. PMid:21447307.
10. Kupfer D. Statement by David Kupfer, MD [Internet]. In: American Psychiatric Association. Arlington, VA: American Psychiatric Association; 2013 [Accessed: Jun 18 2015]. Available from: http://www.psych.org/File%20Library/Advocacy%20and%20Newsroom/Press%20Releases/2013%20Releases/13-33-Statement-from-DSM-Chair-David-Kupfer--MD.pdf
11. Guay MC, Lageix P, Parent V. Proposition d'une démarche évaluative du TDAH. In: Chevalier N, Guay MC, Achim A, Lageix P, Poissant H, editors. Trouble déficitaire de l'attention avec hyperactivité. Soigner, éduquer, surtout valoriser. Montréal: l'Université du Québec; 2006. 5 p.
12. Elder TE. The importance of relative standards in ADHD diagnoses: evidence based on exact birth dates. J Health Econ. 2010;29(5):641-656. http://dx.doi.org/10.1016/j.jhealeco.2010.06.003. PMid:20638739.
13. Dotinga R. Youngest kids in class may be more likely to get ADHD diagnosis [Internet]. In: Health Day. 2012 [cited 2015 Jun 18]. Available from: http://consumer.healthday.com/kids-health-information-23/attention-deficit-disorder-adhd-news-50/youngest-kids-in-class-may-be-more-likely-to-get-adhd-diagnosis-670784.html
14. Holmberg K, Sundelin C, Hjern A. Screening for attention-deficit/hyperactivity disorder (ADHD): can high-risk children be identified in first grade? Child Care Health Dev. 2013;39(2):268-276. http://dx.doi.org/10.1111/j.1365-2214.2012.01382.x. PMid:22515618.
15. Thomas R, Mitchell GK, Batstra L. Attention-deficit/hyperactivity disorder: are we helping or harming? BMJ. 2013;347:f6172. [Accessed: 2015 Feb 3]. http://dx.doi.org/10.1136/bmj.f6172. PMid:24192646.
16. Wolraich ML, Hannah JN, Baumgaertel A, Feurer ID. Examination of DSM-IV criteria for attention deficit/hyperactivity disorder in a county-wide sample. J Dev Behav Pediatr. 1998;19(3):162-168. http://dx.doi.org/10.1097/00004703-199806000-00003. PMid:9648041.
17. Parens E, Johnston J. Facts, values, and attention-deficit hyperactivity disorder (ADHD): an update on the controversies. Child Adolesc Psychiatry Ment Health. 2009;3(1):1-17. http://dx.doi.org/10.1186/1753-2000-3-1. PMid:19152690.
18. Thakkar VG. Diagnosing the wrong deficit [Internet]. In: The New York Times Sunday Review. 2013 [cited 2013 Apr 27]. Available from: http://www.nytimes.com/2013/04/28/opinion/sunday/diagnosing-the-wrong-deficit.html?emc=eta1&_r=0.
19. Saul R. Doctor: ADHD does not exist [Internet]. In: Time. 2004 [cited 2015 Jun 18]. Available from: http://time.com/25370/doctor-adhd-does-not-exist/
20. Canadian ADHD Practice Guidelines (CAP-Guidelines) [Internet]. 3rd ed. Canada: Canadian ADHD Resource Alliance; 2010 [cited 2015 Jun 18y]. Available from: http://www.caddra.ca/cms4/pdfs/caddraGuidelines2011.pdf
21. Sroufe A. Ritalin Gone Wrong [Internet]. In: The New York Times Sunday Review. 2012 [cited 2012 Jan 28]. Available from: http://www.nytimes.com/2012/01/29/opinion/sunday/childrens-add-drugs-dont-work-long-term.html.

22. Braun JM, Kahn RS, Froehlich T, Auinger P, Lanphear BP. Exposures to environmental toxicants and attention deficit hyperactivity disorder in U.S. children. Environ Health Perspect. 2006;114(12):1904-1909. PMid:17185283.

23. Kirk SA, Gomory T, Cohen D. Mad Science: psychiatric coercion, diagnosis, and drugs. New Brunswick, NJ: Transaction Publishers; 2013. 166 p.

24. Insel T. Transforming Diagnosis [Internet]. In: National Institute of Mental Health. 2013 [cited 2015 Jun 18y]. Available from: http://www.nimh.nih.gov/about/director/2013/transforming-diagnosis.shtml

25. The Trumpet. Psych Illnesses Lack Scientific Basis [Internet]. 2007 [cited cited 2015 Jun 18]. Available from: http://www.thetrumpet.com/article/3819.2061.96.0/society/psych-illnesses-lack-scientific-basis?preview

26. Food and Drug Administration (FDA). Inspections, compliance, enforcement, and criminal investigations [Internet]. 2008 [cited 2008 Sept 25]. Available from: http://www.fda.gov/iceci/enforcementactions/warningletters/2008/ucm1048119.htm

27. Molina BS, Hinshaw SP, Swanson JM, Arnold LE, Vitiello B, Jensen PS, et al. The MTA at 8 years: prospective follow-up of children treated for combined-type ADHD in a multisite study. J Am Acad Child Adolesc Psychiatry. 2009;48(5):484-500. http://dx.doi.org/10.1097/CHI.0b013e31819c23d0. PMid:19318991.

28. Smith G, Jongeling B, Hartmann P, Russell C, Landau L. Raine ADHD study: long-term outcomes associated with stimulant medication in the treatment of ADHD in children [Internet]. Austrália: Government of Western Australia; 2010 [cited cited 2015 Jun 18]. Available from: https://www.health.wa.gov.au/publications/documents/MICADHD_Raine_ADHD_Study_report_022010.pdf

29. Case Western Reserve University. FDA approves many drugs that predictably increase heart and stroke risk: case western reserve physician calls on FDA to address hidden risk [Internet]. 2014 [cited 2014 May 24]. Available from: http://casemed.case.edu/newscenter/news-release/newsrelease.cfm?news_id=212

30. Currie J, Stabile M, Jones LE. Do stimulant medications improve educational and behavioral outcomes in children with ADHD? Massachusetts: National Bureau of Economic Research; 2013 [cited 2015 Jun 18]. Available from: https://www.mcgill.ca/socialstatistics/files/socialstatistics/mark_stabile_oct_2_2013.pdf

31. Riddle MA, Yershova K, Lazzaretto D, Paykina N, Yenokyan G, Greenhill L, et al. The preschool attention-deficit/hyperactivity disorder treatment study (PATS) 6-year follow-up. J Am Acad Child Adolesc Psychiatry. 2013;52(3):264-278. http://dx.doi.org/10.1016/j.jaac.2012.12.007. PMid:23452683.

32. Collingwood J. Side effects of ADHD medication [Internet]. In: PsychCentral. 2010 [cited 2015 Jun 18]. Available from: http://psychcentral.com/lib/side-effects-of-adhd-medications/0003782

33. St-Onge JC. Tous fous? L'influence de l'industrie pharmaceutique sur la psychiatrie. Montréal: Écosociété; 2013. 78 p.

34. Bruser D, Bailey A. ADHD drugs suspected of hurting canadian kids [Internet]. In: Toronto Star Newspapers. 2012 [cited 2012 Sept 26]. Available from: http://www.thestar.com/news/canada/2012/09/26/adhd_drugs_suspected_of_hurting_canadian_kids.html

35. Institute for Safe Medication Practices (ISMP). QuarterWatch Monitoring FDA MedWath Reports. Horsham; 2015 [cited 2015 June 18] Available from: http://www.ismp.org/QuarterWatch/.

36. Mantua Station Drug Co. ER visits linked to ADHD meds up sharply [Internet]. 2013 [cited 2015 Jun 18]. Available from: https://mantuastationrx.com/article.php?id=672868&category=DRAB

37. Larsson J. Confidential report reveals: Big Pharma trying to stop long-term safety studies of ADHD drugs (Ritalin, Concerta) [Internet]. In:TransWorldNews. 2010 [cited 2010 Apr 4]. Available from: http://www.transworldnews.com/NewsStory.aspx?StoryID=244733

38. The Dawn Report (DAWN). Emergency department visits involving Attention Deficit/Hyperactivity disorder stimulant medications [Internet]. 2013 [cited 2015 Jun 18]. Available from: http://archive.samhsa.gov/data/2k13/dawn073/sr073-add-adhd-medications.htm

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Excesos y alternativas de la salud mental en atención primaria

Excessos e alternativas da saúde mental na atenção primária

Excesses and alternatives in mental health in primary care

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Resumen

La extraordinaria expansión de la psiquiatría y la psicología está propiciando el tratamiento de personas sanas que acaban siendo etiquetadas como trastornos mentales. El reduccionismo biológico del modelo médico centrado en los síntomas favorece la transformación de problemas sociales en conflictos individuales y la exposición de los ciudadanos a los efectos adversos de tratamientos excesivos e improcedentes. La prevención cuaternaria en salud mental contempla el empleo de narrativas y formulación de casos (más allá de la etiqueta diagnóstica), la indicación de no-tratamiento y un empleo de los psicofármacos prudente, que considere su deprescripción.

Palabras clave:
Salud Mental
Efectos adversos
Enfermedad Iatrogénica
Medicalización
Prevención Cuaternaria

Resumo

A extraordinária expansão da psiquiatria e da psicologia está proporcionando o tratamento de pessoas saudáveis que acabam sendo rotuladas como transtornos mentais. O reducionismo biológico do modelo médico centrado em sintomas favorece a transformação de problemas sociais em conflitos individuais e a exposição dos cidadãos aos efeitos adversos de tratamentos excessivos e inadequados. A prevenção quaternária em saúde mental contempla o uso de narrativas e formulação de casos (para além do rótulo diagnóstico), a indicação de não-tratamento e um uso prudente de drogas psicoativas, que leve em consideração sua desprescrição.

Palavras-chave:
Saúde Mental
Efeitos adversos
Doença Iatrogênica
Medicalização
Prevenção Quaternária

Abstract

The extraordinary expansion of psychiatry and psychology is leading the treatment of healthy people who end up being labelled as mental disorders. The biological reductionism of the medical model centred on the symptoms favours both the transformation of social problems in individual conflicts and the exposure of citizens to the adverse effects of excessive and inappropriate treatments. Quaternary prevention in mental health contemplates the use of narratives and case formulation (beyond the diagnostic label), the indication of non-treatment, and prudent use of psychoactive drugs, taking into account its deprescription.

Keywords:
Mental Health
Adverse effects
Iatrogenic Disease
Medicalization
Quaternary Prevention

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Introducción

La salud mental es un campo que se presta especialmente a que se dañe a los pacientes por lo que la prevención cuaternaria es una actividad crucial. La dificultad de acotar y conceptualizar los problemas mentales y la falta de tratamientos precisos y ajustados, entre otras particularidades, propicia una laxitud diagnóstica y terapéutica que pone en riesgo a la población (Tabla 1). El perjuicio que se puede infligir a los pacientes está presente en todas las actividades de la salud mental: prevención primaria, cribaje, diagnóstico, tratamiento y rehabilitación, por lo que es importante conocer qué excesos se cometen y qué alternativas podemos manejar en cada una de los procesos de atención.[1] En personas con trastornos mentales graves el intervencionismo del sistema psiquiátrico y los internamientos pueden producir estigmatización y efectos adversos que marquen y dificulten la vida, pero en atención primaria se daña principalmente a través del sobrediagnóstico y sobretratamiento de aquellos que consultan por sufrimientos vinculados a la vida cotidiana y que no constituyen trastornos mentales ni precisan actividades preventivas o curativas.

La psiquiatrización y psicologización de la vida

El fenómeno de la medicalización por el que cada vez más condiciones pasan a ser objeto de estudio y tratamiento en medicina, alcanza unas proporciones extraordinarias en el terreno de la salud mental. Muchas personas acuden a consulta con la expectativa de recibir un tratamiento para el malestar que se produce ante el afrontamiento de la vida cotidiana. En España, una cuarta parte de los pacientes que acuden a un servicio de salud mental derivados por su médico de cabecera no presentan un trastorno mental diagnosticable según criterios CIE-10 y la mitad de ellos ya tiene prescrito un psicofármaco.[2] El tratamiento con medicinas o psicoterapia de los sentimientos desagradables (tristeza, angustia, frustración, impotencia, soledad, odio…) que aparecen en el contexto de una situación vital estresante como una respuesta adaptativa, legítima y proporcionada, expone a personas sanas a los daños que se derivan de intervenciones y diagnósticos sin un claro beneficio.

Las actividades de cribaje también constituyen un peligro potencial de perjuicio como en los casos de depresión[3,4] o de Alzheimer, donde no existe tratamiento que lo justifique. La clave estaría en saber si ante el problema humano que tenemos delante vamos a obtener mejores resultados considerándolo una enfermedad a tratar que si no fuera visto como tal. Los protocolos de intervención no están bien definidos y no hay una tecnología que permita una verdadera objetivación del problema.

Tabla 1. Algunos factores que favorecen los excesos en salud mental.

DE LA DISCIPLINA
Falta de una conceptualización definitiva de los problemas mentales
Desconocimiento final de las causas, generación y desarrollos de los problemas mentales.
Diversidad de teorías y tratamientos, a veces antagónicos entre sí.
Imposibilidad de trazar fronteras entre lo “normal” y lo “patológico”.
Modelo hegemónico actual biomédico
Centrado en los síntomas y el individuo.
Desconsiderando el contexto, la Historia, los factores socioculturales, etc.
Muy influenciado por intereses comerciales y financieros.
Amparado en un autoritarismo pseudocientífico (cuya fundamentación neuroquímica no está probada).
Incapaz de aprehender lo humano (cultura, valores, significados, etc.) con sus herramientas positivistas.
DEL CONTEXTO SOCIOCULTURAL Y ECONÓMICO
La constitución de la salud como un bien de consumo.
El poder de la industria farmacéutica en crear y expandir enfermedades mentales.
La consagración del individualismo (frente al abordaje colectivo de las conflictos sociales).
La exposición del sujeto, liberado de los anclajes tradicionales, a los riesgos de vivir y elegir (y la necesidad de expertos “psi” que los filtren y gestionen).
Tendencia a filiar asuntos morales, contradicciones sociales y deseos y frustraciones personales como problemas mentales.
DEL PROFESIONAL
Conflictos intelectuales (incapacidad de considerar la disciplina y su tarea con cierto escepticismo, adhesión incondicional a una perspectiva y desprecio por el resto).
Conflictos personales (paternalismo, vanidad, exceso de compasión, omnipotencia, incapacidad para decepcionar, etc.).

Fuente: elaborado por los autores.

Muchas de las consultas que realizan los pacientes tienen que ver con sufrimientos derivados de conflictos laborales, económicos, sociales… y en la medida que medicalizamos estas demandas, contribuimos a enmarcar en lo psicológico/biológico y en lo íntimo de una relación profesional-paciente, asuntos que son de orden ético y de ámbito público. Otras veces, en el manejo de estas demandas, ya sea en atención primaria o en salud mental, lo que estamos haciendo además es propugnar que nuestro paciente se adapte de forma personal (comprometiéndole a mejorar a él con nuestra intervención sanitaria), cuando lo que hay detrás son situaciones sociales injustas que exigen un análisis y una solución colectivas.[5] En cualquier caso, corremos el peligro de favorecer un reduccionismo psicológico o biológico de fenómenos y realidades que son mucho más complejas y de empañar otras perspectivas que explican mejor y de forma más global el sufrimiento de nuestro paciente.[6]

La extensión del tratamiento en salud mental de forma indiscriminada a sufrimientos que no se pueden filiar como trastornos mentales conduce a una saturación de los dispositivos asistenciales y, consecuentemente, a una limitación de las prestaciones. La ley de cuidados inversos sostiene que el paciente recibe cuidados en proporción inversa a su necesidad.[7] Con esta dinámica, se favorece que nuestras consultas se saturen de malestares para los que no hay una respuesta técnica sanitaria clara ni eficaz y que los trastornos mentales graves se pierdan o reciban una atención limitada. En este contexto, se está produciendo un aumento de la demanda para terapias psicológicas que precisan de un terapeuta que se convierta en un guía que aconseje al paciente sobre las decisiones de su vida, como si hubiera una forma de vivirla basada en conocimientos científicos.

Consecuencias negativas del uso de etiquetas diagnósticas

La nosología en psiquiatría y salud mental es un asunto muy controvertido. La extraordinaria variabilidad en número y contenido de las categorías diagnósticas solo en el último medio siglo da cuenta de su provisionalidad. Asimismo, algunos diagnósticos se van poniendo de moda por temporadas,[8] como ha sucedido con la depresión desde los años 90 y más recientemente, el trastorno bipolar o el trastorno por déficit de atención e hiperactividad. Estas variaciones constatan que los diagnósticos no tienen un carácter sustantivo, de verdad inmutable, son construcciones cuya vigencia depende del momento histórico, de qué tipo de profesionales ostenta el poder de la disciplina y de los intereses económicos y sociales que hay detrás.

La elaboración de las sucesivas clasificaciones de las enfermedades mentales DSM y CIE ha producido, entre otros, dos fenómenos: la inflación del número de categorías diagnósticas y la reducción del umbral de los criterios por los que alguien es diagnosticado. Esto se ha traducido en un incremento extraordinario de la prevalencia de los trastornos mentales y así, según el DSM-IV, la mitad de la población podrá ser diagnosticada de al menos un trastorno mental a lo largo de su vida,[9] para regocijo de la industria farmacéutica y muchos profesionales de la salud mental. Cabe esperar que esta prevalencia aumente con el DSM-5, que con decisiones como eliminar el duelo como criterio de exclusión en el diagnóstico de depresión, apunta a medicalizar más condiciones y personas. La creencia de que las categorías diagnósticas son discretas y arraigadas en una anormalidad refleja un modelo de enfermedad en el que los trastornos mentales son clases naturales. Las etiquetas diagnósticas no captan la realidad en forma de síntomas sino que la interpretan. Tienen una capacidad de cosificación extraordinaria y parecería que pueden definir y concretar la esencia de un sujeto. Cuando se dice de un paciente que tiene un trastorno de personalidad o que es un depresivo, se transforman las interpretaciones subjetivas de los síntomas que realiza el profesional en etiquetas que deshumanizan los problemas, restringen nuestra comprensión del individuo y nos inducen una visión sesgada en la que vamos a resaltar todo aquello que se ajuste al diagnóstico.

Tampoco hay que perder de vista que las clasificaciones de las enfermedades mentales se diseñan por especialistas hospitalarios de países occidentales. Estos suelen desconocer el tipo de demandas que se producen en atención primaria y, yendo más allá, su perspectiva no tiene nada que ver con la cultura de los países en desarrollo, donde la conceptualización de los problemas mentales y su abordaje (muchas veces a través de agentes no especializados) puede ser muy distinta. Incluso se ha afirmado que "la investigación indica que los pacientes con trastornos depresivos tienen diferente etiología, fisiopatología y evolución natural que los enfermos psiquiátricos hospitalizados.[10] Esta colonización ideológica de las sociedades económicamente dominantes que desplaza las formas tradicionales y locales de evaluar y experimentar el sufrimiento psíquico no ha sido necesariamente positiva.[11]

Dentro de esta perspectiva positivista y operativa se está desarrollando la biometría en salud mental que promueve el uso de escalas para cribar y certificar diagnósticos o controlar seguimientos. Se toman estos resultados como si fueran una verdad objetiva, desplazando el juicio clínico, sin embargo la validación de las escalas se hace comparando sus resultados con el método patrón: la misma entrevista clínica. Una medición "objetiva" termina reemplazando el diálogo terapéutico entre personas.

Los daños de establecer una relación terapéutica

Cuando indicamos un tratamiento a un paciente, implícitamente le estamos trasmitiendo muchos mensajes que pueden ser potencialmente perjudiciales. Lo que estamos haciendo es interpretar las características personales del paciente, su malestar o su relato vital en el marco de un sistema de creencias orientado a la patología. De esta manera, se le comunica de forma implícita que su problema no mejorará o incluso empeorará si no realiza el tratamiento y, si este se interrumpe de forma anticipada (lo que sucede en numerosas ocasiones), no habrá mejorado lo que estaba previsto o corre el peligro de ponerse mucho peor. Esta dependencia respecto de la intervención profesional tiende a empobrecer los aspectos no médicos que también pueden ser saludables y curativos del ambiente y tiende a reducir la capacidad psicológica del paciente para afrontar sus problemas. No se escapan a esta argumentación aquellos marcos basados en la psicología de la salud dirigidos a "potenciar" al sujeto o dotarlo de nuevos recursos. En estos casos el paciente sigue siendo alguien deficitario al que un "experto" le tiene que dar algo que él no alcanza ni puede conseguir por su cuenta.

El lenguaje psiquiátrico y psicoterapéutico también restringe la comprensión que realizan los propios pacientes de sus experiencias. El concepto de "normalidad" que tiene el paciente se estrecha y puede acabar codificando buena parte de sus conductas desde su condición psiquiátrica o psicológica. Esto puede limitar su sensación de autonomía y gobierno y favorece la necesidad de que sea el experto profesional el que gestione sus emociones y experiencias.[12,13] La relación con un profesional favorece que el paciente se sitúe en un rol pasivo y enfermo ante los avatares de su vida y ya no tiene que contar sus problemas en su entorno lo que debilita el apoyo de las redes tradicionales de contención.

Existen además unos efectos adversos inherentes a la terapia. Cada modelo teórico tiene su particular sistema de entender e interpretar las conductas de los pacientes. A través de este sistema y conducido por un lenguaje particular, los terapeutas trasmiten que saben más que el propio paciente sobre sí mismo. Este sistema de creencias domina la conversación terapéutica y favorece que perspectivas alternativas que el paciente pueda considerar, queden relegadas porque sean contradictorias o estén fuera de la perspectiva particular del profesional. Las distintas visiones que aportan los modelos teóricos pueden ser muy útiles en la comprensión de los problemas del paciente, pero en ningún caso son la "verdad",[14] algo a lo que es difícil que se sustraiga el paciente durante y después del tratamiento. Se ha señalado que los aspectos no específicos, por oposición a técnicas específicas, que dan cuenta de la mayor parte del cambio en psicoterapia.[15] Los psicoterapeutas, o equipos, que solo manejan una técnica tienden a usar la misma en más ocasiones de las indicadas.

Los tratamientos psicológicos y sus efectos adversos

Las intervenciones psicoterapéuticas se han considerado tradicionalmente inocuas, puesto que en principio se trata de un intercambio dialéctico, sin más. Pero si reconocemos su potencial terapéutico, también tenemos que considerar su capacidad para dañar. Se ha calculado que entre un tres y un 15% de los pacientes empeoran tras realizar un tratamiento psicológico.[16,17] Este perjuicio depende de muchas variables, como el contexto del paciente, la formación técnica del profesional y sus características personales, factores del proceso terapéutico (en especial, la capacidad de producirse una alianza terapéutica) y también variables que dependen de la especificidad de la terapia. Se han descrito intervenciones terapéuticas que resultan perjudiciales ya sea por sus características particulares o su ámbito de aplicación.[18] Las más estudiadas, y a la vez muy comunes, son la realización de *debriefing* en supervivientes de acontecimientos traumáticos y el tratamiento psicológico del duelo. El *debriefing* se realiza con el propósito de reducir la incidencia del trastorno por estrés postraumático (TEPT) en ciudadanos que han sido víctimas de catástrofes naturales, accidentes, violencia, etc. Cuando esta intervención se llevan a cabo de forma generalizada, la evolución clínica de los pacientes analizados globalmente es peor y los pacientes tratados desarrollan más síntomas de TEPT que los que no recibieron *debriefing*.[19] Es posible que tanto profesionales como pacientes estén satisfechos con el tratamiento, pero la realidad es que el pronóstico clínico es peor. Más frecuente en atención primaria es intervenir en el proceso de duelo de un paciente tras la pérdida de un ser querido. Igualmente, se ha demostrado que el tratamiento generalizado del duelo en jóvenes y adultos no aporta globalmente evoluciones clínicas positivas y muchos pacientes se encuentran peor.[20,21] Así que no basta con ser bienintencionados y bondadosos y desear ayudar a nuestros pacientes, también tenemos que cuestionarnos nuestras prácticas porque pueden ser perjudiciales. La fantasía de inocuidad de los tratamientos psicológicos conlleva el riesgo de sobretratamiento.

Iatrogenia del tratamiento psicofarmacológico

Cada vez hay más pruebas de que la posible eficacia de los psicofármacos no se debe a supuestos mecanismos bioquímicos específicos que se ajustan a un diagnóstico o a una sintomatología. Las pocas categorías de fármacos que se emplean en psiquiatría se utilizan de forma inespecífica en un gran abanico de trastornos. Parece que los psicofármacos no corrigen desequilibrios en los neurotransmisores sino que, al contrario, los provocan e inducen estados psicológicos que pueden resultar útiles de forma inespecífica en el tratamiento de ciertos síntomas.[22,23] Este efecto difuso de los psicofármacos pone cada vez más en perspectiva su efectividad, y alerta sobre los daños que pueden causar.

Se cuestiona la creencia de que los neurolépticos sean un tratamiento crónico imprescindible para las psicosis,[24,25] se acumulan pruebas sobre las limitaciones que producen y se consideran una posible barrera para la recuperación de las personas que los toman. Hay datos que apoyan la idea de que parte de la cronicidad y de las recaídas se deben precisamente a estar en tratamiento con neurolépticos, porque pueden producir psicosis de rebote, por sensibilización, disfrenia tardía, discinesia tardía, y síntomas negativos,[26-31] además de una reducción del volumen cerebral de los que los utilizan.[32,33]

Sobre las benzodiacepinas hay mucha literatura y sabemos que el efecto adverso más relevante del uso crónico, más allá de la dependencia,[34] es el deterioro cognitivo.[35] Respecto a los antidepresivos, además de la polémica teoría de su capacidad para cronificar la depresión,[36] su eficacia *per se* ha sido muy cuestionada en los últimos años. Los últimos meta-análisis dan cuenta de que la mayoría de los beneficios de los antidepresivos pueden explicarse por el efecto placebo y solo alrededor del 20% de la varianza puede ser atribuible al fármaco.[37-39] Comparados con el placebo, los antidepresivos no son más eficaces en las depresiones leves o moderadas y, en todo caso, se muestran superiores en el tratamiento de las depresiones más graves.[40,41]

Todo esto teniendo en cuenta que los datos sobre eficacia de los psicofármacos están sobreestimados y la información sobre sus efectos adversos minimizada porque la investigación y su difusión está mayoritariamente controlada por la industria farmacéutica. Este control, que perpetúa que las muertes por medicamentos ocupen la tercera causa en el mundo occidental, ha propiciado la extraordinaria expansión del mercado de los psicofármacos bajo la apariencia de que son muy seguros y eficaces.[42]

Los daños que producen los psicofármacos se multiplican en las poblaciones más vulnerables. Los ancianos tienen la particularidad de estar además polimedicados por lo que los efectos adversos son más numerosos e impredecibles. Es muy frecuente el uso de neurolépticos en personas mayores con deterioro cognitivo con el fin de sedarlos, contenerlos o controlar sus conductas, no de forma terapéutica. El uso de neurolépticos en demencia multiplica por dos la tasa de muerte y el empleo de estos o de antidepresivos en mayores incrementa extraordinariamente la morbilidad en forma de accidentes vasculares, mareos, caídas, fracturas, problemas metabólicos y convulsiones.[43,44] Igualmente, el uso de neurolépticos en discapacitados intelectuales tienen el objetivo de sedar, no de tratar a los sujetos. Estas prescripciones van en contra de los intereses del paciente al que se expone a riesgos graves y cuya conducta se podría manejar alternativamente con intervenciones psicosociales eficaces.[45,46] Los niños tampoco escapan a la descontrolada expansión de la psiquiatría y los tratamientos psicofarmacológicos que actúan en este caso en un cerebro en desarrollo. Se desconoce el efecto a largo plazo que tendrá el consumo de estimulantes y neurolépticos administrados en esta generación fundamentado en diagnósticos tan cuestionables como el trastorno por déficit de atención e hiperactividad o el trastorno bipolar infantil.

Las guías de prescripción clínica pueden no ser útiles en el proceso de decidir si tratar y con qué: el 90% de los autores que participaron en tres de ellas de gran repercusión tenían lazos financieros con las empresas farmacéuticas cuyos productos aparecían recomendados y este conflicto de intereses no aparecía reflejado en la guía.[47] En estas circunstancias y con todos estos datos controvertidos, la prescripción se convierte en una tarea compleja en la que debemos calibrar cuidadosamente el balance riesgo-beneficio.

Alternativas para reducir los perjuicios en salud mental

Los juicios clínicos en medicina están muy lejos de ser análisis objetivos de un conjunto de hechos eminentemente medibles tecnológicamente, pero en el caso de la psiquiatría en particular, el cuestionamiento a la perspectiva médica y el modelo de enfermedad ha de ser radical. El diagnóstico alcanza su máxima subjetividad en este campo donde no hay medidas objetivas proporcionadas por la tecnología y cuya expresión y comprensión psicopatológica está muy ligada a la cultura.[48] La etiqueta diagnóstica oculta la singularidad del paciente, la compleja interacción de factores genéticos, psicológicos, sociales

y ambientales de ese individuo concreto, sus valores, significados, expectativas y necesidades que están inmersos en la cultura como marco organizador. Por ello, frente al diagnóstico simplificador, las narrativas nos proporcionan el significado, contexto y perspectiva del sufrimiento del paciente, define cómo, por qué y de qué manera está enfermo. La formulación de casos en salud mental (Tabla 2) permite, frente a la etiqueta diagnóstica, organizar la información clínica y dar una respuesta más ajustada a la singularidad del paciente.[49]

Antes de iniciar un tratamiento psicológico o farmacológico tenemos que considerar la posibilidad de indicar no-tratamiento. Esta es la intervención paradigmática de la prevención cuaternaria en salud mental ya que evita la exposición del paciente a los efectos adversos de los tratamientos. Muchas de las personas sanas que están sufriendo de manera proporcionada y adaptativa ante un evento vital esperan recibir un tratamiento cuando lo prudente es esperar y ver. Por ello, la indicación de no-tratamiento ha de ser una intervención frecuente y fundamental en el día a día de las consultas de Atención Primaria y Salud Mental. En estos casos, lo más beneficioso para el paciente será protegerle de los efectos secundarios de un tratamiento improcedente y para ello, primero tenemos que escuchar y hacernos cargo del sufrimiento del paciente y luego, con él, desvincularlo de que sea patológico o de que precise una intervención sanitaria y contextualizarlo dentro de su historia vital y de salud.[50] Esta indicación de no-tratamiento precisa de nuestras habilidades de entrevista psicoterapéuticas para que el paciente se sienta bien atendido (Tabla 3). Es la espera vigilante que ha de respetarse, por ejemplo, en un duelo normal, antes de pautar antidepresivos o realizar intervenciones psicológicas. Si un sujeto afronta y resuelve un duelo sin la necesidad de tratamientos, se refuerza su capacidad y autonomía a la hora de enfrentar acontecimientos adversos y de gestionar los sentimientos que producen sufrimiento. Se certifica su salud, su fortaleza y su resiliencia. Sin embargo, si tratamos a una persona que experimenta un duelo normal, igualmente mejorará como el primero (los duelos normales se caracterizan por eso, porque son autolimitados), pero implícitamente se le están transmitiendo otros mensajes: el tratamiento certifica, sino una patología, sí la incapacidad de esa persona de salir adelante por sí misma, su vulnerabilidad y su necesidad de consultar con un experto sanitario siempre que experimente sentimientos que produzcan sufrimiento, aunque estos sean sanos, legítimos y adaptativos.

Tabla 2. Ejemplo de formulación de casos de salud mental en Atención Primaria

1. DIAGNÓSTICO CLÍNICO DESCRIPTIVO	
	Descripción de los síntomas, curso y grado de afectación funcional.
2. DIAGNÓSTICO SITUACIONAL	
2.1	Factores desestabilizadores actuales
2.2	Factores protectores/ vulnerabilidad desde las dimensiones bio-psico-social:
	Antecedentes médicos generales
	Antecedentes psiquiátricos
	Factores familiares
	Factores sociales (económicos, laborales, red social, ocio…)
	Rasgos de personalidad y estilos de afrontamiento
3. MODELO EXPLICATIVO DEL PACIENTE	
	Significado de los síntomas, atribuciones etiológicas.
4. EXPECTATIVAS Y DEMANDAS DEL PACIENTE	
5. PLAN TERAPÉUTICO	
5.1.	Objetivos
5.2.	Plan
6. DEVOLUCIÓN	
	Explicación sencilla y razonada de lo que le sucede al paciente que procure incluir los síntomas clínicos, los factores biopsicosociales y que pueda integrar, al menos parcialmente, el modelo explicativo del paciente y que dé una respuesta realista a sus expectativas.

Fuente: Mata Ruiz et al.[49]

Tabla 3. Mapa psicoterapéutico de la indicación de no-tratamiento.

Fases	Objetivos	Trabajos
1ª Escucha empática	Enterarnos de lo que le sucede al paciente Que el paciente sepa que nos estamos enterando de lo que le sucede	Cuál es el problema Cómo se explica el problema Qué quiere (demanda) Qué papel nos otorga Emociones asociadas
2ª Construcción de una versión inicial	Acordar con el paciente una versión inicial de forma conjunta	
3ª Deconstrucción	Desvincular el problema que nos presenta el paciente de lo patológico y su solución del ámbito de lo sanitario	Del problema De cómo se lo explica De la demanda De la relación terapéutica Trabajo sobre las emociones
4ª Resignificación	Co-construir una nueva versión en que: la problemática que plantea el paciente quede vinculada a su contexto cotidiano saludable la carga emocional esté legitimada y normalizada el rol de enfermo cambie a uno más activo e independiente	
5ª Cierre	Despedirse	Condiciones del alta

Fuente: Ortiz Lobo et al.[50]

En este contexto de promoción comercial de los medicamentos que favorece la creación de unas expectativas irreales en pacientes y profesionales y un uso improcedente y excesivo de los mismos es necesario apelar a un uso juicioso de los psicofármacos. Es imprescindible una prescripción más estratégica, con una estrecha vigilancia de los efectos adversos, ser cauto y escéptico con las novedades, trabajar con los pacientes en una prescripción compartida y considerar el impacto de los psicofármacos a largo plazo.[51] En esta línea de trabajo prudente, la deprescripción es otra actividad crucial. Muchas veces se mantienen de forma crónica antidepresivos, neurolépticos y benzodiacepinas no porque estén aportando un beneficio neto sino por la creencia de que "algo harán". Es verdad que, cuando se suprimen los psicofármacos algunos pacientes empeoran, pero en numerosas ocasiones esto es debido al síndrome de abstinencia que ha producido una prescripción prolongada y su retirada demasiado brusca.

Conclusión

Los intereses comerciales, corporativos y sociales y los conflictos intelectuales pueden pervertir la práctica de la salud mental y dañar a los ciudadanos. Las soluciones tecnológicas (proceso diagnóstico, administración de psicofármacos, psicoterapia) no son neutrales, están ligadas a unos valores. Solo con un uso reflejo, autocrítico y escéptico pueden hacerse explícitos estos valores y desde ahí podrán ser defendidos o rechazados.

Referencias

1. Ortiz Lobo A. Hacia una psiquiatría crítica. Madrid: Editorial Grupo 5; 2013
2. Ortiz Lobo A, González González R, Rodríguez Salvanés F. La derivación a salud mental de pacientes sin un trastorno psíquico diagnosticable. Aten Primaria. 2006;38(10):563-569. http://dx.doi.org/10.1157/13095928. PMid:17198609.
3. Thombs BD, Ziegelstein RC. Does depression screening improve depression outcomes in primary care? BMJ. 2014; 348:g1253. http://dx.doi.org/10.1136/bmj.g1253. PMid:24496211.
4. Gilbody S, House AO, Sheldon TA. Instrumentos de cribaje (screening) y detección de casos para la depresión. In: La Biblioteca Cochrane Plus [Internet]. Oxford: Update Software Ltd.; 2008. [última consulta el 2015 June 16]. Disponible en: http://es.summaries.cochrane.org/cd002792/instrumentos-de-cribaje-screening-y-deteccion-de-casos-para-la-depresion#sthash.tzlJquDm.dpuf.

5. Rendueles G. Psiquiatrización de la ética - Ética de la psiquiatría: el idiota moral. In: Santander F, editor. Ética y praxis psiquiátrica. Madrid: AEN Colección Estudios; 2000

6. Jervis G. Manual crítico de psiquiatría. Barcelona: Anagrama; 1977

7. Hart JT. The inverse care law. Lancet. 1971;1(7696):405-412. http://dx.doi.org/10.1016/S0140-6736(71)92410-X. PMid:4100731.

8. Frances A. ¿Somos todos enfermos mentales? Buenos Aires: Ariel; 2014.

9. Kessler RC, Berglund P, Demler O, Jin R, Merikangas KR, Walters EE. Lifetime prevalence and age-of-onset distributions of DSM-IV disorders in the National Comorbidity Survey Replication. Arch Gen Psychiatry. 2005;62(6):593-602. http://dx.doi.org/10.1001/archpsyc.62.6.593. PMid:15939837.

10. Arroll B, Elley CR, Fishman T, Goodyear-Smith FA, Kenealy T, Blashki G, et al. Antidepresivos versus placebo para la depresión en la atención primaria. In: Biblioteca Cochrane Plus [Internet]. Oxford: Update Software Ltd.; 2009. [última consulta el 2015 June 16]. Disponible en: http://www.update-software.com.

11. Timimi S. Campaign to abolish psychiatric diagnosic systems such as ICD and DSM (CAPSID) [Internet]. Location: Publisher, year. [última consulta el 2015 June 16]. Disponible en: http://www.criticalpsychiatry.net/wp-content/uploads/2011/05/CAPSID12.pdf.

12. Boisvert CM, Faust D. Iatrogenic symptoms in psychotherapy. A theoretical exploration of the potential impact of labels, language, and belief systems. Am J Psychother. 2002;56(2):244-259. PMid:12125301.

13. Crown S. Contraindications and dangers of psychotherapy. Br J Psychiatry. 1983;143(5):436-441. http://dx.doi.org/10.1192/bjp.143.5.436. PMid:6640210.

14. Fernández Liria A, Rodríguez Vega B. La práctica de la psicoterapia. La construcción de narrativas terapéuticas. Bilbao: Desclée De Brower; 2001

15. Bracken P, Thomas P, Timimi S, Moldavsky D. La Psiquiatría más allá del paradigma actual. Acta Psiquiátr Psicol Am Lat. 2013;59(3):186-195.

16. Moos RH. Iatrogenic effects of psychosocial interventions for substance use disorders: prevalence, predictors, prevention. Addiction. 2005;100(5):595-604. http://dx.doi.org/10.1111/j.1360-0443.2005.01073.x. PMid:15847616.

17. Mohr DC. Negative outcome in psychotherapy: A critical review. Clin Psychol Sci Pract. 1995;2(1):1-27. http://dx.doi.org/10.1111/j.1468-2850.1995.tb00022.x.

18. Lilienfeld SO. Psychological treatments that cause harm. Perspect Psychol Sci. 2007;2(1):53-70. http://dx.doi.org/10.1111/j.1745-6916.2007.00029.x.

19. Rose S, Bisson J, Churchill R, Wessely S. Psychological debriefing for preventing post traumatic stress disorder (PTSD). Cochrane Database Syst Rev. 2002;(2):CD000560. PMid:12076399.

20. Currier JM, Holland JM, Neimeyer RA. The effectiveness of bereavement interventions with children: a meta-analytic review of controlled outcome research. J Clin Child Adolesc Psychol. 2007;36(2):253-259. http://dx.doi.org/10.1080/15374410701279669. PMid:17484697.

21. Currier JM, Neimeyer RA, Berman JS. The effectiveness of psychotherapeutic interventions for bereaved persons: a comprehensive quantitative review. Psychol Bull. 2008;134(5):648-661. http://dx.doi.org/10.1037/0033-2909.134.5.648. PMid:18729566.

22. Moncrieff J, Cohen D. Rethinking models of psychotropic drug action. Psychother Psychosom. 2005;74(3):145-153. http://dx.doi.org/10.1159/000083999. PMid:15832065.

23. Healy D. The creation of psychopharmacology. Cambridge: Harvard University Press; 2002.

24. Bola JR, Mosher LR. At issue: predicting drug-free treatment response in acute psychosis from the Soteria project. Schizophr Bull. 2002;28(4):559-575. http://dx.doi.org/10.1093/oxfordjournals.schbul.a006964. PMid:12795491.

25. Seikkula J, Aaltonen J, Alakare B, Haarakangas K, Keranen J, Lehtinen K. Five-year experience of first-episode nonaffective pychosis in open-dialogue approach: Treatment principles, follow-up outcomes, and two case studies. Psychother Res. 2006;16(2):214-228. http://dx.doi.org/10.1080/10503300500268490.

26. Husa AP, Rannikko I, Moilanen J, Haapea M, Murray GK, Barnett J, et al. Lifetime use of antipsychotic medication and its relation to change of verbal learning and memory in midlife schizophrenia - An observational 9-year follow-up study. Schizophr Res. 2014;158(1-3):134-141. http://dx.doi.org/10.1016/j.schres.2014.06.035. PMid:25034761.

27. Frota LH. Partial agonists in the schizophrenia armamentarium. Tardive Dysphrenia: The newest challenge to the last generation atypical antipsychotics drugs? J Bras Psiquiatr. 2003;52(Suppl 1):14-24.

28. Fernandez HH, Trieschmann ME, Okun MS. Rebound psychosis: effect of discontinuation of antipsychotics in Parkinson's disease. Mov Disord. 2005;20(1):104-105. http://dx.doi.org/10.1002/mds.20260. PMid:15390047.

29. Margolese HC, Chouinard G, Beauclair L, Bélanger MC. Therapeutic tolerance and rebound psychosis during quetiapine maintenance monotherapy in patients with schizophrenia and schizoaffective disorder. J Clin Psychopharmacol. 2002;22(4):347-352. http://dx.doi.org/10.1097/00004714-200208000-00003. PMid:12172332.

30. Chouinard G, Chouinard VA. Atypical antipsychotics: CATIE study, drug-induced movement disorder and resulting iatrogenic psychiatric-like symptoms, supersensitivity rebound psychosis and withdrawal discontinuation syndromes. Psychother Psychosom. 2008;77(2):69-77. http://dx.doi.org/10.1159/000112883. PMid:18230939.

31. Moncrieff J. Does antipsychotic withdrawal provoke psychosis? Review of the literature on rapid onset psychosis (supersensitivity psychosis) and withdrawal-related relapse. Acta Psychiatr Scand. 2006 Jul;114(1):3-13. http://dx.doi.org/10.1111/j.1600-0447.2006.00787.x. PMid:16774655.

32. Ho BC, Andreasen NC, Ziebell S, Pierson R, Magnotta V. Long-term antipsychotic treatment and brain volumes: a longitudinal study of first-episode schizophrenia. Arch Gen Psychiatry. 2011;68(2):128-137. http://dx.doi.org/10.1001/archgenpsychiatry.2010.199. PMid:21300943.

33. Veijola J, Guo JY, Moilanen JS, Jääskeläinen E, Miettunen J, Kyllönen M, et al. Longitudinal changes in total brain volume in schizophrenia: relation to symptom severity, cognition and antipsychotic medication. PLoS One. 2014; 9(7):e101689. http://dx.doi.org/10.1371/journal.pone.0101689. PMid:25036617.

34. Ashton H. The diagnosis and management of benzodiazepine dependence. Curr Opin Psychiatry. 2005;18(3):249-255. http://dx.doi.org/10.1097/01.yco.0000165594.60434.84. PMid:16639148.

35. Billioti de Gage S, Moride Y, Ducruet T, Kurth T, Verdoux H, Tournier M, et al. Benzodiazepine use and risk of Alzheimer's disease: case-control study. BMJ. 2014; 349:g5205. http://dx.doi.org/10.1136/bmj.g5205. PMid:25208536.

36. Fava GA. Can long-term treatment with antidepressant drugs worsen the course of depression? J Clin Psychiatry. 2003;64(2):123-133. http://dx.doi.org/10.4088/JCP.v64n0204. PMid:12633120.

37. Turner EH, Matthews AM, Linardatos E, Tell RA, Rosenthal R. Selective publication of antidepressant trials and its influence on apparent efficacy. N Engl J Med. 2008;358(3):252-260. http://dx.doi.org/10.1056/NEJMsa065779. PMid:18199864.

38. Kirsch I, Deacon BJ, Huedo-Medina TB, Scoboria A, Moore TJ, Johnson BT. Initial severity and antidepressant benefits: a meta-analysis of data submitted to the Food and Drug Administration. PLoS Med. 2008;5(2):e45. http://dx.doi.org/10.1371/journal.pmed.0050045. PMid:18303940.

39. Pigott HE, Leventhal AM, Alter GS, Boren JJ. Efficacy and effectiveness of antidepressants: current status of research. Psychother Psychosom. 2010;79(5):267-279. http://dx.doi.org/10.1159/000318293. PMid:20616621.

40. Fournier JC, DeRubeis RJ, Hollon SD, Dimidjian S, Amsterdam JD, Shelton RC, et al. Antidepressant drug effects and depression severity: a patient-level meta-analysis. JAMA. 2010;303(1):47-53. http://dx.doi.org/10.1001/jama.2009.1943. PMid:20051569.

41. Barbui C, Cipriani A, Patel V, Ayuso-Mateos JL, van Ommeren M. Efficacy of antidepressants and benzodiazepines in minor depression: systematic review and meta-analysis. Br J Psychiatry. 2011;198(1):11-16. http://dx.doi.org/10.1192/bjp.bp.109.076448. PMid:21200071.

42. Gøtzsche P. Medicamentos que matan y crimen organizado. Barcelona: Ed. Los libros del lince; 2014.

43. Coupland C, Dhiman P, Morriss R, Arthur A, Barton G, Hippisley-Cox J. Antidepressant use and risk of adverse outcomes in older people: population based cohort study. BMJ. 2011;343. http://dx.doi.org/10.1136/bmj.d4551.

44. Morales BC. Síndrome metabólico y antipsicóticos de segunda generación. Rev Asoc Esp Neuropsiquiatr. 2011;31(2):303-320. http://dx.doi.org/10.4321/S0211-57352011000200009.

45. Wang PS, Schneeweiss S, Avorn J, Fischer MA, Mogun H, Solomon DH, et al. Risk of death in elderly users of conventional vs. atypical antipsychotic medications. N Engl J Med. 2005;353(22):2335-2341. http://dx.doi.org/10.1056/NEJMoa052827. PMid:16319382.

46. Ballard C, Hanney ML, Theodoulou M, Douglas S, McShane R, Kossakowski K, et al. The dementia antipsychotic withdrawal trial (DART-AD): long-term follow-up of a randomised placebo-controlled trial. Lancet Neurol. 2009;8(2):151-157. http://dx.doi.org/10.1016/S1474-4422(08)70295-3. PMid:19138567.

47. Cosgrove L, Bursztajn HJ, Krimsky S, Anaya M, Walker J. Conflicts of interest and disclosure in the American Psychiatric Association's Clinical Practice Guidelines. Psychother Psychosom. 2009;78(4):228-232. http://dx.doi.org/10.1159/000214444. PMid:19401623.

48. Launer J. Narrative based medicine: a narrative approach to mental health in general practice. BMJ. 1999;318(7176):117-119. http://dx.doi.org/10.1136/bmj.318.7176.117. PMid:9880290.

49. Mata Ruiz I, Ortiz Lobo A. Formulación de casos en salud mental: una guía de entrenamiento. In: Retolaza A. Trastornos mentales comunes: manual de orientación. Madrid: Asociación Española de Neuropsiquiatría; 2009. p. 195-213. Estudios 41.

50. Ortiz-Lobo A, Murcia-García L. La indicación de no-tratamiento: aspectos psicoterapéuticos. In: Retolaza A. Trastornos mentales comunes: manual de orientación. Madrid: Asociación Española de Neuropsiquiatría; 2009. p. 179-193. Estudios 41.

51. Schiff GD, Galanter WL, Duhig J, Lodolce AE, Koronkowski MJ, Lambert BL. Principles of conservative prescribing. Arch Intern Med. 2011;171(16):1433-1440. http://dx.doi.org/10.1001/archinternmed.2011.256. PMid:21670331.

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¿Overscreening o prevención a escala humana? Tamizaje excesivo

Sobrerrastreamento ou prevenção em uma escala humana? Excesso de rastreamento

Overscreening or prevention in a human scale? Excessive screening

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Resumen

Cuando se aplica un método de cribado o tamizaje de modo excesivo, abusivo o innecesario los daños provocados pueden superar a los beneficios. Para desarrollar el concepto de tamizaje excesivo, fueron consideradas algunas categorías: tamizaje innecesario, sin indicación médica, inducido, obligatorio, y por frecuencia inadecuada. Existen sesgos de interpretación que no permiten determinar de forma objetiva el balance daño beneficio de los programas de tamizaje relacionados al exceso de diagnóstico. Evitar el daño producido por tamizajes excesivos (overscreening) requiere llevar recomendaciones y pautas genéricas al terreno de la práctica clínica con casos particulares. La prevención cuaternaria, fundada conceptualmente en los cuidados de salud centrados en la persona, permite considerar las creencias, inquietudes, opciones individuales, haciendo posible llevar a la prevención a una escala humana.

Palabras clave:
Sobretamizaje
Tamizaje Masivo
Relaciones Médico-Paciente
Prevención Cuaternaria
Medicalización

Resumo

Quando um método de rastreio é aplicado de forma excessiva, desnecessária ou abusiva, os danos podem superar os benefícios. Para desenvolver o conceito de excesso de rastreamento, foram consideradas algumas categorias: rastreamento desnecessário, sem indicação médica, induzido, obrigatório, e por frequência inadequada. Existem vieses de interpretação que não permitem determinar objetivamente o balanço dos danos e benefícios dos programas de rastreamento relacionados ao excesso de diagnósticos. Para se evitar danos causados por excesso de rastreamento (overscreening) é necessário se deslocar do campo das recomendações e pautas genéricas para o terreno da prática clínica, com casos particulares. A prevenção quaternária, fundamentada conceitualmente nos cuidados de saúde centrados na pessoa, permite considerar as crenças, interesses, opções individuais, tornando possível levar a prevenção a uma escala humana.

Palavras-chave:
Sobrerrastreamento
Programas de Rastreamento
Relações Médico-Paciente
Prevenção Quaternária
Medicalização

Abstract

When screening is applied in an excessive, unnecessary or abusive manner, the damage may outweigh the benefits. In order do develop the concept of excessive screening some categories were considered: unnecessary screening, screening without medical indication, induced screening, mandatory screening, and inadequate frequency screening. There are biases of interpretation that do not allow objectively determining the balance of harms and benefits of screening programmes related to overdiagnosis. To prevent damage from excessive screening (overscreening) it is necessary to move from the domain of generic recommendations and guidelines to the clinical practice ground of individual cases. The quaternary prevention, conceptually grounded in person-centred health care, comprises the beliefs, interests, and individual options, making it possible to lead prevention to a human scale.

Keywords:
Overscreening
Mass screening
Physician-Patient Relations
Quaternary Prevention
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¿Overscreening o prevención a escala humana? Tamizaje excesivo

Los programas de cribado o tamizaje son actividades incluidas en el nivel secundario de prevención y se aplican de forma masiva y sistemática en población sana asintomática. Su objetivo es reducir la morbilidad y fundamentalmente la mortalidad de una enfermedad mediante la aplicación de algún tipo de intervención en etapa pre sintomática desde una perspectiva de disminución de riesgos.[1] Es preciso distinguir entre los conceptos de tamizaje (o cribado) y diagnóstico o detección precoz. Tamizaje, como se ha dicho implica una intervención masiva, desde el sistema de salud hacia una población de riesgo. Por diagnóstico precoz entendiese una acción individualizada, centrada en la persona. Así el diagnóstico precoz pretende detectar un problema de salud en una etapa o fase inicial y ofrecer mejores chances de tratamiento, cura y sobrevida. Otra modalidad frecuente de tamizaje es llamado oportunista. Este ocurre cuando el profesional de salud aprovecha la consulta de un usuario por otro motivo, para plantearle la búsqueda de una condición o factor de riesgo.[2]

Las controversias éticas respecto a muchos programas de tamizaje o *screening* y a los excesos en los tamizajes, giran en torno a varias premisas fundamentales. En este artículo se discuten solamente tres de ellas. En primer lugar, un programa masivo de *screening* para ser justificable debe asegurar que la intervención propuesta brinde mayores beneficios que daños. Al ser aplicado en personas sanas y siendo que la iniciativa surge desde el sistema de salud y no desde los usuarios, debe contarse con certezas respecto a las garantías de los beneficios que éste ofrece sobre los daños que puede provocar.[3] El segundo aspecto está centrado en la equidad. Este argumento debe ser tenido en cuenta particularmente, cuando se analiza la situación en países de economías emergentes, dado que los programas poblacionales o los tamizajes oportunistas pueden implicar consumo y desviación de recursos, siempre finitos, interfiriendo en el desarrollo de políticas y o acciones sanitarias, en áreas prioritarias de la salud colectiva.

El último aspecto tiene que ver con el papel de los profesionales de la salud en la comunicación con los usuarios. Un resultado positivo en un tamizaje unicamente está clasificando a un individuo en un grupo de 'probable mayor riesgo'. Deben ser consideradas otras dimensiones como la sensibilidad y especificidad de la prueba, las consecuencias de resultados falsos positivos o negativos y los sesgos posibles cuando se comunican los resultados poblacionales de los programas de *screening*.[3] La comunicación efectiva, el vínculo en el binomio médico/paciente, los cuidados centrados en la persona, la toma de decisiones compartidas, son herramientas claves en esta dimensión comunicacional para lograr compartir y dialogar sobre estos conceptos complejos de modo individualizado y asertivo. Este artículo presenta consideraciones sobre excesos en los tamizajes, para lo cual se comienza por definir *overscreening*.

Definición

Dado el amplio uso que se da al término *screening* en el lenguaje médico y de la salud, se analizó en su sentido semántico para intentar una definición aceptable. Este anglicismo es el gerundio del verbo *to screen*. Entre las traducciones posibles de este verbo, que aplican a nuestro interés particular, se encuentran las siguientes acepciones:[4]

- Tamizar, pasar por una criba; *(suspects) etc* investigar; *(select)* seleccionar, pasar por el tamiz. Acción de filtrar o tamizar.
- *(Med)* hacer una exploración a. (textual de diccionario).

Por lo tanto, '*to screen*' refiere a un proceso que permite seleccionar e identificar individuos pertenecientes a una población, de acuerdo a algún criterio preestablecido.

La primera vez en ser utilizada la palabra *overscreening*, con el sentido de tamizaje excesivo, fue en 1989 en una publicación de Petr Scrabanek en la que se promovía el debate racional en el uso de mamografías como método de cribado para cáncer de mama.[5] Posteriormente, en 1992, fue utilizado en una publicación sobre tamizaje de cáncer de cuello de útero indexada en PUBMED.[6] De todos modos el término *overscreening* no dispone de descriptor MeSH en esta base de datos.[7] Se propone la siguiente definición para *overscreening*, con el sentido de cribado o tamizaje en exceso:

Overscreening define aquellas situaciones en las que se emplea un método de cribado o tamizaje de un modo excesivo, abusivo o innecesario de tal forma que los daños que provoca superan a los beneficios.

Ejemplos de tamizaje en exceso

Debido al impacto sanitario del cáncer como enfermedad, a la intensidad con que se le busca y por ser motivo de preocupación de usuarios, pacientes y profesionales de la salud, en este trabajo se hace referencia, fundamentalmente al tamizaje en exceso en el caso de enfermedades oncológicas. Existen varias situaciones en las que se puede estar frente a lo que se denomina tamizaje en exceso.

Tamizaje innecesario

El hecho de categorizar a una práctica de tamizaje como innecesaria hace reflexionar sobre cuanta energía deben poner los profesionales de salud en actividades que no redundan en mejorar la salud percibida, y no se centran en el aumento de la calidad de vida y el disfrute vital de las personas. La palabra *innecesario* no expresa con claridad la capacidad de inducción de daño potencial que poseen estas prácticas. El nivel de daño puede inferirse por las consecuencias derivadas de los resultados posibles. Por ejemplo, el número de falsos positivos o la carga de sobrediagnóstico a la que se exponen las personas. A su vez estos fenómenos mencionados derivados del tamizaje a gran escala, tienen impacto en las decisiones que deben tomarse con cada individuo, así como en los costos tangibles e intangibles que provocan todas las intervenciones diagnósticas y terapéuticas que se desencadenan. Muchos de estos resultados no pueden ser evaluados en su verdadera magnitud, por tener características cualitativas de difícil ponderación. Por ejemplo: ¿qué impacto individual tiene recibir el rótulo de 'portadora o portador de cáncer'?[8] A continuación se presentan algunos ejemplos de tamizaje innecesario.

Los exámenes para detección de cáncer en adultos mayores son innecesarios y provocan medicalización de la vida en exceso.[9] Siendo el cáncer una causa frecuente de muerte en esta población, es evidente que cuanto más le busquemos, más le encontraremos. Otro ejemplo icónico de tamizaje innecesario, es el de la búsqueda del cáncer de próstata a través del antígeno prostático específico en sangre (PSA). Hay suficiente evidencia para no sostener este tamizaje por los daños que provoca y el escaso o nulo impacto en 'salvar vidas' que ofrece. De todos modos, muchas instituciones y grupos de profesionales siguen promoviendo su realización y no es tan simple argumentar en su contra, incluso para organizaciones consideradas poderosas. En 2009 y nuevamente en 2010 el *US Preventive Services Task Force (USPSTF),* concluyó que con moderada certeza el *screening* con PSA para cáncer de próstata no ofrecía beneficio neto, pero estas conclusiones nunca fueron publicadas. Finalmente en octubre de 2010, luego de que en un artículo del *New York Times* Magazine se dejara saber que las recomendaciones que se habían realizado casi dos años antes no se habían comunicado, una revisión realizada por un comité independiente de expertos de la institución apareció a la luz.[10-12] La recomendación actual de USPSTF en su guía del año 2012 es contraria a la realización de esta prueba con un nivel de recomendación tipo D.[13]

Tamizaje sin indicación médica y tamizaje inducido

Instituciones dedicadas a la venta de servicios tecnológicos o entidades aseguradoras, ofrecen chequeos para detección de enfermedades, pero también los ofrecen los proveedores de servicios de salud. Muchas personas acceden a este tipo de práctica alentadas por el supuesto de que 'más es mejor' o porque su estatus social lo impone como práctica saludable. Este tipo de 'productos' que proceden de una medicina altamente mercantilizada y que promueve el consumo, llevan a prácticas nocivas como las tomografías corporales totales con el riesgo que implican estos estudios al ser realizados sin indicación y en repetidas ocasiones. Actualmente se supera este riesgo con el acceso a tecnología que no utiliza radiación pero que expone a los usuarios a otros problemas como la detección de incidentalomas. Estos hallazgos fortuitos son muchas veces parte del llamado efecto reservorio.[14] Esto implica la detección fortuita de 'anomalías' que no se asocian con molestias, alteraciones funcionales, enfermedad o muerte.

Los medios masivos de comunicación juegan un rol destacado en la inducción de tamizajes en la población. La metodología utilizada incluye la promoción del miedo a enfermedades, la persuasión mediante generalizaciones que pueden ser verdades a medias o argumentos falaces. Se utilizan modelos de emulación de alto impacto mediático. Un ejemplo de esto último es conocido como 'Efecto Angelina'.[15] La confiabilidad y calidad de las fuentes de información utilizadas por los medios de comunicación están frecuentemente sesgadas y afectadas por conflicto de intereses.

Tamizaje obligatorio

Algunos programas masivos son estimulados e instituidos desde el sistema de salud, por leyes o reglamentaciones. En otras ocasiones, son impuestos por usos y costumbres institucionales o a través de presiones de grupos de poder. Estas prácticas reglamentadas, al ser obligatorias no admiten proteger el principio ético de autonomía y autodeterminación de los individuos.

Hay una tensión dialéctica cuando se confronta entre el bien común y el ejercicio del derecho individual en las decisiones sobre el propio cuerpo y la vida. Es un aspecto que puede ser discutible, pero si un individuo no acepta realizar una práctica establecida, por ejemplo cumplir con un plan de vacunación y esa acción tiene efectos negativos en la comunidad, esto suele desencadenar sanciones o acciones compulsivas desde el sistema, tendientes a obligar el cumplimiento de la norma. Queda sin efecto esta discusión cuando la decisión afecta al individuo y su cuerpo sin provocar daños a terceros, como suele ocurrir en condiciones crónicas no transmisibles.[16]

Cuando se debe cumplir con una práctica que está instituida como regla por el sistema de salud, cada profesional que brinda consejo a los usuarios, está en un punto de gran tensión ética, ya que debe enfrentar su propio conflicto interior entre lo que su conocimiento y experiencia le dicen y lo que está obligado a cumplir por mandato. Esto ocurre a los profesionales médicos cada vez que una trabajadora uruguaya solicita realizar su mamografía para cumplir con la reglamentación que impone el carné de salud.[17]

Tamizaje en exceso por su frecuencia

La probabilidad de tener un resultado falso positivo al realizar una prueba de cribado depende de factores relacionados con el tipo de prueba, su efectividad o calidad y características de la población a la que se aplica. Pero cuando se está ante un programa que implica cribados regulares con una secuencia temporal entre ellos, la probabilidad de obtener un resultado falso positivo es diferente a la que ocurre al analizar un resultado aislado. Esta probabilidad se hace acumulativa a lo largo del tiempo y depende del número de repeticiones. Con el número de repeticiones, el porcentaje esperado de falsos positivos aumenta de forma considerable. Es posible minimizar este efecto eligiendo una prueba con menor tasa de falsos positivos o ajustando la frecuencia con la que se sugiere realizar la prueba. Este es el caso del Papanicolaou (PAP). Si luego de dos o tres pruebas normales, estas se realizan a intervalos menores a 2 o 3 años ocurrirá mayor cantidad de falsos positivos. Por tanto se deben afrontar junto a las pacientes las consecuencias de este efecto estadístico, en la vida real.[18]

¿Qué ocurre cuando se realizan tamizajes excesivos?

Sobrediagnóstico y efecto en la sobrevida a 5 años

Lo que llamamos cáncer define en realidad un concepto patológico bastante complejo y heterogéneo. Incluye entidades que evolucionan a la letalidad, procesos indolentes que no causan daño durante la vida, e incluso lesiones que involucionan.[19,20] Cuando esta enfermedad evoluciona rápidamente el tamizaje es inefectivo y cuando no se manifiesta por ser indolente, la detección es fuente de daño por sobrediagnóstico y tratamiento innecesario.[21] Los tamizajes incorporan a la casuística, personas a las que se diagnostica cáncer en etapas tempranas, y esto aumenta el número de sobrevivientes a cinco años, lo que produce una sobreestimación en este indicador. No sabemos cuántas de estas personas realmente se habrían vuelto sintomáticas en la evolución de su enfermedad. Tampoco hay manera de saber quiénes han sido sobrediagnosticados. Aunque el tratamiento haya sido totalmente inefectivo y como este factor no puede ser analizado, la sobrevida a cinco años aumentará, lo que reforzara el argumento a favor de los programas de cribado.[22] Este efecto ocurre con cribados para cáncer de mama, próstata, tiroides y piel en los que la incidencia ha aumentado sin que ocurran cambios significativos en la mortalidad.[23,24]

Sesgo en el valor predictivo positivo de una prueba

Otro sesgo en la interpretación de los beneficios que ofrecen los cribados, es el efecto que ocurre sobre la sensibilidad del estudio utilizado: el sobrediagnóstico aumenta la sensibilidad haciendo aumentar falsamente el valor predictivo positivo del mismo.

Riesgo relativo versus riesgo absoluto

Cuando se comunica información sobre los beneficios o efectos de los tamizajes masivos en determinada población, se suele hacer a través de datos sobre riesgo relativo en lugar de utilizar el riesgo absoluto. El siguiente ejemplo muestra con mayor claridad esta situación: para un hombre de 55 años la disminución del riesgo relativo al recibir cribado para cáncer de colon es de 18%. La reducción del riesgo absoluto (probabilidad de sufrir un evento), sin embargo, es tan solo de 0,014%. Al discutir sobre los riesgos y beneficios de este tamizaje con los pacientes se puede argumentar que la probabilidad de no morir de cáncer colorrectal es de 99,34% en la población cribada y de 99,20 en la no cribada. Como se ve, al analizar valores absolutos, la diferencia es ínfima y con los valores relativos parece abultada.[25,26]

Falsos positivos

El análisis del efecto de los falsos positivos merecería un capítulo aparte. Existe mucha bibliografía sobre situaciones adversas derivadas de los mismos. Por ejemplo en el caso del cribado para cáncer de colon, mediante la detección de sangre oculta en heces, la sensibilidad y especificidad de esta prueba puede alterarse por el uso de ácido acetil salicílico.[27]

¿Cómo avanzar? La escala humana de la prevención

El exceso en los tamizajes depende de la planificación, promoción y aplicación de programas preventivos verticales, que responden a una modalidad de abordaje sanitario centrado en la enfermedad. Por medio de este enfoque reduccionista se pretende llegar a la salud colectiva a través de la gestión del riesgo individual. Así consideradas las actividades sanitarias, imponen de forma arrogante un saber por encima de otro.[28] Esta forma de proceder en las relaciones de poder entre los actores en el sistema de salud es característica del modelo médico hegemónico tal cual lo describe Menéndez.[29] El autor considera aspectos económicos, políticos, institucionales e ideológicos para conceptualizar y definir al modelo médico hegemónico del siguiente modo:

> *Las principales características estructurales del modelo médico son su biologismo, individualismo, ahistoricidad, a-sociabilidad, mercantilismo y eficacia pragmática, y si bien dichos rasgos pueden ser observados en la medicina practicada antes del siglo XIX, durante este siglo se profundizarán y potenciarán esos rasgos hasta convertirse en las características dominantes de la biomedicina. Es importante subrayar que el biologismo articula el conjunto de los rasgos señalados y posibilita la exclusión de las condiciones sociales y económicas en la explicación de la causalidad y desarrollo de las enfermedades. El biologismo es el que posibilita proponer una historia natural de la enfermedad en la cual la historia social de los padecimientos queda excluida o convertida en variables bioecológicas.*(p. 12)[29]

Este paradigma imperante establece un marco en el que se desarrollan prácticas funcionales a un modelo de salud mercantilizado. Este modelo se rige por leyes de consumo y por tanto admite tensiones en múltiples sentidos que proceden del mercado, la industria, los prestadores de salud y de los 'consumidores'.

El nivel relacional clave para evitar los tamizajes en exceso y los excesos de los tamizajes

Intentar evitar *'overscreenig*' (o sobretamizaje) y el daño que produce, requiere acciones complejas en múltiples niveles. Se focalizará en las acciones de la dimensión relacional del binomio médico-paciente/paciente-médico. Es el llamado nivel micro del enfoque de prevención cuaternaria.[30] En este escenario interpersonal se juega definitivamente la aplicación de la ética en la práctica médica a escala humana.

Evitar excesos en los tamizajes requiere llevar recomendaciones y pautas genéricas al terreno de la práctica con casos particulares. La función de los médicos familiares y comunitarios implica, hacerse cargo de una larga lista de tareas que se extiende más allá de la aplicación de programas masivos para cribado de enfermedades. La interacción asertiva es crucial y requiere del profesional la habilidad de intentar acceder al conocimiento integral de cada individuo en su contexto. Este esfuerzo le permitirá asomar a la peculiaridad y originalidad humana. Solamente de ese modo se producirá una aproximación respetuosa hacia el otro, reconociendo diferencias, aceptando la asimetría y entendiendo el valor inclusivo de la alteridad. Así los médicos familiares y comunitarios estarán habilitados a realizar responsablemente la sugerencia precisa. Esta desafiante e interactiva forma de proceder admite considerar las preferencias, favorece la retroalimentación, para acordar un plan individualizado a seguir.

La prevención cuaternaria, fundada conceptualmente en los cuidados de salud centrados en la persona, permite considerar las creencias, inquietudes, opciones particulares y propias de cada individuo, haciendo posible una dimensión humana en la prevención. Promueve que cada persona participe de acuerdo a su situación, sus características y dones, en la toma de decisiones vinculadas a su dimensión de salud, respetando los principios éticos y específicamente los principios de autonomía y no maleficencia *(primun non nocere)*. Incorporar la mirada que promueve la prevención cuaternaria en la práctica médica permite: (1) reorientar el enfoque de prevención del eje cronológico hacia el relacional; (2) moverse desde un modelo preventivo centrado en la enfermedad hacia uno centrado en la persona; y (3) aplicar desde esta perspectiva una organización de prácticas en la que cada protagonista asume de forma corresponsable el lugar que ocupa.

Nota del autor: debido a las dificultades en encontrar términos aceptables para todos los idiomas implicados, se han utilizado en este trabajo como sinónimos: *screening*, cribado y "tamizaje" (que formalmente en castellano es un neologismo, pero que para el lenguaje médico se usa y se entiende bien).

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Referencias

1. Ministério da Saúde (BR), Secretaria de Atenção à Saúde. Departamento de Atenção Básica. Rastreamento. Brasília: Ministério da Saúde; 2010. (Série A. Normas e Manuais Técnicos Cadernos de Atenção Primária, n. 29).
2. Norman HA, Tesser CD. Rastreamento de doenças. In: Gusso GDF, Lopes JMC. Tratado de medicina de família e comunidade: princípios, formação e prática. Porto Alegre: Artmed; 2012. p. 521-532.
3. Gates TJ. Screening for cancer: evaluating the evidence. Am Fam Physician. [Internet] 2000 [última consulta el 2015 Jun 17] ;63(3):513-522. Disponible en: http://www.aafp.org/afp/2001/0201/p513.pdf.
4. Colin S. Collins Spanish-English, English-Spanih dictionary. 3a ed. Barcelona: Ediciones Grijalbo; 1994.
5. Skrabanek P. Shadows over screening mammography. Clin Radiol. 1989;40(1):4-5. http://dx.doi.org/10.1016/S0009-9260(89)80003-0. PMid:2920517.
6. McMaster H, Arroll B. Screening for cervical cancer: attitudes and policies among Auckland general practitioners. N Z Med J. 1992;105(931):125-127. PMid:1560922.
7. MeSH Browser [Internet]. Bethesda (MD): National Library of Medicine (U.S.); 2002 [última consulta el 2014 Oct 25]; [1 pantalla]. Disponible en: http://www.ncbi.nlm.nih.gov/mesh/?term=overscreening.
8. Brodersen J, Siersma VD. Long-term psychosocial consequences of false-positive screening mammography. Ann Fam Med. 2013;11(2):106-115. http://dx.doi.org/10.1370/afm.1466. PMid:23508596.
9. Gérvas J. Prevención cuaternaria en ancianos. Rev Esp Geriatr Gerontol. 2012;47(6):266-269. http://dx.doi.org/10.1016/j.regg.2012.07.001. PMid:23062686.
10. Lenzer J, Brownlee S. US expert panel recommends against prostate cancer screening. BMJ. 2011;343:d6479. http://dx.doi.org/10.1136/bmj.d6479. PMid:21987717.
11. Brownlee S, Lenzer J. Can cancer ever be ignored? [Internet]. 2011 Oct 5 [última consulta el 2014 Oct 19]. The New York Times Magazine; 2011. Disponible en: www.nytimes.com/2011/10/09/magazine/can-cancer-ever-be-ignored.html?_r=2&ref=magazine.

12. Sullivan T. Evidence does not support blanket prostate cancer testing recommendation [Internet] 2013 Sept 5 [última consulta el 2014 Oct 19]. Healthy Debate; 2013.
Disponible en: http://healthydebate.ca/opinions/a-popular-belief-that-early-detection-of-cancer-is-best-does-not-make-it-so.

13. Moyer VA, U.S. Preventive Services Task Force. Screening for prostate cancer: U.S. Preventive Services Task Force recommendation statement. Ann Intern Med. 2012;157(2):120-134. http://dx.doi.org/10.7326/0003-4819-157-2-201207170-00459. PMid:22801674.

14. Welch HG, Black WC. Using autopsy series to estimate the disease "reservoir" for ductal carcinoma in situ of the breast: how much more breast cancer can we find? Ann Intern Med. 1997;127(11):1023-1028. http://dx.doi.org/10.7326/0003-4819-127-11-199712010-00014. PMid:9412284.

15. Borzekowski DL, Guan Y, Smith KC, Erby LH, Roter DL. The Angelina effect: immediate reach, grasp, and impact of going public. Genet Med. 2014;16(7):516-521. http://dx.doi.org/10.1038/gim.2013.181. PMid:24357847.

16. Arie S. Uruguay's mandatory breast cancer screening for working women aged 40-59 is challenged. BMJ. 2013;346:f1907. http://dx.doi.org/10.1136/bmj.f1907.

17. Pizzanelli Báez EM. Principios Éticos y Prevención Cuaternaria: ¿es posible no proteger el ejercicio del principio de autonomía? Rev Bras Med Fam Comunidade. 2014;9(31):169-73. http://dx.doi.org/10.5712/rbmfc9(31)852.

18. Welch HG. Should I be tested for cancer? Maybe not, and here's why. Berkeley: University of California Press; 2004.

19. Greaves M. Does everyone develop covert cancer? Nat Rev Cancer. 2014;14(4):209-210. http://dx.doi.org/10.1038/nrc3703. PMid:25688403.

20. Zahl PH, Gøtzsche PC, Mæhlen J. Natural history of breast cancers detected in the Swedish mammography screening programme: a cohort study. Lancet Oncol. 2011;12(12):1118-1124. http://dx.doi.org/10.1016/S1470-2045(11)70250-9. PMid:21996169.

21. Brodersen J, Schwartz LM, Woloshin S. Overdiagnosis: how cancer screening can turn indolent pathology into illness. APMIS. 2014;122(8):683-689. http://dx.doi.org/10.1111/apm.12278. PMid:24862511.

22. Welch HG; Schwartz LM; Woloshin S. Are increasing 5-year survival rates evidence of success against cancer? JAMA. 2000;283:2975-2978. PMID: 10865276.

23. Esserman L, Shieh Y, Thompson I. Rethinking screening for breast cancer and prostate cancer. JAMA. 2009;302(15):1685-1692. http://dx.doi.org/10.1001/jama.2009.1498. PMid:19843904.

24. Sandblom G, Varenhorst E, Rosell J, Löfman O, Carlsson P. Randomised prostate cancer screening trial: 20 year follow-up. BMJ. 2011;(31):342:d1539. http://dx.doi.org/10.1136/bmj.d1539.

25. Hewitson P, Glasziou P, Irwig L, Towler B, Watson E. Screening for colorectal cancer using the faecal occult blood test, Hemoccult. Rev. Cochrane Database Syst. 2007;(1):CD001216. PMID: 17253456.

26. Kronborg O, Fenger C, Olsen J, Jørgensen OD, Søndergaard O. Randomised study of screening for colorectal cancer with faecal-occult-blood test. Lancet. 1996;348:1467-1471. PMID: 8942774.

27. Brenner H, Tao S, Haug U. Low-dose aspirin use and performance of immunochemical fecal occult blood tests. JAMA. 2010;304(22):2513-2520. http://dx.doi.org/10.1001/jama.2010.1773. PMid:21139112.

28. Sacket D. Hormone replacement therapy. The arrogance of preventive medicine. CMAJ. [Internet]. 2002 [última consulta el 2015 Jun 17];167(4):363-364. Disponible en: http://www.cmaj.ca/content/167/4/363.full.pdf.

29. Menéndez E. El modelo médico y la salud de los trabajadores. Salud Colectiva. 2005;1(1):9-32.

30. Halfmann D. Recognizing medicalization and demedicalization: discourses, practices, and identities. Health (London). 2012;16(2):186-207. http://dx.doi.org/10.1177/1363459311403947. PMid:21540251.

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Surgical pathology in cancer diagnosis: implications for quaternary prevention

Anatomia patológica no diagnóstico do câncer: implicações para a prevenção quaternária

Patología quirúrgica en el diagnóstico de cáncer: implicaciones para la prevención cuaternaria

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Abstract

Surgical pathology is the medical specialty in charge of cancer diagnosis. Although very important since oncology development, its link with overdiagnosis and overtreatment remains understudied. Despite big mediatisation, molecular biology has not brought much progress to tumour classifications. On the contrary, the silent apparition of immunohistochemistry at the end of the 1980's improved much of tumour classifications so significantly that it could cast doubts in some trials' results of that period. This article discusses how the booming and abuse of immunohistochemistry might have led to overdiagnosis. It also highlights that the ISO 15189 standardization, as well as the tumour classification complexity, might function to induce overtreatment. In summary, critical reading and understanding of pathology reports by general practitioners are essential. Therefore, family doctors should not hesitate to discuss the cancer diagnosis with the pathologist, and in some cases also question the oncologist decision. This approach can be considered a quaternary prevention action which can prevent overtreatment.

Keywords:
Quaternary Prevention
Pathology, Surgical
Uterine Cervical Neoplasms

Resumo

A anatomia patológica é a especialidade médica responsável pelo diagnóstico de câncer. Apesar de muito importante, a partir do desenvolvimento da oncologia, sua ligação com o sobrediagnóstico e sobretratamento permanece ainda pouco estudada. Apesar de grande midiatização, a biologia molecular não trouxe muito progresso para a classificação dos tumores. Ao contrário, a aparição silenciosa de imunohistoquímica, no final da década de 1980, foi o que melhorou significativamente as classificações tumorais, a ponto de ser possível lançar dúvidas sobre os resultados de alguns ensaios clínicos desse período. Este artigo discute como o auge e o abuso da imunohistoquímica pode ter levado ao sobrediagnóstico. Ele também destaca que a padronização ISO 15189, assim como a complexidade de classificação tumoral, podem também contribuir para a indução do sobretratamento. Em suma, a leitura crítica e a compreensão dos laudos de patologia por parte dos médicos de família são essenciais. Portanto, os médicos de família não deveriam hesitar em discutir o diagnóstico de câncer com o patologista e, em alguns casos, também questionar a decisão do oncologista. Essa abordagem pode ser considerada uma ação de prevenção quaternária que pode prevenir o sobretratamento.

Palavras-chave:
Prevenção Quaternária
Patologia Cirúrgica
Neoplasias do Colo do Útero

Resumen

La patología quirúrgica es la especialidad médica encargada del diagnóstico de cáncer. Aunque es muy importante, desde el desarrollo de la oncología, su vínculo con el sobrediagnóstico y sobretratamiento sigue pendiente de estudio. A pesar de gran mediatización, la biología molecular no ha traído mucho progreso para las clasificaciones tumorales. Por el contrario, la aparición silenciosa de la inmunohistoquímica, en el final de la década de 1980, mejoró mucho las clasificaciones tumorales, a punto de que sea posible plantear dudas sobre los resultados de algunos ensayos clínicos en ese período. Este artículo describe cómo el auge y el abuso de la inmunohistoquímica puede tener llevado al sobrediagnóstico. También destaca que la estandarización ISO 15189, así como la complejidad de la clasificación tumoral, pueden también contribuir para la inducción del sobretratamiento. En suma, la lectura crítica y la comprensión de los informes de patología por los médicos familiares son esenciales. Portanto, los médicos de familia no deberían vacilar en discutir el diagnóstico de cáncer con el patólogo y, en algunos casos, también cuestionar la decisión del oncólogo. Este enfoque puede ser considerado una acción de prevención cuaternaria que puede prevenir el sobretratamiento.

Palabras clave:
Prevención Cuaternaria
Patología Quirúrgica
Neoplasias del Cuello Uterino

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Background: the boom of immunohistochemistry

Surgical pathology is a huge but hidden specialty. Modern pathology using the microscope began with Rudolf Virchow,[1] a XIX century German doctor and professor. Juan Rosai[2] describing the beginning of pathology in the United States of America refers to it as a surgical and mainly experimental specialty. The first residents of surgical pathology appear in the 1940's. Pathology grew much after World War II, leaving behind its surgical component to become an independent laboratory department in the 1960s. Up to 1960, surgical pathology used only light microscope and stains (histochemistry).[3] Electron microscopy was used in the middle of the XX century, but was abandoned in the eighties due to the advent of immunohistochemistry.

Immunohistochemistry uses a small amount of animal antibodies to mark cells and help tumour typing. Between 1980 and 2000 immunohistochemistry boomed with pathology laboratories being progressively equipped with these techniques. Around 2000, Ventana Medical Systems[4] released the first immunohistochemistry automates.[5] Thus, immunohistochemistry has become easier and quicker to perform. Immunohistochemistry has ascertained its important role on pathology diagnosis and has not yet been championed. For instance, molecular biology, though very mediated, is only performed in a few cases after light microscopy and immunohistochemistry, to complete the diagnosis process.

Hence, interesting would be to find out if pathology can be linked to overdiagnosis and overtreatment since it has been recently reported some controversies over screening programmes,[6] as well as in cancer overdiagnosis.[7] The rationale for that is that screening programmes may identify a reservoir of indolent tumours. These are not life-threatening conditions, and potentially can lead to overdiagnosis and overtreatment.[8] For this reason, it has been suggested a need for changing cancer terminology. The term 'cancer' should be reserved for describing lesions with a reasonable likelihood of lethal progression, if left untreated.[9] This would be the first step in understanding and mapping the overdiagnosis phenomenon.

The current literature on overdiagnosis did not investigate much in surgical pathology. The researchers have been looking to overdiagnosis, mostly from epidemiological perspective, with little emphasis on surgical pathology. Thus, it might be interesting to explore how pathology can be an overdiagnosis accomplice and actor. This article emphasises the limits and future of pathology and the so called 'technological progresses' suggesting that family physicians could have a role in dealing with pathological reports as an action for quaternary prevention.

Before the spread of immunohistochemistry in the 1990's: an unknown amount of cancer misclassified

Immunohistochemistry uses antibodies to mark cells and at first the technique was manual, quite difficult to handle, and time consuming. In pathology, one antibody is rarely used alone. For instance, after screening the case on the microscope, the pathologist can use a panel of antibodies to make the diagnosis. This whole process was revolutionised 15 years ago with Ventana medical system, which for the first time has automatized the immunohistochemistry process.[5] This favoured its expansion and confirmed its success. As a result, some traditional stains in tumour typing were abandoned or replaced by immunohistochemistry.

For example, in endocrine tumour diagnosis, the use of Grimelius stain was phased out by immunohistochemistry and the use of synaptophysin and chromogranin is now clearly acknowledged. With the introduction of immunohistochemical techniques, tumours could be characterized in a more specific way regarding peptide hormones and biogenic amines content,[6] but no publication has been found ascertaining the definite superiority of immunohistochemistry against Grimelius stain. In 1992, Cetin[10] still recommended to perform Grimelius stain. Currently, in Western countries, Grimelius stain has been completely abandoned and not even pathology textbooks refer to it anymore.

In 1985, Gatter et al.[11] from Oxford University, highly recommended the brand new immunohistochemistry methods in tumour diagnosis since undifferentiated carcinoma cases diagnosed by light microscopy alone ("old" pathologic diagnosis prior to 1980-1990) were reviewed and examined with new immunohistochemistry methods. Half of the 'carcinoma' cases have been reclassified in lymphoma, which is opposite to carcinoma, 'curable' with adequate chemotherapy. Gatter et al.[11] urged pathologists to use immunohistochemistry: *'Immunohistological methods can now resolve the majority of difficulties arising over the histological diagnosis of malignant tumours, and these methods should, therefore, be used on a wide scale by diagnostic histopathology laboratories'*.

Hence, Gatter et al. have demonstrated that immunohistochemistry helps the pathologists to classify tumours and that without the advent of immunohistochemistry, big mistakes have been made. Their assertiveness was based on the misclassification of lymphomas, which previously to immunohistochemistry techniques were diagnosed as carcinomas. In other words, if the patients were diagnosed as having carcinoma, they might have not started chemotherapy, which could have cured them. Gatter et al.'s message was very important because in 1985 just few laboratories were performing immunohistochemistry.

Immunohistochemistry side effects: useless antibodies

Immunohistochemistry was at first a great help to the pathologist diagnosis, but the antibodies manufacturers boomed and underwent aggressive marketing campaigns. The P16 protein is the typical antibody, whose campaign has been described as 'aggressive' by some scientists.[12] This abuse of antibodies is not trivial. For instance, in case of doubt between 'normal' or dysplasia in cervix biopsy, P16 immunohistochemistry might be helpful.[13] However, the same P16 might be used for dysplasia grading, which presumably induces overdiagnosis of high-grade dysplasia.[14] A diagnosis of high-grade dysplasia is not a banal thing, since it involves resection of cervix as treatment (conisation), which has implications for subsequent deliveries.[15] According to Carrigg and Hasteh[16] from UC San Diego health system, 17% of conisations are normal and, therefore, unjustified. In other words, as result of Pap smear screening for cervical cancer, nearly one out five women would have her normal cervix being taken off, increasing her chances of having a premature delivery.

Ventana, Roche and ISO 15189

Ventana is a big corporation which only deals with pathologists. Ventana does not only sell machines, it also sells antibodies that can work with its automated devices. Additionally, Ventana automates also work with other corporation antibodies. Ventana also invented and sold around the year 2000 the first automate which could perform the whole immunohistochemistry technique by itself. It was a huge success and Ventana took the first rank in the world immunohistochemistry market: in 2011, in the US, it had more than 50% of the immunohistochemistry $650 million market.[13] In 1998, the US Food & Drug Administration approved Roche's Herceptin (trastuzumab) as a chemotherapy drug for breast cancer. To be prescribed, Herceptin needs an associated test, the HER-2 immunohistochemistry test. If enough cells are marked by the HER-2, then Herceptin can be prescribed. Around 15% of the breast cancers are positive for HER-2 tests. In order to prescribe Roche's Herceptin, oncologists must have a positive HER-2 test. It is made on the breast cancer slides by pathologists by means of immunohistochemistry.

The CAP-ASCO (College of American Pathologists-American Society of Clinical Oncology) recommendations for HER-2 test interpretation changed 3 times since its birth.[17] Before 2007, it was positive if more than 10% of the cells were strongly stained. From 2007 onwards the requirement increased to up 30%. Recently, in 2014, it was dragged back to 10%. The FISH interpretation levels have also changed in the same period. In 2014, one of the most important pathology review study noticed that '*Certain recommendations, particularly those related to repeating the test and pathological concordance, have lower levels of supportive evidence than existing key recommendations*".[16] This recent HER-2 test cut-off change may increase Herceptin prescription for the years to come. Since Ventana's acquisition by Roche, in 2008, for the cost of 3,4 billion dollars,[18] Roche controls now all the pathology diagnosis pathway: the Ventana HER-2 antibody, the Ventana immunohistochemistry automate and the Herceptin drug. Thus, currently Roche sells the companion test and the drug as well.

The new world standard ISO 15189, which is based on ISO 9001 quality management system is now applied to medical biology laboratories. It has become mandatory for medical biology in a few countries,[19] especially France and Belgium, although it is not mandatory in the USA.[20] It is also beginning to be applied to some surgical pathology laboratories. ISO 15189 states that the integrated systems should be preferred and most laboratories, which own Ventana automates, will be pushed to buy Ventana antibodies, in case of ISO 15189 being strictly applied.

Classification changes

The veracity of pathology diagnosis depends little on technique. It mainly depends on the pathologist's knowledge and skills and not everyone have the same level of dexterity. The pathology diagnosis is not infallible and thereby the inter-observer reproducibility is sometimes not satisfactory.[21] This would be improved by simple classifications, whose therapeutic benefits and reproducibility could be tested. Unfortunately this is not the trend, since WHO Classifications of tumours are determined by a small circle of 'experts' meetings, without much preliminary studies.[22] In addition, instead of releasing a mature classification every 20 years, the pace has been accelerated and classificatory criteria change more rapidly. However, as quoted in 2002, the 1998 WHO bladder tumour classification criteria are not better than the 1973, which is still widely used.[23] There are even some guidelines mistakes as the WHO/RENATEN 2010 classification of endocrine digestive tumour in which difference in methods could reach 44% of discordance.[24]

Discussion

The immunohistochemistry techniques which appeared in the eighties, as mentioned previously, were a big advance in pathology. It allowed making a more adequate diagnosis in a significant number of cases. Few publications reviewed the cases diagnosed before the existence of immunochemistry. The real impact of immunohistochemistry on the pathology diagnosis accuracy is difficult to estimate as already discussed above in The Lancet's seminal article.[11] It could be objected that this one paper is not enough to assert the value of immunohistological methods impact on tumour diagnosis. But, this is not the case because, certainly, before immunohistochemistry a significant amount of cancers was misclassified. Before the 1990's, pathologists might have misclassified tumours as carcinoma instead of lymphoma or melanoma. It was the technical limitation of that time and not the pathologists' fault. Although every senior pathologist admits now that immunohistochemistry was a big step forward, there is little interest in the period before immunohistochemistry in searching for classification discrepancies. If not, new review studies could be performed, since slides or paraffin blocks are stored for long time, which makes possible to review the 1970-1990 cases. This context is highlighted on the British Pathology Association website 'conversation with pathologists', where it is possible to listen to pathologist David A. Levison,[25] editor of a pathology textbook:

> *'Immunohistochemistry has made a huge difference. Before we had this, if we saw a mass of malignant cells, we could tell it was a tumour, but not definitely if it was a lymphoma, which is treatable, curable; or if it was an undifferentiated carcinoma which virtually nothing will touch, will kill you in a few weeks or months; or if it was a sarcoma for which there might be some other specific treatment. Now, with immunohistochemistry and the molecular techniques as well, we can tell in almost every case, "Yes that's a lymphoma, it's a B-cell lymphoma, usually curable. The chances are that 90% of people who have this sort of tumour will be still alive in five years, if they are treated with this particular regime'*.[25]

The only thing which is not accurate in this statement is that the old school of pathologists actually made a definite diagnosis, and misclassified tumours. Pathologists at that time did not know their limits as they were unknown to immunohistochemistry. They did not classify all those tumours as 'unclassified' or as 'undifferentiated tumours' as might be expected. In the 1985 Gatter et al. study[11] it was documented that 60% of the cases diagnosed as undifferentiated carcinoma were, after immunohistochemistry analysis, classified finally as lymphoma, which are curable entities. These facts are sufficient to suspect the occurrence of major biases results in some of the clinical chemotherapy trials of that time. Thus, old clinical trials based on pathology diagnosis and published with no or insufficient immunohistochemistry might be biased by tumour misclassification. The drug approvals based on those misclassified cases might then be ineffective. This is all the more accurate in sarcoma and also in bronchial carcinoma, melanoma, and lymphoma, which are not diagnosed now without immunohistochemistry and it is the less accurate in colonic adenocarcinoma that does not usually need immunohistochemistry for diagnosis.

On the one hand, immunohistochemistry is of great help for the pathologists, on the other hand it is being now so common that it might be overused. Immunohistochemistry overuse can hardly be contradicted. For instance, in 2012, a paper from the Department of Pathology, University of Virginia Health System[26] states:

> *'With its proliferation in pathology practice settings of all types, the temptation to overuse it [immunochemistry] continues. Immunochemistry should, of course, complement and not supersede information gleaned from the clinical context and the H & E-stained morphologic appearance. The pathology literature is inundated with articles that address the usefulness of diagnostic IHC [immunohistochemistry] algorithms and panels for tumour classification. However, there is a paucity of studies examining the patterns of usage of IHC among pathologists, possibly because of the inherent bias likely to be present in the study design'.*

The link between immunohistochemistry overuse and overdiagnosis is not yet proved, but highly suspected. In 1997, uropathologist Epstein emphasized that the percentage of minute cancer among prostatectomy has increased since PSA screening.[27] His remark on minute cancer, a cancer less than 7mm, is a reference that this prostate 'cancers' might be harmless. The overdiagnosis due to prostate screening has been proved by epidemiological studies.[28] Pathology might be a major cause of this overdiagnosis, but few pathologists have written about it. Epstein's article mentions PSA screening as a possible cause of overdiagnosis, but forgets to acknowledge the immunohistochemistry technique as playing also a major role in prostate cancer overdiagnosis. Nowadays, for almost 10 years, active surveillance for minimal prostate cancer (<1mm on biopsy) is quite advised and commonly accepted.[29]

Even though molecular biology knowledge has stepped forward, it does not help much the clinician to diagnose and treat cancer. Associated tests are now numerous (Braf, Kras mutations) as in the case of Thyrosine Kinase Inhibitors (approved by FDA) which are now more than twenty. They are mostly made by molecular biology (PCR), but previous diagnosis would have required only haematoxylin and eosin (H & E) coloration and perhaps, immunohistochemistry.

Pathology diagnosis demands experience more than technology. As Juan Rosai,[2] one of the most influential twentieth century pathologist has stated: *'despite all the advances in molecular biology and other disciplines, the diagnosis of solid tumours today is still based in the overwhelming majority of the cases on what we see under the microscope'.*[2]

Radiology is supported by manufacturers which sell big and expensive machines. Pathology does not need any expensive material. Cost effective analyses of surgical pathology has rarely been studied, but is very low,[30] or at least, lower than radiology, though it makes the definite diagnosis.

False advances in the area of pathology are focusing on useless features. For instance, ISO 15189 would not make pathologists to progress, but to divert the focus on trivial details, such as room or fridge temperature. This approach will not improve the quality of the diagnosis. However, if accreditation on ISO 15189 is applied worldwide to pathologists, it will not improve the accurate diagnosis, but it is likely to transform friendly familial pathology laboratory into a big diagnosis industrial manufacture to be launched in the stock exchange market. These transformations could be detrimental for surgical pathology efficiency. A skilled and committed pathologist tends to phone clinicians when there is a lack of clinical details, an essential step for making the diagnosis. The same slide image can be of a melanoma, if the patient is an adult, or a congenital *naevus* in the case of a newborn! Moreover, the industrialization of pathology might induce overdiagnosis, backed by pharmaceutical industry concerned with a positive association of immunohistochemical test to treat patients.

Conclusion

Surgical pathology is the key to cancer diagnosis and its role on overdiagnosis and overtreatment is underestimated. This article tries to point out the major overdiagnosis factors in surgical pathology. An unknown number of major tumour misclassification has been made before the emergence of immunohistochemistry (1980-2000) and those misclassifications might have biased some cancer clinical trial results. For this reason, old trial conclusions should be taken cautiously. Immunohistochemistry might be now overused with important implications for the debate on overdiagnosis/overtreatment and tumour classification simplification and harmonization could be a real step forward to minimize cancer overdiagnosis.[31] ISO 15189 standardisation should be seen as not a neutral endeavour, having important consequences for pathology diagnostic result accuracy, since most pathology diagnostic results are not quantitative but qualitative tasks.

In summary, further independent studies are required to emphasize and to determine more precisely the role of surgical pathology on overdiagnosis. Critical reading and understanding of pathology reports by general practitioners are essential. Therefore, family doctors should not hesitate to discuss the cancer diagnosis with the pathologist, and in some cases also question the oncologist decision. This approach can be considered a quaternary prevention action which can prevent overtreatment.

References

1. Tan SY, Brown J. Rudolph Virchow (1821-1902): "pope of pathology". Singapore Med J. 2006;47(7):567-568. PMid:16810425.
2. Rosai J. Guiding the surgeon's hand: the history of American surgical pathology. Washington, DC: Armed Forces Institute of Pathology, 1997.
3. Wick MR. Histochemistry as a tool in morphological analysis: a historical review. Ann Diagn Pathol. 2012;16(1):71-78. http://dx.doi.org/10.1016/j.anndiagpath.2011.10.010 PMid:22261397.
4. Wikipedia. Ventana medical systems [cited 2014 Dec 20]. Available from: https://en.wikipedia.org/wiki/Ventana_Medical_Systems
5. Biz Tucson Special Report Ventana Medical Systems. 2012. [cited 2014 May 29]. Available from: http://issuu.com/mcserres/docs/special_report_ventana/1
6. Grimelius L. Methods in neuroendocrine histopathology, a methodological overview. Ups J Med Sci. 2008;113(3):243-260. http://dx.doi.org/10.3109/2000-1967-238 PMid:18991238.
7. Welch HG, Black WC. Overdiagnosis in cancer. J Natl Cancer Inst. 2010;102(9):605-613.http://dx.doi.org/10.1093/jnci/djq099 PMid:20413742.
8. Esserman LJ, Thompson IM, Reid B, Nelson P, Ransohoff DF, Welch HG, et al. Addressing overdiagnosis and overtreatment in cancer: a prescription for change. Lancet Oncol. 2014;15(6):234-242.http://dx.doi.org/10.1016/S1470-2045(13)70598-9 PMid:24807866.
9. Esserman LJ, Thompson IM Jr, Reid B. Overdiagnosis and overtreatment in cancer: an opportunity for improvement. JAMA. 2013;310(8):797-798. http://dx.doi.org/10.1001/jama.2013.108415 PMid:23896967.
10. Cetin Y. Chromogranin A immunoreactivity and Grimelius' argyrophilia. Anat Embryol (Berl). 1992;185(3):207-215. http://dx.doi.org/10.1007/BF00211819 PMid:1349463.
11. Gatter KC, Alcock C, Heryet A, Mason DY. Clinical importance of analysing malignant tumours of uncertain origin with immunohistological techniques. Lancet. 1985;325(8441):1302-1305.http://dx.doi.org/10.1016/S0140-6736(85)92794-1 PMid:2860495.
12. Sabath AP, Kiviat NB. Review: detection and classification of cervical neoplasia in the era of HPV. Pathology Case Review. 2010;15(4):101-140. http://dx.doi.org/10.1097/PCR.0b013e3181e711ff
13. McEvoy & Farmer. Anatomic pathology markets in the United States: excerpts from our new report. 2011. [cited 2014 Dec 18]. 20 p. Available from: http://www.mcevoyandfarmer-pathology.com/wp-content/uploads/2012/12/USPathReportContents.pdf. (US Pathology 2011 Report).
14. Kyrgiou M, Koliopoulos G, Martin-Hirsch P, Arbyn M, Prendiville W, Paraskevaidis E. Obstetric outcomes after conservative treatment for intraepithelial or early invasive cervical lesions: systematic review and meta-analysis. Lancet. 2006;367(9509):489-498. http://dx.doi.org/10.1016/S0140-6736(06)68181-6 PMid:16473126.
15. Carrigg A, Teschendorf C, Amaro D, Weidner N, Tipps A, Shabaik A, et al. Examination of sources of diagnostic error leading to cervical cone biopsies with no evidence of dysplasia. Am J Clin Pathol. 2013;139(4):422-427.http://dx.doi.org/10.1309/AJCP6BSD0SNGQLHQ PMid:23525611.
16. Rakha EA, Starczynski J, Lee AH, Ellis IO. The updated ASCO/CAP guideline recommendations for HER2 testing in the management of invasive breast cancer: a critical review of their implications for routine practice. Histopathology. 2014;64(5):609-615. http://dx.doi.org/10.1111/his.12357 PMid:24382093.
17. Pu X, Shi J, Li Z, Feng A, Ye Q. Comparison of the 2007 and 2013 ASCO/CAP evaluation systems for HER2 amplification in breast cancer. Pathol Res Pract. 2014;211(6):421-425.http://dx.doi.org/10.1016/j.prp.2014.09.010 PMid:25818873.
18. The New York Times. Roche buying Ventana for $3.4 billion. 2008 Jan 22. [cited 2014 Sept 14]. Available from: http://www.nytimes.com/2008/01/22/business/worldbusiness/22iht-22rocheFW.9396266.html?_r=0
19. Tomáš Z. Accreditation in clinical laboratories. Biochemia Medica. 2010;20(2):215-220. http://dx.doi.org/10.11613/BM.2010.026
20. International Organization for Standardization (ISO). Frequently asked questions related to the A2LA ISO 15189 medical laboratory accreditation program [cited 2014 Nov 11]. Available from: http://www.a2la.org/faq/medical_15189.pdf
21. Lee EW, Deng FM, Melamed J, Mendrinos S, Das K, Hochman T, et al. Grading variability of urothelial carcinoma: experience from a single academic medical center. Can J Urol. 2014;21(4):7374-7378. PMid:25171282.
22. Roychowdhury M. Bladder Urothelial tumors - WHO / ISUP classification (2004). 2011. [cited 2015 jan. 12] Available from: http://www.pathologyoutlines.com/topic/bladderwhoisup.html
23. Oosterhuis JWA, Schapers RFM, Janssen-Heijnen MLG, Pauwels RPE, Newling DW, ten Kate F. Histological grading of papillary urothelial carcinoma of the bladder: prognostic value of the 1998 WHO/ISUP classification system and comparison with conventional grading systems. J Clin Pathol. 2002;55(12):900-905.http://dx.doi.org/10.1136/jcp.55.12.900 PMid:12461053.
24. Khan MS, Luong TV, Watkins J, Toumpanakis C, Caplin ME, Meyer T. A comparison of Ki-67 and mitotic count as prognostic markers for metastatic pancreatic and midgut neuroendocrine neoplasms. Br J Cancer. 2013;108(9):1838-1845. http://dx.doi.org/10.1038/bjc.2013.156 PMid:23579216.
25. Armstrong S. A matter of life and death. Dundee: University Press; 2008. [cited 2014 May 29]. Available from: http://www.pathsoc.org/conversations/index.php
26. Shah AA, Frierson HF Jr, Cathro HP. Analysis of immunohistochemical stain usage in different pathology practice settings. Am J Clin Pathol. 2012;138(6):831-836.http://dx.doi.org/10.1309/AJCPAGVTCKDXKK0X PMid:23161717.

27. DiGiuseppe JA, Sauvageot J, Epstein JI. Increasing incidence of minimal residual cancer in radical prostatectomy specimens. Am J Surg Pathol. 1997;21(2):174-178.http://dx.doi.org/10.1097/00000478-199702000-00006 PMid:9042283.

28. Sandhu GS, Andriole GL. Overdiagnosis of prostate cancer. Am J Pathol. 1987;129(1):140-151. PMid:3310650.

29. Lund L, Svolgaard N, Poulsen MH. Prostate cancer: a review of active surveillance. Res Rep Urol. 2014;6:107-112. PMid:25202685.

30. Raab SS. The cost-effectiveness of immunohistochemistry. Arch Pathol Lab Med. 2000;124(8):1185-1191. PMid:10923081.

31. Colin C, Devouassoux-Shisheboran M, Sardanelli F. Is breast cancer overdiagnosis also nested in pathologic misclassification? Radiology. 2014;273(3):652-655.http://dx.doi.org/10.1148/radiol.14141116 PMid:25420166.

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Prescripción prudente y deprescripción de fármacos como herramientas para la prevención cuaternaria

Prescrição prudente e desprescrição de fármacos como ferramentas para a prevenção quaternária

Prudent prescribing and deprescribing drugs as tools for quaternary prevention

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Resumen

Las consecuencias de una medicación inadecuada son diversas y con gran repercusión a nivel clínico: desde efectos adversos e interacciones medicamentosas a fracturas por caídas y aumento de morbi-mortalidad. Para evitar o mejorar dichas consecuencias, así como para abordar sus causas y con la seguridad del paciente en mente, nace la deprescripción para conseguir una prescripción más segura, más prudente y más humana. La atención primaria se sitúa en un lugar privilegiado para hacer frente a este reto que debería formar parte de cualquier estrategia de prevención cuaternaria.

Palabras clave:
Deprescripción
Prescripciones de Medicamentos
Prevención Cuaternaria
Seguridad del Paciente

Resumo

As consequências de uma medicação inadequada são diversas e com grande repercussão clínica: desde efeitos adversos e interações medicamentosas até fraturas por quedas e aumento da morbidade e mortalidade. Para se evitar ou amenizar essas consequências, bem como abordar as suas causas, levando-se em conta a segurança dos pacientes, surge a desprescrição para se obter uma prescrição mais segura, mais prudente e mais humana. A atenção primária está em uma posição privilegiada para enfrentar o desafio da desprescrição e esta deveria fazer parte de qualquer estratégia de prevenção quaternária.

Palavras-chave:
Desprescrição
Prescrições de Medicamentos
Prevenção Quaternária
Segurança do Paciente

Abstract

The consequences of inappropriate medication are diverse and have great clinical impact: from adverse effects and medication interactions to fractures from falls and increased morbidity and mortality. To avoid or ameliorate such consequences, as well as to address its causes, bearing in mind patients' safety, deprescription has emerged as a safer, more prudent and humane practice. Primary care is in a privileged position to address this challenge of deprescription and it should be part of any strategy of quaternary prevention.

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Introducción

En la actualidad es bien conocido y aceptado que la interacción entre el paciente y el sistema sanitario puede tener como consecuencia daños no relacionados con la evolución de la enfermedad, sino con las prácticas, productos, procedimientos y sistemas sanitarios.[1] Aunque el manejo y la prescripción de los fármacos sean prudentes, hay momentos en los que éstos entran en contradicción con el estado actual del paciente. La deprescripción es un intento de resolver dichas contradicciones.

Para poder deprescribir medicamentos a un paciente es preciso tener una idea global de esa persona, integrando aspectos tanto de las esferas biomédica y farmacológica, como del contexto personal y social. Uno de los pasos esenciales es adecuar los medicamentos que se usan a las metas de la atención sanitaria-prevención (primaria, secundaria, terciaria o cuaternaria) de morbilidad y mortalidad, intención curativa, alivio de síntomas, prevención de sufrimiento (tratamiento paliativo), y mejoría o mantenimiento de la funcionalidad, autonomía o calidad de vida.

El proceso de prescripción es complejo y está influido por múltiples factores y profesionales, propios y ajenos al sistema sanitario. Las fallas en este proceso deben ser analizadas bajo un enfoque sistémico que determine los puntos de riesgo, con el objetivo de mejorar la seguridad del paciente. Los medicamentos prescritos, mantenidos, cambiados o retirados deben ser un reflejo del proceso de constante cambio de metas en la atención.

Deprescripción y prescripción prudente son hermanas gemelas en este proceso. Habitualmente, primero debe aparecer la prescripción segura, por anteceder en el tiempo a la deprescripción y por llevar a la práctica el principio ineludible del *primmun non nocere*. Pero, en ocasiones, el paciente sufre un cambio brusco que modifica de manera sustancial sus expectativas y condiciones de vida, de manera que la deprescripción se impone como una prioridad y se anticipa en el tiempo al cambio en el estilo de prescripción de una forma más agresiva a más conservadora.[2]

¿Cómo mejoramos la seguridad del tratamiento farmacológico?

El acto de la prescripción suele ser el momento en el que se decide que un paciente sea tratado con un determinado medicamento. Esta decisión es importante y debe tener un objetivo terapéutico claro y explícito. Los tratamientos con medicamentos llevan aparejado el riesgo de que el paciente sufra un daño. Este riesgo se puede minimizar si en el momento de la prescripción se siguen una serie de principios que buscan mejorar la seguridad del tratamiento farmacológico.[3]

Los principios de la prescripción prudente fueron definidos por Gordon Schiff,[3] junto con un equipo multidisciplinar de médicos, farmacéuticos y educadores, en base a su experiencia y a la información recogida de estudios recientes que demuestran que los medicamentos se usan frecuentemente de forma inapropiada, que existe una sobreutilización de los mismos (a la vez que una infrautilización en otros casos) y que su empleo se asocia a reacciones adversas, hospitalizaciones y mortalidad relacionadas.

Estos principios apuestan por un cambio radical en actitudes y conductas relacionadas con la prescripción, de modo que el objetivo principal es promover una prescripción segura, orientada a evitar al paciente los riesgos y daños derivados del tratamiento farmacológico. Además, incluyen un nuevo constructo: el principio de prevención, un paradigma ecológico que fuerza el ejercicio de prevenir los potenciales efectos adversos, incluso cuando la relación causa-efecto no haya sido totalmente establecida científicamente. Los principios de prescripción prudente, recogidos en la Tabla 1, giran en torno a varias ideas claves.

En primer lugar, la necesidad de pensar más allá de los medicamentos poniendo en marcha estrategias de prevención e implementando un abordaje no farmacológico. Se aboga por la práctica de una prescripción más estratégica, mejorando los inicios de tratamiento, la selección del mismo y los cambios que se realicen, valorándolos en el contexto del régimen terapéutico completo del paciente.

Otro punto clave es conocer las reacciones adversas más frecuentes y graves de los medicamentos de uso habitual y estar alerta por si se producen. Es necesario informar al paciente de las reacciones adversas más importantes para que pueda reconocerlas y sepa cómo actuar. Además la aproximación a los nuevos medicamentos e indicaciones debe ser prudente y escéptica, manteniéndose al día empleando fuentes de información objetivas y de calidad.

Dentro de los principios de prescripción prudente es fundamental respetar las creencias y valores de los pacientes, trabajando con ellos para establecer objetivos comunes e implicarles en la toma de decisiones compartidas. Por último, como idea clave, cabe destacar la valoración de los resultados de los tratamientos a largo plazo, teniendo presente que un adecuado seguimiento del paciente puede mejorar los resultados de la farmacoterapia.

Tabla 1. Principios de la prescripción prudente.

Pensar más allá de los medicamentos	
Principio 1	Buscar en primera instancia alternativas no farmacológicas.
Principio 2	Tratar las causas subyacentes de los problemas de salud, en lugar de centrarse exclusivamente en los síntomas.
Principio 3	Buscar oportunidades para la prevención en lugar de centrarse exclusivamente en el tratamiento de síntomas o de la enfermedad avanzada.
Principio 4	Usar el tiempo como un test diagnóstico y terapéutico siempre que sea posible.
Practicar una prescripción más estratégica	
Principio 5	Emplear pocos medicamentos pero aprender a utilizarlos bien.
Principio 6	Evitar el cambio continuo de medicamentos sin tener motivos claros y concluyentes basados en la evidencia.
Principio 7	Ser escéptico con las "terapias individualizadas".
Principio 8	Siempre que sea posible, comenzar el tratamiento con un sólo fármaco.
Estar alerta ante la aparición de reacciones adversas a los medicamentos	
Principio 9	Ante un nuevo problema de salud, pensar en primer lugar si puede tratarse de una reacción adversa a un medicamento.
Principio 10	Informar a los pacientes sobre la posibilidad de que se produzcan reacciones adversas a sus medicamentos para que sean capaces de reconocerlas lo más pronto posible en caso de que aparezcan.
Principio 11	Tener presente que se puede estar promoviendo y tratando a la vez un síndrome de abstinencia.
Aproximarse a los nuevos medicamentos y a las nuevas indicaciones con prudencia y escepticismo	
Principio 12	Informarse de los nuevos medicamentos y de las nuevas indicaciones empleando fuentes fiables e independientes.
Principio 13	No tener prisa en utilizar medicamentos de reciente comercialización.
Principio 14	Asegurarse de que el medicamento mejora resultados clínicos orientados al paciente y no solo variables subrogadas orientadas a la enfermedad.
Principio 15	Evitar la ampliación o extrapolación de indicaciones.
Principio 16	No dejarse seducir por una elegante farmacología molecular o por el mecanismo de acción de los fármacos.
Principio 17	Tener precaución con la promoción selectiva de estudios.
Trabajar con los pacientes para establecer objetivos comunes	
Principio 18	No ceder de forma precipitada y poco crítica a las peticiones de los pacientes, especialmente con los medicamentos que conocen a través de la publicidad.
Principio 19	Ante un fracaso terapéutico, evitar prescribir más fármacos sin antes comprobar la adherencia del paciente al tratamiento.
Principio 20	Evitar utilizar medicamentos que el paciente ha tomado previamente sin obtener resultados o que causaron una reacción adversa.
Principio 21	Suspender el tratamiento con fármacos innecesarios o que no estén siendo efectivos.
Principio 22	Respetar las dudas expresadas por los pacientes sobre sus medicamentos.
Valorar los efectos del tratamiento de forma amplia y a largo plazo	
Principio 23	Pensar más allá de los beneficios a corto plazo de los fármacos y valorar los beneficios y riesgos a más largo plazo.
Principio 24	Buscar oportunidades para mejorar los sistemas de prescripción y hacer cambios que hagan más segura la prescripción y el uso de medicamentos.

Fuente: Modificado a partir de Schiff et al.[3]

¿Qué es y cómo llevar a cabo la deprescripción de medicamentos?

La polimedicación se ha convertido en un auténtico problema de salud pública.[4] Podríamos hablar largo y tendido sobre sus causas (Tabla 2) y sus consecuencias (Figura 1), pero solo nos centraremos en su abordaje.

Clásicamente se han descrito múltiples abordajes[5] para este complejo problema, pero la mayoría de estas intervenciones se caracterizan por ser externas, con un enfoque estrictamente "técnico". Esto pone de manifiesto la necesidad de un modelo diferente que contemple la situación funcional, clínica y sociofamiliar, centrado en mejorar los resultados desde la perspectiva del paciente (p.ej., calidad de vida) y que adapte el régimen terapéutico a la situación del paciente según su fragilidad, expectativa de vida, necesidades y perspectiva vital. En este contexto surge la idea y el concepto de deprescripción de medicamentos.[6]

La deprescripción de medicamentos es un proceso de desmontaje de la prescripción por medio de su análisis, mostrando sus contradicciones y ambigüedades. El fin es reconsiderar la prescripción desde el principio, comenzando desde el conocimiento del estado y situación del paciente hasta el diagnóstico de sus problemas de salud, hasta el final, la indicación de los medicamentos y su seguimiento posterior. Se trata de un proceso singular, continuo (prescripción-deprescripción), que necesariamente debe adaptarse a cada persona y circunstancia, y que concluye con la modificación de dosis, sustitución o eliminación de unos fármacos y la adición de otros que están infrautilizados.[7]

Tabla 2. Factores determinantes del uso múltiple e inadecuado de medicamentos y de aparición de efectos adversos debidos al uso de fármacos.

FACTORES ASOCIADOS AL PACIENTE Y SU ENTORNO SOCIOFAMILIAR
Factores biológicos:
Edad por encima de 75 años, mujeres
Morbilidad asociada:
Tener tres o más enfermedades crónicas, depresión, ansiedad, esquizofrenia, deterioro cognitivo, insuficiencia cardíaca, renal o hepática, enfermedades respiratorias, hipertensión arterial, enfermedades cardiovasculares, diabetes y síntomas digestivos.
Consumo de fármacos específicos:
Ansiolíticos, hipnóticos, antidepresivos, analgésicos, antiagregantes y espasmolíticos.
Factores psicológicos:
Pobre autopercepción de la salud y deficiente adaptación a la enfermedad.
Factores sociales:
Situación económica deficiente, bajo nivel educativo, vivir solo o con un cuidador discapacitado, viudedad, dependencia física, vivir en zonas rurales.
FACTORES ASOCIADOS AL FUNCIONAMIENTO DEL SISTEMA SANITARIO
Institucionalización.
Ingresos hospitalarios en el último año.
Interconsultas entre especialistas.
Múltiples agentes prescriptores.
Acudir a múltiples farmacias.
Discrepancias entre pacientes y facultativos sobre la historia farmacoterapéutica.
Adopción acrítica y sistemática de las guías clínicas basadas en la evidencia.

Fuente: Modificado de Gavilán-Moral et al.[7]

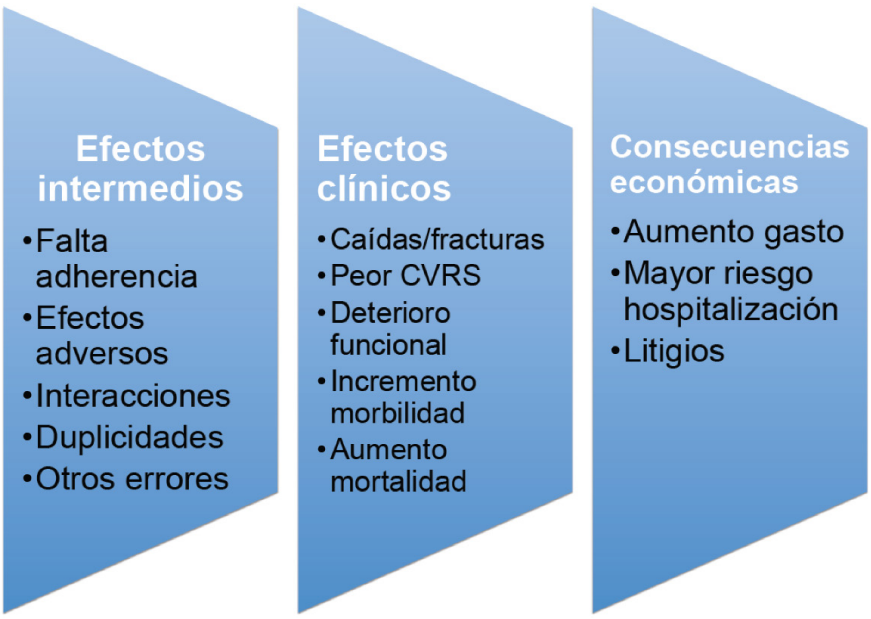

Figura 1. Consecuencias de la polimedicación y el uso inadecuado de medicación.
Fuente: Modificado de Gavilán et al.[6] CVRS: Calidad de Vida Relacionada con la Salud.

Los condicionantes para poder llevarla a cabo de una forma segura y aceptada son la disponibilidad de evidencias científicas (balance beneficios/riesgos), la funcionalidad física y social, calidad de vida, comorbilidad y preferencias del paciente, los factores farmacológicos de los medicamentos (farmacodinámica y farmacocinética, indicaciones y contraindicaciones, interacciones) y los no farmacológicos (contexto social y familiar, aspectos psicológicos, funcionamiento sistema sanitario, recursos de la comunidad, expectativas, relación médico-paciente).[8] Parte, pues, de un modelo diferente al considerar aspectos de la persona y de su entorno al mismo tiempo que los biomédicos. Aunque la deprescripción es un proceso dinámico, para su mejor comprensión se puede dividir en una serie de fases.

Lo primero es disponer de un listado fiel de la medicación que toma el paciente. En muchas ocasiones, lo que el médico cree que toma el paciente no siempre se corresponde con lo que éste dice tomar, siendo alto el grado de discrepancia entre ellos.[9]

El segundo paso sería redefinir el plan terapéutico: qué fármacos eliminar, sustituir o introducir y en cuáles modificar la dosis, en función de los condicionantes descritos en Tabla 3. Determinadas cuestiones podrían facilitar la identificación de fármacos susceptibles de ser deprescritos. Lo más urgente sería replantear la continuidad de medicamentos que estén produciendo efectos adversos o que potencialmente puedan ser dañinos.

Tabla 3. Condicionantes para el proceso de deprescripción de medicamentos.

Disponibilidad de evidencias científicas sobre el balance beneficios-riesgos.
Grado de funcionalidad física y social del paciente.
Metas de la atención sanitaria (curación, retrasar o cambiar la causa de la muerte, prevención de la morbilidad, mejora o mantenimiento de la funcionalidad o de la calidad de vida, alivio sintomático o prevención cuaternaria).
Expectativas de vida.
Nivel de calidad de vida.
Comorbilidad, grado de control de las enfermedades y estado general de salud.
Adherencia del paciente a los tratamientos y a los consejos de deprescripción.
Preferencias y expectativas del paciente sobre el deseo de abandonar, mantener o iniciar otros nuevos fármacos.
Factores farmacológicos de los medicamentos (farmacodinámica y farmacocinética, indicaciones y contraindicaciones, interacciones).
Factores no farmacológicos de los medicamentos (contexto social y familiar, aspectos psicológicos, funcionamiento sistema sanitario, recursos de la comunidad, relación médico-paciente).

Fuente: Modificado de Gavilán-Moral et al.[6]

Existen en la literatura multitud de métodos para identificar medicamentos inapropiados en los ancianos y que son susceptibles de ser eliminados: los más usados son los de Beers y los STOPP.[10] Sin embargo, estos métodos no valoran las características particulares de cada paciente, obviando además los aspectos clínicos y psicosociales, por lo que no siempre son criterios útiles para adecuar la medicación en los ancianos frágiles, cuya característica principal es la heterogeneidad. Los fármacos cuya utilidad ha sido superada al desaparecer la enfermedad que motivó su introducción, así como los que el paciente se resiste a tomar, podrían ser los siguientes en ser deprescritos.

En cualquier caso, para tomar decisiones aceptadas y adaptadas a cada paciente sobre cómo modificar el régimen terapéutico, es preciso valorar a cada persona y todo lo que a ésta rodea. Las decisiones sobre cómo llevar a cabo la deprescripción dependen básicamente de resolver las tensiones y contradicciones entre dos pares de interrogantes, como son: (1) ¿es la expectativa de vida de esta persona (determinada por el pronóstico y la evolución natural de la enfermedad) mayor que el tiempo que tarda el medicamento en obtener un beneficio clínico relevante?, y (2) ¿son congruentes las metas de la atención sanitaria (curación, cuidados, prevención primaria, secundaria, terciaria o cuaternaria), determinados por la valoración de grado de comorbilidad, el estado funcional y la calidad de vida, con los objetivos de la prescripción-deprescripción (por ejemplo, pasar de un escenario de prevención a largo plazo a tratamientos meramente sintomáticos)?[11] También es preciso evaluar el grado de adherencia a los tratamientos, los deseos del paciente de abandonar, mantener o iniciar otros nuevos fármacos, sus expectativas y experiencias previas, así como su contexto sociofamiliar.

La última fase, la de seguimiento clínico y farmacoterapéutico, tiene como misión principal detectar y evitar las complicaciones derivadas de la deprescripción, como la reaparición o agravamiento de la enfermedad de base, y evaluar el grado de adhesión y aceptación de las recomendaciones. Para incrementar el grado de confianza del paciente en el proceso de deprescripción es fundamental que dichos cambios se realicen de forma gradual y que el seguimiento sea estrecho, sobre todo al comienzo (que es cuando suelen aparecer los principales problemas), manteniendo una actitud de "puerta abierta", involucrando activamente al paciente o su cuidador en las decisiones y aclarando que ningún cambio es irreversible.[12]

Se trataría pues de reconsiderar en un paciente concreto su régimen terapéutico, discontinuando lo innecesario y añadiendo lo preciso de una forma individualizada, según el estado del paciente y su expectativa de vida. Suele apoyarse en el uso de algoritmos que facilitan la toma de decisiones,[13] basándose en criterios de necesidad (confrontación de la indicación del medicamento con las necesidades clínicas del paciente y las metas de la atención sanitaria) y de efectividad-seguridad (balance beneficios/riesgos), al tiempo que tienen en consideración la expectativa de vida y el tiempo que el medicamento tarda en alcanzar su beneficio.

La deprescripción típicamente es un proceso que se adapta y justifica de una forma más adecuada y aceptada en los pacientes que se encuentran en una situación terminal. Por extensión y por los mismos motivos, puede ser aplicable a ancianos frágiles, cuya expectativa de vida es corta en la mayoría de los casos.[14] Sin embargo, si consideramos que la deprescripción debe y puede ser un proceso que acompañe siempre a la prescripción, cualquier momento puede ser bueno, sobre todo cuando se van acumulando medicamentos en el régimen terapéutico, ante cambios clínicos relevantes o situaciones vitales que modifiquen la percepción y actitud de la persona ante los medicamentos.[15]

¿Qué riesgos, barreras y amenazas contempla?

En el proceso de deprescripción pueden aparecer riesgos, como la aparición de efectos indeseables o agravamiento de procesos de base. Así mismo existen múltiples barreras, tanto del sistema sanitario y la sociedad, como del médico y su relación con el paciente, junto con sus miedos y percepciones. En la Figura 2 se reflejan las diferentes actitudes hacia la deprescripción.

Si el paciente no está de acuerdo con los cambios propuestos en su medicación o tiene miedo a las consecuencias, puede hacer fracasar ese intento de mejora en la adecuación de su medicación. La influencia de los profesionales sanitarios, la familia, los amigos y los medios de comunicación son determinantes en el cese de la medicación que pueden actuar tanto favoreciendo como limitando el proceso de deprescripción, y resulta importante identificar dichos factores.[16]

Para asegurar que la deprescripción es aceptada por el paciente y no conduce a riesgos innecesarios también es preciso tener un conocimiento amplio de los medicamentos y del paciente y su contexto (Tabla 4). Saber manejar bien los fármacos, sus propiedades, precauciones de uso y los problemas que pudiera acarrear su discontinuación es imprescindible. Sin embargo, existen pocos estudios que evalúen la seguridad de la retirada de medicamentos, por lo que el *ars medica* y la prudencia son los que guían habitualmente la práctica clínica. Conocer el significado que la persona otorga al medicamento y su experiencia del proceso es primordial, ya que en muchas ocasiones descubrimos que la falta de adhesión al proceso de deprescripción esconde miedos y vivencias desagradables.[17] Todo ello nos muestra la necesidad de un proceso de deprescripción centrado en el paciente, involucrándolo y educándolo sobre los riesgos y beneficios de la medicación, disipando los temores sobre la cesación de medicamentos, convirtiéndose en un proceso de apoyo, seguimiento y supervisión.

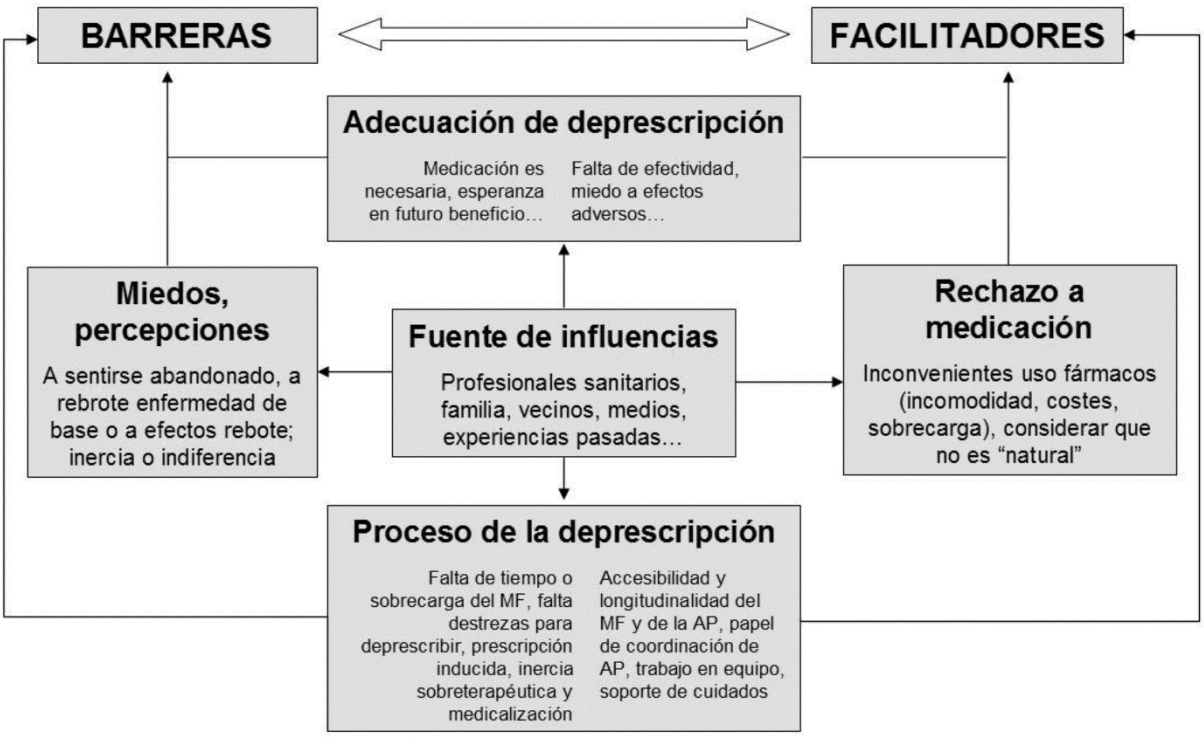

Figura 2. Actitudes hacia la deprescripción. MF: Médico de Familia; AP: Atención Primaria. Fuente: Modificado de Reeve et al.[16]

Tabla 4. Aspectos contextuales a tener en cuenta a la hora de tomar decisiones con el paciente sobre intervenciones médicas.

Habilidades cognitivas	¿Está el paciente capacitado para tomar los medicamentos correctamente y para entender sus propiedades básicas?
Estado emocional	¿Está el paciente pasando por una etapa de angustia que le impida tomar decisiones?
Creencias culturales	¿Qué significado social se le atribuye en su entorno al medicamento?
Creencias espirituales	¿Hay algún impedimento religioso en tomar la medicación adecuadamente (por ejemplo, en un paciente musulmán que debe tomar el fármaco con el desayuno y nos encontramos en el mes del Ramadán)?
Accesibilidad a los cuidados sanitarios	¿Tiene problemas de movilidad que le impidan ir al centro de salud a monitorizar el efecto de la deprescripción? ¿Está su médico disponible para visitas domiciliarias?
Soporte social	Ahora que el paciente se encuentra frágil, ¿quién o quiénes cuidan de él?
Responsabilidades de las cuidadoras	¿Se hacen cargo de rellenar su pastillero y de administrar los medicamentos a la hora indicada?
Actitudes antes la enfermedad	¿Por qué se resiste a tomar estas pastillas? ¿Se siento enfermo?
Relación con los profesionales sanitarios	¿Siente el paciente confianza en los profesionales y cercanía suficientes como para consultar en el caso de que la deprescripción fracase?
Situación económica del paciente	¿Puede costearse el paciente sus medicinas?

Fuente: Modificado de Gavilán-Moral et al.[6]

¿Qué papel tiene la Atención Primaria en la prescripción prudente y la deprescripción?

Atendiendo a los principios de Atención primaria, reflejados en la Tabla 5, el médico de familia mantiene un papel primordial en la atención prudente al paciente polimedicado. Su labor, llevada a cabo sobre el terreno, en el día a día, de forma sistematizada, basada en una relación clínica de confianza, en coordinación con otros profesionales y, en ocasiones, más intuitiva que racionalmente, tiene potencialmente más posibilidades de ser aceptada y compartida por el paciente que cualquier otra intervención sanitaria. Para potencializar este papel sería importante formar a nuestros residentes en competencias para una mejor prescripción de medicamentos, siendo necesario desarrollar habilidades de comunicación de los residentes de medicina de familia.[18]

Tabla 5. Características de la Atención Primaria que facilitan la atención a la persona mayor polimedicada.

Accesibilidad
La accesibilidad mejora la confianza del paciente en el médico y favorece la adhesión a nuestras recomendaciones sobre deprescripción de medicamentos, al reducir la incertidumbre que produce la retirada de ciertos medicamentos
Longitudinalidad
La continuidad en los cuidados por la misma persona a lo largo del tiempo favorece que se pueda monitorizar los efectos, positivos o negativos, del uso de medicamentos, así como los derivados de su discontinuación.
Trabajo en equipo
La labor conjunta y centrípeta (con el paciente en el centro de la atención) de múltiples profesionales (otros médicos, enfermeras, trabajadores sociales, farmacéuticos) y personas (cuidadores informales y formales) es necesaria y posible.
Coordinación farmacoterapéutica
El médico de familia debe ser el coordinador de los tratamientos farmacológicos del paciente, tanto los que son recomendados por los especialistas del segundo nivel asistencial como los prescritos en urgencias o los de venta libre. Conciliar la medicación es una labor genuina del médico de familia.
Conocimiento de los fármacos
Conocer el perfil farmacológico de los medicamentos de uso preferente en atención primaria, sus efectos adversos más frecuentes y sus limitaciones, es imprescindible. Usar pocos medicamentos pero de forma adecuada facilita este conocimiento y contribuye a optimizar el régimen terapéutico.
Conocimiento de las personas
El médico de familia está en un lugar privilegiado para conocer los aspectos biomédicos y psicológicos de las personas a las que atiende, así como su contexto familiar y social.

Fuente: Modificado de Gavilán-Moral et al.[6]

Conclusiones

Un abordaje sistémico del problema de la polimedicación y el uso inadecuado de medicamentos nos lleva a entender estos problemas como un fallo de sistema que debe ser corregido. Es prevención cuaternaria la evitación del daño que causa la actividad del sistema sanitario, especialmente la evitación de la actividad innecesaria e inapropiada, la evitación de actividades sin eficacia y/o efectividad, y la evitación de la medicalización.

En la práctica, hacer prevención cuaternaria es utilizar servicios y tecnologías sólo cuando es probable que los beneficios superen a los daños. El conocimiento del paciente, la comunicación con él y el conocimiento de las evidencias científicas disponibles, ajena a manipulaciones industriales, son herramientas fundamentales para evitar sobremedicalizar o sobretratar a la población.[18,19]

Para conseguir que el balance entre los beneficios y los riesgos sea favorable para el paciente, prescribir de una forma segura y deprescribir en el momento adecuado se convierte en una necesidad en el día de la actividad sanitaria, especialmente en el ámbito de la atención primaria. Las potencialidades de la medicina de familia y las características de la atención primaria nos sitúan en un lugar privilegiado para afrontar este reto.

Referencias

1. Starfield B, Hyde J, Gérvas J, Heath I. The concept of prevention: a good idea gone astray? J Epidemiol Community Health. 2008;62(7):580-583. http://dx.doi.org/10.1136/jech.2007.071027. PMid:18559439.
2. Gavilán E, Jimenez L, Villafaina L. Deprescripción de medicamentos en ancianos: paradojas y contradicciones. FMC. 2013;20(1):22-26.
3. Schiff GD, Galanter WL, Duhig J, Lodolce AE, Koronkowski MJ, Lambert BL. Principles of conservative prescribing. Arch Intern Med. 2011;171(16):1433-1440. http://dx.doi.org/10.1001/archinternmed.2011.256. PMid:21670331.
4. Wise J. Polypharmacy: a necessary evil. BMJ. 2013;347:f7033. http://dx.doi.org/10.1136/bmj.f7033. PMid:24286985.
5. Kaur S, Mitchell G, Vitetta L, Roberts MS. Interventions that can reduce inappropriate prescribing in the elderly: a systematic review. Drugs Aging. 2009;26(12):1013-1028. http://dx.doi.org/10.2165/11318890-000000000-00000. PMid:19929029.
6. Gavilán E, Villafaina A, Jimenez L. Polimedicación en personas mayores. AMF. 2012;8:426-433.
7. Gavilán-Moral E, Villafaina-Barroso A, Jiménez-de Gracia L, Gómez Santana MC. Ancianos frágiles polimedicados: ¿es la deprescripción de medicamentos la salida? Rev Esp Geriatr Gerontol. 2012;47(4):162-167. http://dx.doi.org/10.1016/j.regg.2012.01.003. PMid:22683145.
8. Barsky AJ. Nonpharmacologic aspects of medication. Arch Intern Med. 1983;143(8):1544-1548. http://dx.doi.org/10.1001/archinte.1983.00350080050013. PMid:6870436.
9. Bikowski RM, Ripsin CM, Lorraine VL. Physician-patient congruence regarding medication regimens. J Am Geriatr Soc. 2001;49(10):1353-1357. http://dx.doi.org/10.1046/j.1532-5415.2001.49265.x. PMid:11890495.
10. Gallagher P, O'Mahony D. STOPP (Screening Tool of Older Persons' potentially inappropriate Prescriptions): application to acutely ill elderly patients and comparison with Beers' criteria. Age Ageing. 2008;37(6):673-679. http://dx.doi.org/10.1093/ageing/afn197. PMid:18829684.
11. Holmes HM, Hayley DC, Alexander GC, Sachs GA. Reconsidering medication appropriateness for patients late in life. Arch Intern Med. 2006;166(6):605-609. http://dx.doi.org/10.1001/archinte.166.6.605. PMid:16567597.
12. Leydon GM, Rodgers L, Kendrick T. A qualitative study of patient views on discontinuing long-term selective serotonin reuptake inhibitors. Fam Pract. 2007;24(6):570-575. http://dx.doi.org/10.1093/fampra/cmm069. PMid:18032401.
13. Garfinkel D, Mangin D. Feasibility study of a systematic approach for discontinuation of multiple medications in older adults. Arch Intern Med. 2010;170(18):1648-1654. http://dx.doi.org/10.1001/archinternmed.2010.355. PMid:20937924.
14. Carey EC, Covinsky KE, Lui LY, Eng C, Sands LP, Walter LC. Prediction of mortality in community-living frail elderly people with long-term care needs. J Am Geriatr Soc. 2008;56(1):68-75. http://dx.doi.org/10.1111/j.1532-5415.2007.01496.x. PMid:18031487.
15. Moen J, Bohm A, Tillenius T, Antonov K, Nilsson JL, Ring L. "I don't know how many of these [medicines] are necessary." - a focus group study among elderly users of multiple medicines. Patient Educ Couns. 2009;74(2):135-141. http://dx.doi.org/10.1016/j.pec.2008.08.019. PMid:18845412.
16. Reeve E, To J, Hendrix I, Shakib S, Roberts MS, Wiese MD. Patient barriers to and enablers of deprescribing: a systematic review. Drugs Aging. 2013;30(10):793-807. http://dx.doi.org/10.1007/s40266-013-0106-8. PMid:23912674.
17. Anthierens S, Tansens A, Petrovic M, Christiaens T. Qualitative insights into general practitioners views on polypharmacy. BMC Fam Pract. 2010;11(1):65. http://dx.doi.org/10.1186/1471-2296-11-65. PMid:20840795.
18. Fournier JP, Escourrou B, Dupouy J, Bismuth M, Birebent J, Simmons R, et al. Identifying competencies required for medication prescribing for general practice residents: a nominal group technique study. BMC Fam Pract. 2014;15(1):139. http://dx.doi.org/10.1186/1471-2296-15-139. PMid:25084813.
19. Gérvas J. Prevención cuaternaria: teoría y práctica en la consulta, la enseñanza y la política sanitaria, y su relación con la equidad y el coste [Internet]. In: Equipo CESCA. 2011 [última consulta el ano mês dia]. Disponible en: http://equipocesca.org/prevencion-cuaternaria-teoria-y-practica-en-la-consulta-la-ensenanza-y-la-politica-sanitaria-y-su-relacion-con-la-equidad-y-el-coste/2011
20. Jamoulle M, Gomes LF. Prevenção quaternária e limites em medicina. Rev Bras Med Fam Comunidade. 2013;9(31):186-191. http://dx.doi.org/10.5712/rbmfc9(31)867.

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Violência obstétrica e prevenção quaternária: o que é e o que fazer

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Resumo

O objetivo deste artigo é justificar a necessidade de prevenção quaternária frente à 'violência obstétrica' (VO), expressão que agrupa todas as formas de violência e danos originados no cuidado obstétrico profissional, bem como discutir estratégias e ações de prevenção quaternária a serem realizadas pelos médicos de família e comunidade (MFC), pelas equipes de atenção primária à saúde (APS) e suas entidades associativas. A prevalência de violência obstétrica no Brasil é alta: ¼ das mulheres relata terem sofrido maus-tratos durante o atendimento ao parto, além de excesso de intervenções desnecessárias (como venóclise, ocitocina de rotina e episiotomia) e privação de uma assistência baseada em boas práticas, tais como parto em posição verticalizada, possibilidade de se alimentar e de se movimentar durante o trabalho de parto e presença de um acompanhante. Destaca-se o excesso crônico de cesarianas (55,6% do total de nascimentos) no Brasil, mais prevalente no setor privado (85%) do que no público (40%). Ações de prevenção quaternária dirigidas à VO são propostas e discutidas, como: (1) a elaboração (individual e coletiva) de planos de parto orientados pelas equipes de APS no pré-natal (para os quais se oferece um roteiro); (2) a introdução de outros profissionais qualificados no cuidado ao parto de risco habitual (incluindo MFC capacitados); e (3) a participação dos MFC e profissionais da APS e suas associações no movimento social e político pela "humanização" do parto, com apoio às mudanças nas maternidades já em funcionamento e às novas iniciativas de serviços de cuidado ao parto.

Palavras-chave:
Violência contra a Mulher
Doença Iatrogênica
Prevenção Quaternária
Autonomia Pessoal
Parto Obstétrico

Abstract

This article aims to justify the necessity of quaternary prevention in face of 'obstetric violence' (OV), expression that comprises all forms of harms and violence originated by professional obstetric care, as well as to discuss actions and strategies of quaternary prevention to be taken by family physicians, primary care providers and their professional associations. The prevalence of obstetric violence in Brazil is high: ¼ of women report that they have suffered abusive treatment during birth delivery, besides the excess of unnecessary interventions (i.e. venoclisis, routine oxitocin, and episiotomy), consequently denying them a best practice care such as vertical position, allowing the pregnant woman to freely move, eat, and have a companion during labour process. There is an excess of caesareans (55.6% of the total births) in Brazil, most prevalent on the private sector (85%) than in the public health system (40%). We propose and discuss actions of quaternary prevention against obstetric violence: (1) the elaboration (individual and collective) of birth plans oriented by primary care teams during antenatal care (for which we suggest a guideline); (2) the introduction of other qualified professionals on the caring for low risk birth (including qualified family physicians); and (3) the participation of family physicians and other primary care providers and their associations on the social and political movement for "humanization of birth", supporting the changes on currently functioning maternity wards and new initiatives on birth delivery care.

Keywords:
Violence Against Women
Iatrogenic Disease
Quaternary Prevention
Personal Autonomy
Delivery, Obstetric

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Resumen

El objetivo de este artículo es justificar la necesidad de la prevención cuaternaria frente a la 'violencia obstétrica' (VO), expresión que agrupa a todas las formas de violencia y los daños derivados de la atención obstétrica profesional, así como para discutir las estrategias y acciones de prevención cuaternaria que podrían ser adoptadas por los médicos de Familia y comunidad (MFC), por los equipos de atención primaria de salud (APS) y sus entidades asociativas. La prevalencia de violencia obstétrica en Brasil es alta: ¼ de las mujeres informó haber sufrido malos tratos durante el trabajo de parto, así como excesivas intervenciones innecesarias (como las venoclisis, la oxitocina de rutina y la episiotomía) y la privación de una asistencia basada en las mejores prácticas, tales como el parto en una posición vertical, la posibilidad de alimentarse y desplazarse durante el parto y la presencia de un acompañante. Destacamos el exceso crónico de cesáreas (55,6% de todos los nacimientos) en Brasil, más frecuente en el sector privado (85%) que en el sector público (40%). Acciones de prevención cuaternaria dirigidas a la violencia obstétrica son propuestas y discutidas, tales como: (1) la preparación (individual y colectiva) de los planes de parto guiados por los equipos de APS en la atención prenatal (que prevé un plan de trabajo); (2) la introducción de otros profesionales calificados en el cuidado del parto de bajo riesgo (incluidos MFC entrenados); y (3) la participación de médicos familiares y profesionales de la APS y sus asociaciones en el movimiento social y político para la "humanización" del parto, con soporte para los cambios en las maternidades en funcionamiento y las nuevas iniciativas de los servicios de atención al parto.

Palabras clave:
Violencia contra la Mujer
Enfermedad Iatrogénica
Prevención Cuaternaria
Autonomía Personal
Parto Obstétrico

Introdução

> *Adelir, 29 anos, G3P0C2A0, casada, em abril de 2014 estava no final da gestação e desejava parto normal. Fez o pré-natal no centro de saúde, mas abandonou o seguimento com 39 semanas por medo de ser induzida a uma cesariana. Com 41 semanas de gestação, foi ao hospital para uma avaliação de vitalidade fetal e iniciando o trabalho de parto. Foi realizado um ultrassom que mostrou perfeitas condições de vitalidade fetal e feto pélvico. A médica no hospital indicou cesariana, por duas cirurgias anteriores e feto pélvico. Adelir recusou, assinou termo de responsabilidade e voltou para casa, aguardar o avanço de seu trabalho de parto. Foi surpreendida às 01:30h por policiais que a obrigaram a ir ao hospital realizar a cesariana, enviados por um juiz, acionado por um promotor, requisitado pelo hospital onde tinha sido atendida. No hospital, o marido é impedido de acompanhar a cesariana. Não houve intercorrências e o bebê nasceu com boa vitalidade .*[1,2]

A expressão "violência obstétrica" (VO) é utilizada para descrever e agrupar diversas formas de violência (e danos) durante o cuidado obstétrico profissional. Inclui maus tratos físicos, psicológicos, e verbais, assim como procedimentos desnecessários e danosos – episiotomias, restrição ao leito no pré-parto, clister, tricotomia e ocitocina (quase) de rotina, ausência de acompanhante – dentre os quais destaca-se o excesso de cesarianas, crescente no Brasil há décadas, apesar de algumas iniciativas governamentais a respeito.[3] A história de Adelir, por exemplo, sintetizada acima, apesar de circular na mídia em vários países, não gerou manifestações sociais ou de entidades médicas brasileiras. Apenas ativistas da luta pela 'humanização' do parto criticaram a violência, e não se tem informação de denúncias realizadas junto à justiça comum ou ao Conselho Regional de Medicina.

Recente pesquisa nacional deu visibilidade ao problema: cerca de 1/4 das mulheres que tinham parido, e também aproximadamente metade das que abortaram, relataram alguma forma de VO.[4] Esses fatos são a ponta de um iceberg com o qual a sociedade e os profissionais da atenção primária à saúde (APS) brasileira têm convivido passivamente. Sendo a prevenção quaternária a atitude e a ação de identificação e evitação de risco de hipermedicalização, intervenções desnecessárias e danos,[5] ela deve considerar a VO em seu escopo de saberes, valores e práticas.

O objetivo deste artigo é justificar a necessidade de prevenção quaternária frente à 'violência obstétrica' (VO), expressão que agrupa todas as formas de violência e danos originados no cuidado obstétrico profissional, bem como discutir estratégias e ações de prevenção quaternária a serem realizadas pelos médicos de família e comunidade (MFC), pelas equipes de atenção primária à saúde (APS) e suas entidades associativas. A VO diz respeito a vários profissionais. No Brasil, a quase totalidade dos partos são hospitalares (em 2012, 98% dos 2.905.789 nascimentos com nascidos vivos ocorreram em hospital[6]), atendidos em sua maioria por médicos obstetras. Porém, este artigo é voltado aos profissionais da atenção primária à saúde (especialmente aos MFC), responsáveis pelo pré-natal de grande parte das gestantes do país. O texto está estruturado em três partes: a primeira trata da VO; a segunda aborda intervenções prejudiciais na parturição e o excesso de cesarianas no Brasil; e a terceira finaliza com ações que os MFC e demais profissionais da APS poderiam realizar como estratégia para a prevenção quaternária.

Violência obstétrica

Na última década, várias definições de violência obstétrica têm sido propostas. Uma delas é a da primeira legislação latino-americana tipificando esta forma de violência, aprovada na Venezuela:

> *Qualquer conduta, ato ou omissão por profissional de saúde, tanto em público como privado, que direta ou indiretamente leva à apropriação indevida dos processos corporais e reprodutivos das mulheres, e se expressa em tratamento desumano, no abuso da medicalização e na patologização dos processos naturais, levando à perda da autonomia e da capacidade de decidir livremente sobre seu corpo e sexualidade, impactando negativamente a qualidade de vida de mulheres* (p.30).[7]

Várias expressões já foram usadas para designar o fenômeno, como "violência no parto", "abuso obstétrico", "desrespeito e abuso",[8] "violência de gênero no parto e aborto", "violência institucional de gênero no parto e aborto",[9] "assistência desumana/desumanizada", "crueldade no parto",[10] "violações dos Direitos Humanos das mulheres no parto".[11] Dentre as várias conceituações possíveis, a proposta por Bowser e Hill[8] elenca as principais categorias de desrespeito e abuso nas instituições de saúde, associando-as aos direitos correspondentes, sintetizadas no Quadro 1.

O Quadro 1 demonstra a existência de uma superposição entre VO e dano iatrogênico no parto. Uma forma pragmática de visibilizar esses danos é o "termômetro de segurança da assistência materna", recentemente criado pelo *National Health Service (NHS)* inglês,[12] que registra danos medidos individualmente em uma dada população (Quadro 2).

Estes indicadores podem ser usados pela vigilância sanitária, para medir o resultado da assistência em um determinado serviço ou região de saúde. No contexto da saúde materna e perinatal, a prática da prevenção quaternária é indissociável do cuidado baseado em evidências científicas, da humanização do parto e do combate à VO, que deve ser encarada como questão prioritária, "pois representa a desumanização do cuidar e a perpetuação do ciclo de opressão feminina pelo próprio sistema de saúde" (p. S12).[13]

Quadro 1. Categorias de violência obstétrica, direitos e exemplos.

Categoria	Direito correspondente	Situações exemplares
Abuso físico.	Direito a estar livre de tratamento prejudicial e de maus tratos.	Procedimentos sem justificativa clínica e intervenções "didáticas", como toques vaginais dolorosos e repetitivos, cesáreas e episiotomias desnecessárias. Imobilização física em posições dolorosas, prática da episiotomia e outras intervenções sem anestesia, sob a crença de que a paciente "já está sentindo dor mesmo".
Imposição de intervenções não consentidas. Intervenções aceitas com base em informações parciais ou distorcidas.	Direito à informação, ao consentimento informado e à recusa, e respeito pelas escolhas e preferências, incluindo acompanhantes durante o atendimento de maternidade.	Mulheres que verbalmente e por escrito, não autorizam uma episiotomia, mas esta intervenção é feita à revelia da sua desautorização. Recusa à aceitação de planos de parto. Indução à cesárea por motivos duvidosos, tais como superestimação dos riscos para o bebê (circular de cordão, "pós-datismo" na 40ª semana, etc.) ou para a mãe (cesárea para "prevenir danos sexuais", etc.). Não informação dos danos potenciais de longo prazo dos modos de nascer (aumento de doenças crônicas nos nascidos, por exemplo).
Cuidado não confidencial ou privativo.	Confidencialidade e privacidade.	Maternidades mantêm enfermarias de trabalho de parto coletivas, muitas vezes sem sequer um biombo separando os leitos, e ainda usam a falta de privacidade como justificativa para desrespeitar o direito a acompanhantes.
Cuidado indigno e abuso verbal.	Dignidade e respeito.	Formas de comunicação desrespeitosas com as mulheres, subestimando e ridicularizando sua dor, desmoralizando seus pedidos de ajuda. Humilhações de caráter sexual, do tipo "quando você fez você achou bom, agora está aí chorando".
Discriminação baseada em certos atributos.	Igualdade, não discriminação, equidade da atenção.	Tratamento diferencial com base em atributos considerados positivos (casadas, com gravidez planejadas, adultas, brancas, mais escolarizadas, de classe média, saudáveis, etc.) depreciando as que têm atributos considerados negativos (pobres, não-escolarizadas, mais jovens, negras, e as que questionam ordens médicas).
Abandono, negligência ou recusa de assistência.	Direito ao cuidado à saúde em tempo oportuno e ao mais alto nível possível de saúde.	Estudos mostram o abandono, a negligência ou recusa de assistência às mulheres que são percebidas como muito queixosas, descompensadas ou demandantes, e nos casos de assistência ao aborto incompleto, frequentemente são deixadas por último, com riscos importantes à sua segurança física.
Detenção nos serviços.	Liberdade, autonomia.	Pacientes podem ficar retidas até que saldem as dívidas com os serviços. No Brasil e em outros países, começam a ocorrer detenções policiais, como no caso narrado no início deste artigo.

Fonte: elaborado a partir de Bowser e Hill.[8]

Quadro 2. Termômetro de segurança da assistência materna do NHS.

Dano perineal (laceração e episiotomia)
Trauma abdominal (cesariana ou laparotomia)
Hemorragia pós-parto
Infecção (trato urinário, mastite, ferida perineal, de cesária, laparotomia ou uterina)
Desfechos do bebê: apgar <7 (5º min.)
Transferência do serviço ou internação em UTI neonatal
Segurança emocional da mãe (separação mãe-bebê, ser deixada sozinha pela equipe quando preocupada, preocupação sobre segurança durante assistência levada em consideração, dúvida que não foi sanada)

Fonte: Safety Thermometer, National Health Service.[12]

Excesso de intervenções no parto e cesáreas no Brasil

Em 1996, a publicação da OMS "Assistência ao parto normal: um guia prático"[14] classificou as intervenções durante o parto conforme evidências científicas, o que foi amplamente divulgado no Brasil, em 2001.[15] As práticas claramente prejudiciais ou ineficazes e que devem ser eliminadas estão sumarizadas no Quadro 3.

Quadro 3. Práticas prejudiciais e motivos associados.

Práticas prejudiciais ou ineficazes	Motivo
Infusão intravenosa de rotina no trabalho de parto/ Cateterização venosa profilática de rotina.[13]	Diminui a mobilidade, "prende" a parturiente ao leito.[16] Aumenta desconforto.[16] Solução glicosada pode aumentar a possibilidade de hipoglicemia neonatal.[16]
Uso indiscriminado de ocitocina.	Pode levar a um aumento da atividade uterina com conseqüente hipóxia fetal.[15] Ocitocina isoladamente não diminui a possibilidade de cesariana em mulheres com analgesia peridural.[17]
Amniotomia para acelerar trabalho de parto.	Amniotomia isolada parece diminuir um pouco a duração do trabalho de parto, mas aumenta a possibilidade de cesariana.[18]
Posição de litotomia (posição de exame ginecológico).	Posições verticalizadas reduzem o tempo de trabalho de parto e não estão associadas a aumento de intervenções ou efeitos negativos[19] São bem descritos os benefícios da posição verticalizada para mulher e feto.[19,20]
Episiotomia.	Aumenta o risco de laceração perineal de terceiro e quarto graus, de infecção e de hemorragia, sem diminuir complicações a longo prazo de dor e incontinência urinária e fecal.[21] Seu uso rotineiro vir sendo constantemente desestimulado.[22]
Manobra de Kristeller.	Associada a lacerações perineais graves e internação em UTI neonatal para o bebê.[23] Há recomendação de que seja evitada.[24]
Restrição alimentar e hídrica.	Prolongada pode levar a desconforto da parturiente, há recomendação de que as mulheres tenham liberdade para ingerir líquidos e outros alimentos leves durante o trabalho de parto.[25]
Restrição aos movimentos corporais.	Dificulta lidar com a dor.[26] Aumenta a chance de necessidade de analgesia.[26] Aumenta a chance de cesariana.[26] Aumenta a duração do trabalho de parto.[26]
Impedimento de acompanhante.	Presença de acompanhantes é altamente protetora contra todas as formas de violência durante a internação hospitalar.[27]

Fonte: elaborado pelos autores a partir das fontes referenciadas na tabela.

A recente pesquisa Nascer no Brasil,[28] contemplando uma amostra representativa dos partos hospitalares de todo o país (266 maternidades públicas e privadas com 500 ou mais partos anuais em 191 municípios) entrevistou mais de 23 mil mulheres e mostrou que as práticas prejudiciais/ineficazes acima mencionadas ainda são rotina no país. Entre as entrevistadas, 70% foram rotineiramente puncionadas, 40% receberam ocitocina e realizou-se amniotomia em 40%. Entre as mulheres que pariram (48% da amostra), 92% estavam em posição de litotomia (deitadas), 56% foram submetidas a epsiotomia,

37% receberam a manobra de Kristeller (aplicação de pressão na parte superior do útero durante o período expulsivo). Somente 26% puderam se alimentar, 46% puderam se movimentar durante o trabalho de parto e 18,7% contaram com acompanhante. Apenas 5% tiveram partos sem nenhuma intervenção. Não são necessários comentários adicionais para enfatizar a magnitude da VO no país.

Cesariana: quando esta se torna uma violência obstétrica

A cirurgia cesariana, quando necessária, salva vidas e diminui morbidades para a mulher e o concepto.[29] Todavia, esse efeito positivo não se mantém a partir de certa proporção de cesarianas, mesmo em populações com acesso a todos os cuidados necessários intra e pós-cirúrgicos. Em 1985, a Organização Mundial da Saúde (OMS) definiu que o índice máximo de cesarianas deve ser de 15%.[30] Embora não haja consenso sobre um número aceitável ou ideal, é injustificável clinicamente uma taxa global superior a 10-15%.[31]

A melhoria de técnicas cirúrgicas, anestésicas, de antibioticoterapia e de cuidados intensivos criaria uma expectativa de que eventuais efeitos adversos e complicações estivessem diminuindo. No entanto, os efeitos adversos da cesariana são evidentes e persistentes e estudos demonstram que o aumento nas taxas de cesariana isoladamente não obteve efeito na redução da mortalidade perinatal.[32] O decréscimo na mortalidade perinatal se deve, possivelmente, a avanços no cuidado pré-natal, uso de corticosteróides para maturidade pulmonar, melhorias no cuidado intensivo ao recém-nascido, não podendo ser explicado apenas pelo aumento de cesarianas.[32]

Nas cesariadas, em relação às mulheres que tiveram partos normais, há aumento de mortalidade, morbidade severa, internação em UTI, uso de antibióticos, necessidade de transfusão, histerectomia e tempo de permanência no hospital.[33] A possibilidade de complicações se torna mais evidente em gestações futuras, com um aumento do risco de placentação anômala e suas graves conseqüências.[34] Em bebês que nascem de cesariana há maior risco de prematuridade, mortalidade neonatal, admissão em UTI neonatal e uso de ventilação mecânica.[32,33,35,36] A prematuridade iatrogênica e o nascimento eletivo de bebês antes de 39 semanas causa aumento de internações em UTI neonatal e do número de óbitos.[36,37] No Brasil, estudos mostraram a relação entre o aumento de conceptos prematuros e de baixo peso com as taxas aumentadas de cesariana.[38,39]

As evidências da importância fundamental da gravidez, parto e nascimento na promoção da saúde na vida adulta vem se avolumando. Pesquisas epidemiológicas mostram que, em comparação com os nascidos de parto vaginal, os nascidos de cesárea têm um risco aumentado de sobrepeso e obesidade, diabetes tipo 1, asma, alergias digestivas e de pele, entre outros problemas relacionados às características da imunidade e do metabolismo.[40] Uma revisão sistemática destes estudos confirma estas tendências, mesmo controlando os potenciais fatores de confusão.[41]

O trabalho de parto e o parto são potentes processos neuroendócrinos que interferem na expressão do genoma humano (processos epigenéticos). Os mecanismos de regulação do *stress*, a produção de neurotransmissores e a transição respiratória são distintas para os que passaram e não passaram pelo trabalho de parto, com consequências epigenéticas que podem durar toda a vida.[42,43] O modo de nascer tem repercussões para toda a vida sobre o risco de doenças crônicas, e há evidências sólidas destas diferenças.

Em geral, há grande excesso de realização de cesarianas no Brasil, sendo mais prevalente no setor suplementar (assim como em países e populações mais ricas no mundo). Em 2009, no Brasil, o número de nascidos vivos por cirurgia excedeu os nascidos vivos por parto normal.[39] Estima-se que em 2012 as taxas foram de 55,6% no país, 40% nos serviços públicos e 85% nos serviços privados.[6] No Gráfico 1 são apresentadas as proporções entre partos normais e cesarianas entre serviços púbicos e privados, evidenciando uma tendência de piora nos últimos anos.

Para se compreender o fenômeno do abuso de cesarianas deve-se considerar a multiplicidade e a complexidade dos fatores envolvidos. Há fatores culturais que se referem à medicalização do ideário das pessoas e das mulheres, fazendo com que a cesariana seja considerada um bem de consumo e uma intervenção segura.[44,45] Embora algumas mulheres realmente escolham essa via de parto, esta não é a escolha da maioria das usuárias.[46,47] As que preferem a cesariana são influenciadas por fatores culturais (crença histórica e errônea de que tem impacto na diminuição da mortalidade perinatal, medo do parto normal[48] e experiências negativas com partos anteriores[49]) e pelos médicos que as assistem.[44,50] Entrevistas realizadas com mulheres de classe média que foram cesariadas evidenciaram que os médicos determinam a via de parto quer seguindo o desejo das mulheres (quando elas desejam a cirurgia) ou montando um cenário de necessidade clínica da cesariana.[51]

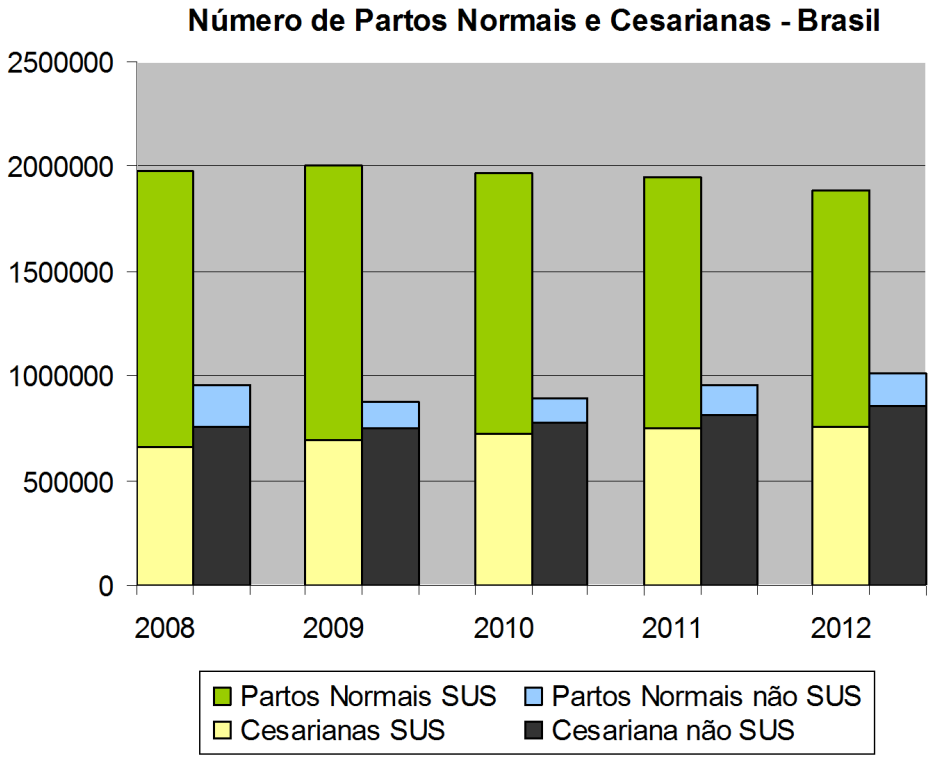

Gráfico 1. Número de partos normais e cesarianas, Brasil, 2008-2012.

A organização da assistência influencia as taxas de cesariana, que tendem a ser menores nos países com uma assistência obstétrica menos medicalizada, com maior atuação de *midwives*[52] - ofício equivalente ao desempenhado pelas obstetrizes formadas em curso de graduação no Brasil, sendo que atualmente há apenas um curso pioneiro desse tipo na Universidade de São Paulo - e/ou enfermeiras obstetras e com menor freqüência de intervenções, como na Holanda, Nova Zelândia e países Escandinavos.[53]

Segundo a OMS, a assistência ao parto realizada por profissionais capacitados é o fator mais importante para diminuição da mortalidade materna.[54] São atendentes qualificados para a assistência ao parto: médicos (inclusive MFCs), obstetrizes e enfermeiras obstetras.[54] No Brasil, médicos e suas associações demonstram grande preocupação com o parto de risco habitual atendido por obstetrizes e/ou enfermeiras obstetras, geralmente alegando que partos assistidos por esses profissionais teriam maior risco para a mãe e o concepto. Isso não é verificado na literatura, assim como é refutado por ela.[55,56,57]

Fatores ligados aos médicos especialistas assistentes no Brasil agem como forças geradoras do excesso de cesarianas: conveniência, agendamento, rapidez no parto, receio de processos por má prática e a crença de que as mulheres preferem e solicitam a cesariana.[44,58] Também há adesão ideológica dos médicos à cesariana, como mostra o caso da epígrafe. Além disso, quando o médico faz o pré-natal, conveniência, facilidade de agendamento e rapidez no procedimento significam desdobramentos econômicos com melhor administração de outras atividades remuneradas e de tempo livre.[59] Adicionalmente, com o persistente excesso de cesarianas por décadas no Brasil, provavelmente ocorreu (e continua ocorrendo) uma modificação no treinamento dos médicos obstetras no país: eles podem não estar desenvolvendo e exercitando habilidades clínicas para acompanhar um parto normal sem intervenções cirúrgicas. Ao não saberem mais manejar clinicamente partos, qualquer complicação e/ou distócia, ou mesmo variação da normalidade tende a ser resolvida pela cirurgia, que em muitos casos poderia ser evitada com benefícios para a mulher e seu bebê.[59] Todos esses fatores ajudam na compreensão do enorme número de violações de direitos e de agressões de várias ordens, bem como do grande volume de cesarianas desnecessárias que ocorrem atualmente no Brasil, tanto no setor privado como no sistema público de saúde.

Prevenção quaternária da violência obstétrica (VO): o que fazer e como

Considerando-se a magnitude e a complexidade da VO no Brasil, são indicados dois tipos de ações de prevenção quaternária: ações individuais, familiares e comunitárias realizadas na APS, associadas ao pré-natal; e ações em maior escala (social, política e institucional).

Apesar da elevada cobertura de pré-natal (98,7%) no Brasil, apenas 40% das mulheres afirmam ter recebido orientações sobre práticas benéficas para o trabalho de parto, sendo maiores as orientações sobre gravidade e sinais de risco.[25,60] É importante mudar essa visão e instrumentalizar o MFC para que oriente as gestantes e famílias quanto aos benefícios do parto natural e às possíveis complicações de intervenções questionáveis[60] a fim de contribuir para o empoderamento das mulheres e suas famílias e para que elas possam exigir um atendimento obstétrico seguro e digno. Dessa forma, enfrentar a VO exige que os profissionais de saúde assumam uma responsabilidade para além das rotinas de pré-natal e do entendimento biomédico da gestação e parturição.

Um recurso subutilizado no Brasil é a construção de planos de parto, prática iniciada na década de 1970 entre mulheres europeias que reivindicavam controle sobre seu próprio corpo no contexto da crescente medicalização do parto.[61] Recomendado pela OMS,[62] sua elaboração convida a mulher, auxiliada por seus cuidadores, a refletir sobre práticas benéficas e danosas e sobre seus direitos durante o processo de parturição.

O plano de parto exige um esforço da mulher para entender e expressar seus valores pessoais, medos e necessidades no processo parturitivo e facilita a comunicação dessas preferências aos profissionais da assistência.[63,64] São vantagens descritas do uso do plano de parto a melhoria da comunicação com a equipe de assistência, a sensação de ter escolhas e maior controle durante o parto, fazendo com que a mulher esteja mais consciente das opções que tem durante o parto.[52,64]

Para a APS, o plano de parto traz a necessidade de se pensar o pré-natal como espaço importante de compartilhamento de informações e pactuação de estratégias que mitiguem a situação de desamparo em que se transformou a assistência ao parto. Ajudar as usuárias a construírem seus planos promove a reflexão das equipes sobre a realidade da assistência ao parto na sua região e sua atuação nesse cenário. Um forte vínculo entre equipe e gestante na APS pode minimizar os danos da descontinuidade de cuidado entre o pré-natal e parto, criando uma ponte entre a equipe cuidadora na APS e o local de assistência ao parto.

O plano de parto pode ser construído tanto de forma individual como coletivamente. No modo individual a mulher pode ser orientada a buscar informações disponíveis e/ou o profissional (médico ou enfermeira) pode utilizar uma consulta para sua construção. No entanto, o modo coletivo, por meio de encontros de gestantes, muito comum na APS brasileira, talvez seja mais produtivo. Nesses espaços coletivos é interessante partir do universo referencial das mulheres, suas histórias e percepções, ao invés de construir uma fala linear e/ou unidirecional. Partindo de uma primeira rodada de relatos, amplia-se o debate. É importante estar aberto para a escuta e uma aliança com as potencialidades das mulheres. A discussão de todas as rotinas, intervenções e práticas pode requerer mais de um encontro do grupo de gestantes. A dificuldade que muitas mulheres enfrentam para se ausentar do domicílio, devido ao cuidado com filhos menores, pode ser mitigada designando um profissional como cuidador, facilitando o acesso às multíparas. No Quadro 4 apresenta-se um roteiro para elaboração de um plano de parto.

Pode-se discutir que as mulheres atualmente sejam mais permissíveis a condutas médicas desnecessárias e que algumas até as desejem, por terem introjetado culturalmente um modelo de assistência que é oferecido de forma hegemônica.[64,65] Cabe lembrar que, mesmo com o modelo vigente, a maioria das brasileiras não prefere a cesariana para o nascimento de seus filhos[66] e supõe-se que ninguém deseje ou anseie por procedimentos dolorosos e ineficazes. Uma vez informadas sobre possíveis alternativas e direitos, supõe-se que as mulheres não somente optariam, mas também lutariam por uma assistência obstétrica com garantias de integridade física e emocional para si e para seus bebês.

É importante que se esclareça que refletir sobre e escrever um plano de parto não garante o cumprimento, pelo serviço de atenção ao parto, daqueles desejos. Na atual conjuntura é provável que a reação dos profissionais não seja receptiva. Uma das possíveis desvantagens do plano de parto é, justamente, o aumento da tensão e de conflitos entre provedores e mulheres[64] e a criação de uma atmosfera de desconfiança entre os envolvidos.[63] Outra desvantagem citada é que aumenta a insatisfação das mulheres ao não conseguirem ter a assistência ou o parto que planejaram.[63,64] Porém, quanto mais as mulheres requisitarem atendimento digno mais difícil será que se perpetue a atual situação. Destaca-se que a elaboração de planos de parto deve ser estimulada por equipes que acreditem nas evidências e nos direitos das mulheres, ou corre-se o risco de se transformar tal proposta em mais um papel a ser preenchido de forma acrítica, burocrática e sem valor.[64]

Quadro 4. Questões para a construção/discussão de um plano de parto.

PLANO DE PARTO
INÍCIO DO TRABALHO DE PARTO
1) Importância de só ir para a maternidade em trabalho de parto ativo já que internações precoces podem desencadear uma cascata de intervenções.
2) Direito a acompanhante (Lei 11.108/2005) em todas as dependências da maternidade: sala de parto, centro cirúrgico e alojamento conjunto.
DURANTE O TRABALHO DE PARTO
1) Escolha do Local de Parto – Domicílio, Centro de Parto Normal, Casa de Parto, Maternidade (entender as diferenças entre estas instituições e cobrar das mesmas a divulgação de seus indicadores).
2) Procedimentos questionáveis para os quais não há evidência de benefício:
- Tricotomia (raspagem pelos pubianos), enema, acesso venoso e ocitocina rotineiros, jejum, amniotomia.
3) Auxiliam a tolerar as dores do trabalho de parto e tem se mostrado benéficos: liberdade de movimento, meios não farmacológicos para alívio da dor (banho quente, massagem).
4) Se sentir necessidade de analgesia de parto solicitar consentimento informado antes de realizá-la.
DURANTE O PARTO
(Conhecer indicações de cesariana e funcionamento do partograma).
1) Liberdade para escolher posição de parto e priorizar posição verticalizada ou lateralizada (cócoras, semi-sentada, em quarto apoios).
2) Não aceitar pernas presas em perneiras ou estribos ou posição de litotomia completa.
3) Orientar preparo perineal a partir de 34 semanas com óleo vegetal e evitar puxos induzidos. A mulher empurra quando tem vontade. Isso diminui as chances de laceração perineal.
4) Episiotomia não deve ser realizada rotineiramente.
5) Clampeamento oportuno do cordão umbilical.
6) O pai ou acompanhante podem ser incluídos na cena do parto e solicitarem cortar o cordão.
7) Contato precoce pele-a-pele entre mãe e bebê.
8) Bebê amamentado assim que possível.
PÓS-PARTO
1) Alojamento conjunto 24 horas.
2) Livre demanda ao aleitamento materno. Questionar complementação com leite artificial.

Fonte: elaboração dos autores.

Dispõe-se atualmente de inúmeros recursos audiovisuais que podem auxiliar no estímulo a reflexões e debates sobre planos de parto. O filme "Um dia de Vida" do Ministério da Saúde mostra a realidade de uma Casa de Parto em Ceres, Goiás, e a trajetória das famílias ali atendidas. O documentário "O SUS que dá certo: Parto e Nascimento humanizado no Hospital Sofia Feldman" retrata o processo de trabalho e o envolvimento de profissionais e de usuárias. Outro documentário, "O Renascimento do parto", denuncia a negação às mulheres do direito à informação e autonomia e divulga outra narrativa possível para o parto: uma experiência segura, prazerosa e única.

Além dos filmes citados, os profissionais podem acessar a biblioteca Cochrane, com revisões sistemáticas sobre a maioria das condutas obstétricas de rotina. Há sítios que fazem uma "tradução" das evidências científicas para profissionais e usuárias, como, por exemplo, o blog da obstetra Melania Amorim e o sítio Childbirth Connection. Há blogs de grupos de apoio à gestação e ao parto com relatos de parto, como a iniciativa Parto no Rio e a proposta 'BH pelo parto normal'. Portanto, a discussão e a elaboração de planos de parto com as gestantes é uma estratégia importante e de fácil operacionalização de ações de prevenção quaternária.

A atuação dos profissionais da APS e suas associações se justifica também fora do ambiente dos serviços de APS. Embora a prevenção quaternária tenha nascido no ambiente do cuidado clínico na APS, deve ir além da clínica, construindo formas de organização social do cuidado profissional que signifiquem diminuição de danos/hipermedicalização. Por exemplo, a construção de sistemas universais públicos de saúde com APS forte como função filtro pode ser considerada uma ação organizativa/política de prevenção quaternária.[67,68] Nesse mesmo sentido, a prevenção quaternária da VO no Brasil pode se dar através da urgente reforma das práticas obstétricas, com a inserção de outros profissionais habilitados no cuidado ao parto de risco habitual e utilizando boas práticas obstétricas, seja nas instituições em funcionamento, seja em outros locais de cuidado ao parto/nascimento.[52] A atuação dos médicos obstetras especialistas seria importante e otimizada em casos de risco não habitual e como segunda linha de cuidado, acionada quando necessário.[59]

A situação exige a união de esforços para a melhoria da assistência obstétrica. Na prática, é o caso de as associações (como a Sociedade Brasileira de Medicina de Família e Comunidade) se pronunciarem com seu apoio e ativismo social e político à causa do combate à VO, à redução do excesso de cesarianas e à promoção de ambientes, serviços e atividades profissionais de boas práticas obstétricas. O atendimento a partos de risco habitual por MFCs é uma realidade em diversos países, inclusive com menores taxas de episiotomias.[69]

As demandas de mulheres organizadas têm ecoado aos poucos nas políticas federais. A Rede Cegonha[70] pretende implantar 280 Centros de Parto Normal até 2015, promovendo uma adequação da ambiência para o trabalho de parto e parto e priorizando a atuação de enfermeiras obstetras e obstetrizes no atendimento de partos de risco habitual, medida reconhecida mundialmente por seus benefícios em reduzir intervenções desnecessárias e número de cesarianas.[52] Tais medidas, no entanto, encontram muita resistência, principalmente por parte de profissionais médicos e suas entidades, devido ao deslocamento de poder que promovem e pela revisão de práticas que implicam. Torna-se necessário, portanto, que os MFCs e outros profissionais da APS e suas associações se articulem aos movimentos de mulheres e ocupem os espaços de participação social no SUS, tanto as Conferências Municipais de Saúde e os espaços da Rede Cegonha, como os Fóruns Perinatais,[70] para cobrar a elaboração e o monitoramento dos indicadores propostos pelos Planos de Ação dos Grupos Condutores da Rede Cegonha e outros considerados importantes, como os incluídos no "termômetro de segurança materna".

Tal política tem grande importância se considerarmos como pode ser indutora de novas subjetividades dentro do SUS. Sabe-se que, com a diminuição da pobreza e a inclusão no mercado de segmentos sociais ansiosos pelo consumo de bens e serviços, há migração de mulheres para o setor suplementar em busca de cesarianas.[71] É também realidade que mulheres de classe média, devido à falta de opção para parto normal no setor privado, buscam serviços públicos, com atendimento pautado em evidências, direitos e respeito.[72]

Conhecer e apoiar os exemplos pioneiros de instituições e serviços nos quais a VO está minimizada ou ausente, como o Hospital Sofia Feldman e casas de parto, bem como incentivar o surgimento de novas alternativas assistenciais às gestantes e a reforma das práticas das maternidades em funcionamento no Brasil, são tarefas urgentes e difíceis.

Conclusão

A prevenção quaternária frente à violência obstétrica no Brasil requer a participação dos profissionais e suas associações em duas frentes: a primeira envolve a atuação clínica no cuidado e apoio às gestantes e puérperas, bem como a elaboração participativa de planos de parto. A segunda requer suporte e participação social para que sejam atendidas as reivindicações de humanização da assistência ao pré-natal e parto, provenientes dos movimentos de mulheres, de modo a impactar significativamente a violência obstétrica no sistema de saúde do Brasil.

Referências

1. Entrevista com Adelir Carmen Lemos de Góes [Internet]. Cientista que virou mãe; 2012 [acesso em 2015 Jun 17]. Disponível em: http://www.cientistaqueviroumae.com.br/2014/04/entrevista-com-adelir-carmen-lemos-de.html
2. Justiça do RS manda grávida fazer cesariana contra sua vontade [Internet]. São Paulo: Folha de São Paulo; 2014 [acesso em 2015 Jun 17]. Disponível em: http://www1.folha.uol.com.br/cotidiano/2014/04/1434570-justica-do-rs-manda-gravida-fazer-cesariana-contra-sua-vontade.shtml
3. Rattner D. Humanização na atenção a nascimentos e partos: ponderações sobre políticas públicas. Interface (Botucatu). 2009;13(1 supl):759-768. http://dx.doi.org/10.1590/S1414-32832009000500027.
4. Venturi G, Godinho T. Mulheres brasileiras e gênero nos espaços público e privado: uma década de mudanças na opinião pública. São Paulo: Editora Fundação Perseu Abramo/SESC-SP; 2013.
5. Bentzen N, editor. Wonca dictionary of general/family practice. Copenhagen: Maanedsskrift for Praktisk Laegegerning; 2003.
6. Ministério da Saúde do Brasil (BR). DATASUS: Sistema de Informações de Nascidos Vivos [Internet]. Ano [acesso em 2014 July 1]. Disponível em: http://www2.datasus.gov.br/DATASUS/index.php?area=0205&VObj=http://tabnet.datasus.gov.br/cgi/deftohtm.exe?sinasc/cnv/nv
7. Ley Orgánica sobre el Derecho de las Mujeres a una Vida Libre de Violencia [Internet]. Gaceta Oficial 38.647. [Acesso em 2015 Jun 17]. Disponível em: http://venezuela.unfpa.org/doumentos/Ley_mujer.pdf.
8. Bowser D, Hill K. Exploring evidence for disrespect and abuse in facility-based childbirth: report of a landscape analysis. Bethesda, Maryland: USAID-TRAction Project; 2010.

9. D'Oliveira AF, Diniz SG, Schraiber LB. Violence against women in health-care institutions: an emerging problem. Lancet. 2002;359(9318):1681-1685. http://dx.doi.org/10.1016/S0140-6736(02)08592-6. PMid:12020546.

10. Goer H. Cruelty in maternity wards: fifty years later. J Perinat Educ. 2010;19(3):33-42. http://dx.doi.org/10.1624/105812410X514413. PMid:21629381.

11. Comité de América Latina y el Caribe para la Defensa de los Derechos de la Mujer (CLADEM); Centro Legal para Derechos Reproductivos y Políticas Públicas (CRLP). Silencio y cumplicidad: violencia contra la mujer em los servicios de salud em el Peru Lima. Lima: CLADEM; 1998.

12. National Health Service (NHS). NHS Safety Thermometer [internet]. 2013 [acesso em 2015 Jun 17]. Disponível em: http://www.safetythermometer.nhs.uk/index.php?option=com_content&view=article&id=11:maternity-homepage&catid=2:uncategorised&Itemid=285

13. Souza JP, Pileggi-Castro C. Sobre o parto e o nascer: a importância da prevenção quaternária. Cad Saude Publica. 2014;30(Supl):S11-S13. http://dx.doi.org/10.1590/0102-311XPE02S114.

14. Organização Mundial da Saúde (OMS). Assistência ao parto normal: um guia prático: relatório de um grupo técnico. Genebra: OMS; 1996.

15. Ministério da Saúde (BR). Parto, aborto e puerpério: assistência humanizada à mulher [Internet]. Brasília: Ministério da Saúde; 2001 [acesso em 2015 Jun 17]. 93 p. Disponível em: http://bvsms.saude.gov.br/bvs/publicacoes/cd04_13.pdf

16. Dawood F, Dowswell T, Quenby S. Intravenous fluids for reducing the duration of labour in low risk nulliparous women. Cochrane Database Syst Rev. 2013;6(6):CD007715. http://dx.doi.org/10.1002/14651858. PMid:23780639.

17. Costley PL, East CE. Oxytocin augmentation of labour in women with epidural analgesia for reducing operative deliveries. Cochrane Database Syst Rev. 2012;5(5):CD009241. http://dx.doi.org/10.1002/14651858. PMid:22592738.

18. Fraser WD, Turcot L, Krauss I, Brisson-Carrol G. Amniotomy for shortening spontaneous labour. Cochrane Database Syst Rev. 2013;(6). http://dx.doi.org/10.1002/14651858.CD006167.pub4.

19. Lawrence A, Lewis L, Hofmeyr GJ, Dowswell T, Styles C. Maternal positions and mobility during first stage labour. Cochrane Database Syst Rev. 2009;(2):CD003934. PMid:19370591.

20. Priddis H, Dahlen H, Schmied V. What are the facilitators, inhibitors, and implications of birth positioning? A review of the literature. Women Birth. 2012;25(3):100-106. http://dx.doi.org/10.1016/j.wombi.2011.05.001. PMid:21664208.

21. Räisänen S, Vehviläinen-Julkunen K, Gisler M, Heinonen S. A population-based register study to determine indications for episiotomy in Finland. Int J Gynaecol Obstet. 2011;115(1):26-30. http://dx.doi.org/10.1016/j.ijgo.2011.05.008. PMid:21767841.

22. Carroli G, Mignini L. Episiotomy for vaginal birth. Cochrane Database Syst Rev. 2009;(1):CD000081. PMid:19160176.

23. Moiety FMS, Azzam AZ. Fundal pressure during the second stage of labor in a tertiary obstetric center: a prospective analysis. J Obstet Gynaecol Res. 2014;40(4):946-953. http://dx.doi.org/10.1111/jog.12284. PMid:24428496.

24. Verheijen EC, Raven JH, Hofmeyr GJ. Fundal pressure during the second stage of labour. Cochrane Database Syst Rev. 2009;7(4):CD006067. PMid:19821352.

25. Singata M, Tranmer J, Gyte GM. Restricting oral fluid and food intake during labour. Cochrane Database Syst Rev. 2010;20(1):CD003930. PMid:20091553.

26. Lawrence A, Lewis L, Hofmeyr GJ, Styles C. Maternal positions and mobility during first stage labour. Cochrane Database Syst Rev. 2013;(10):1-158. http://dx.doi.org/10.1002/14651858.CD003934.pub4.

27. Diniz CSG, d'Orsi E, Domingues RMSM, Torres JA, Dias MAB, Schneck CA, et al. Implementação da presença de acompanhantes durante a internação para o parto: dados da pesquisa nacional Nascer no Brasil. Cad Saude Publica. 2014;30(Supl):S140-S153. http://dx.doi.org/10.1590/0102-311X00127013.

28. Viellas EF, Domingues RMSM, Dias MAB, Gama SGN, Theme MM Fa, Costa JV, et al. Assistência ao pré-natal no Brasil. Cad Saude Publica. 2014;30(Supl):S85-S100.

29. Villar J, Carroli G, Zavaleta N, Donner A, Wojdyla D, Faundes A, et al. Maternal and neonatal individual risks and benefits associated with caesarean delivery: multicentre prospective study. BMJ. 2007;335(7628):1025. http://dx.doi.org/10.1136/bmj.39363.706956.55. PMid:17977819.

30. Belizán JM, Althabe F, Barros FC, Alexander S, Showalter E, Griffin A, et al. Rates and implications of caesarean sections in Latin America: ecological study. BMJ. 1999;319(7222):1397-1400. http://dx.doi.org/10.1136/bmj.319.7222.1397. PMid:10574855.

31. Ye J, Betrán AP, Guerrero Vela M, Souza JP, Zhang J. Searching for the optimal rate of medically necessary cesarean delivery. Birth. 2014;41(3):237-244. http://dx.doi.org/10.1111/birt.12104 PMid:24720614.

32. Villar J, Valladares E, Wojdyla D, Zavaleta N, Carroli G, Velazco A, et al. Caesarean delivery rates and pregnancy outcomes: the 2005 WHO global survey on maternal and perinatal health in Latin America. Lancet. 2006;367(9525):1819-1829. http://dx.doi.org/10.1016/S0140-6736(06)68704-7. PMid:16753484.

33. Villar J, Carroli G, Zavaleta N, Donner A, Wojdyla D, Faundes A, et al. Maternal and neonatal individual risks and benefits associated with caesarean delivery: multicentre prospective study. BMJ. 2007;335(7628):1025. http://dx.doi.org/10.1136/bmj.39363.706956.55. PMid:17977819.

34. Morlando M, Sarno L, Napolitano R, Capone A, Tessitore G, Maruotti GM, et al. Placenta accreta: incidence and risk factors in an area with a particularly high rate of cesarean section. Acta Obstet Gynecol Scand. 2013;92(4):457-460. http://dx.doi.org/10.1111/aogs.12080. PMid:23347183.

35. Hansen AK, Wisborg K, Uldbjerg N, Henriksen TB. Risk of respiratory morbidity in term infants delivered by elective caesarean section: cohort study. BMJ. 2008;336(7635):85-87. http://dx.doi.org/10.1136/bmj.39405.539282.BE. PMid:18077440.

36. Tita AT, Landon MB, Spong CY, Lai Y, Leveno KJ, Varner MW, et al. Timing of elective repeat cesarean delivery at term and neonatal outcomes. N Engl J Med. 2009;360(2):111-120. http://dx.doi.org/10.1056/NEJMoa0803267. PMid:19129525.

37. Gyamfi-Bannerman C, Fuchs KM, Young OM, Hoffman MK. Nonspontaneous late preterm birth: etiology and outcomes. Am J Obstet Gynecol. 2011;205(5):456.e1-456.e6. http://dx.doi.org/10.1016/j.ajog.2011.08.007. PMid:22035950.

38. Bettiol H, Rona RJ, Chinn S, Goldani M, Barbieri MA. Factors associated with preterm births in southeast Brazil: a comparison of two birth cohorts born 15 years apart. Paediatr Perinat Epidemiol. 2000;14(1):30-38. http://dx.doi.org/10.1046/j.1365-3016.2000.00222.x. PMid:10703032.

39. Leal M, Silva AAM, Dias MAB, Gama SGN, Rattner D, Moreira ME, et al. Birth in Brazil: national survey into labour and birth. Reprod Health. 2012;15(9):1-8. http://dx.doi.org/10.1186/1742-4755-9-15. PMid: 22913663.

40. Hyde MJ, Modi N. The long-term effects of birth by caesarean section: the case for a randomised controlled trial. Early Hum Dev. 2012;88(12):943-949. http://dx.doi.org/10.1016/j.earlhumdev.2012.09.006. PMid:23036493.

41. Darmasseelane K, Hyde MJ, Santhakumaran S, Gale C, Modi N. Mode of delivery and offspring body mass index, overweight and obesity in adult life: a systematic review and meta-analysis. PLoS One. 2014;9(2):e878-e896. http://dx.doi.org/10.1371/journal.pone.0087896. PMid:24586295.

42. Bager P, Wohlfahrt J, Westergaard T. Caesarean delivery and risk of atopy and allergic disease: meta-analyses. Clin Exp Allergy. 2008;38(4):634-642. http://dx.doi.org/10.1111/j.1365-2222.2008.02939.x. PMid:18266879.

43. Cho CE, Norman M. Cesarean section and development of the immune system in the offspring. Am J Obstet Gynecol. 2013;208(4):249-254. http://dx.doi.org/10.1016/j.ajog.2012.08.009. PMid:22939691.

44. Barros AJ, Santos IS, Matijasevich A, Domingues MR, Silveira M, Barros FC, et al. Patterns of deliveries in a Brazilian birth cohort: almost universal cesarean sections for the better-off. Rev Saude Publica. 2011;45(4):635-643. http://dx.doi.org/10.1590/S0034-89102011005000039. PMid:21670862.

45. Rattner D. Sobre a hipótese de estabilização das taxas de cesárea do Estado de São Paulo, Brasil. Rev Saude Publica. 1996;30(1):19-33. http://dx.doi.org/10.1590/S0034-89101996000100004. PMid:9008919.

46. Faúndes A, Pádua KS, Osis MJD, Cecatti JG, Sousa MH. Opinião de mulheres e médicos brasileiros sobre a preferência pela via de parto. Rev Saude Publica. 2004;38(4):488-494. http://dx.doi.org/10.1590/S0034-89102004000400002. PMid:15311287.

47. Mandarino NR, Chein MB, Monteiro F Jr, Brito LM, Lamy ZC, Nina VJ, et al. Aspectos relacionados à escolha do tipo de parto: um estudo comparativo entre uma maternidade pública e outra privada, em São Luís, Maranhão, Brasil. Cad Saude Publica. 2009;25(7):1587-1596. http://dx.doi.org/10.1590/S0102-311X2009000700017. PMid:19578580.

48. Pang MW, Leung TN, Lau TK, Hang Chung TK. Impact of first childbirth on changes in women's preference for mode of delivery: follow-up of a longitudinal observational study. Birth. 2008;35(2):121-128. http://dx.doi.org/10.1111/j.1523-536X.2008.00225.x. PMid:18507583.

49. Faisal-Cury A, Menezes PR. Fatores associados à preferência por cesariana. Rev Saude Publica. 2006;4(2):21-26.

50. Cardoso JE, Barbosa RHS. O desencontro entre desejo e realidade: a "indústria" da cesariana entre mulheres de camadas médias no Rio de Janeiro, Brasil. Physis. 2012;22(1):35-52. http://dx.doi.org/10.1590/S0103-73312012000100003.

51. O'Dougherty M. Plot and irony in childbirth narratives of middle-class Brazilian women. Med Anthropol Q. 2013;27(1):43-62. http://dx.doi.org/10.1111/maq.12015. PMid:23674322.

52. Norman AH, Tesser CD. Obstetrizes e enfermeiras obstetras no Sistema Único de Saúde e na Atenção Primária à Saúde: por uma incorporação sistêmica e progressiva. Rev Bras Med Fam Comunidade. 2015;10(34):1-7. http://dx.doi.org/10.5712/rbmfc10(34)1106.

53. Patah LE, Malik AM. Modelos de assistência ao parto e taxa de cesária em diferentes países. Rev Saude Publica. 2011; 45(1):185-194. http://dx.doi.org/10.1590/S0034-89102011000100021. PMid:21181056.

54. Reducción de la mortalidad materna: declaración conjunta OMS/FNUAP/UNICEF/ Banco Mundial [Internet]. Ginebra: Organización Mundial de la Salud; 1999 [acesso em 2015 Jun 17]. http://whqlibdoc.who.int/publications/1999/9243561952_spa.pdf?ua=1

55. Mouta RJO, Progianti JM. Estratégias de luta das enfermeiras da Maternidade Leila Diniz para implantação de um modelo humanizado de assistência ao parto. Texto & Contexto – Enfermagem. 2009;18(4):731-740. http://dx.doi.org/10.1590/S0104-07072009000400015.

56. Narchi NZ. Análise do exercício de competências dos não médicos para atenção à maternidade. Saúde e Sociedade. 2010;19(1):147–158. http://dx.doi.org/10.1590/S0104-12902010000100012

57. Sandall J, Soltani H, Gates S, Shennan A, Devane D. Midwife-led continuity models versus other models of care for childbearing women. Cochrane Database Syst Rev. 2013;8:1-107. http://dx.doi.org/10.1002/14651858.CD004667.pub3. PMid:23963739.

58. Faúndes A, Cecatti JG. A operação cesárea no Brasil: incidência, tendências, causas, conseqüências e propostas de ação. Cad Saude Publica. 1991;7(2):150-173. http://dx.doi.org/10.1590/S0102-311X1991000200003. PMid:15830039.

59. Tesser CD, Knobel R, Rigon T, Bavaresco GZ. Os médicos e o excesso de cesárias no Brasil. Sau & Transf Soc. 2011:2(1):4-12. [acesso em 2015 Jun 17]. Disponível em: http://periodicos.incubadora.ufsc.br/index.php/saudeetransformacao/article/view/1088

60. Klein MC, Kaczorowski J, Tomkinson J, Hearps S, Baradaran N, Brant R. Family physicians who provide intrapartum care and those who do not: very different ways of viewing childbirth. Can Fam Physician. 2011;57(4):e139-e147. PMid:21490345.

61. Penny Simkin P. Birth plans: after 25 years, women still want to be heard. Birth. 2007;34(1):49-51. http://dx.doi.org/10.1111/j.1523-536X.2006.00126.x. PMid:17324178.

62. World Health Organization (WHO). Birth and emergency preparedness in antenatal care. Intergrated management of pregnancy and childbirth (IMPAC). Geneva: Department of Making Pregnancy Safer, WHO; 2006 [acesso em 2015 jun 17]. Disponível em: http://www.who.int/reproductivehealth/publications/maternal_perinatal_health/emergency_preparedness_antenatal_care.pdf

63. Bailey JM, Crane P, Nugent CE. Childbirth education and birth plans. Obstet Gynecol Clin North Am. 2008;35(3):497-509. http://dx.doi.org/10.1016/j.ogc.2008.04.005. PMid:18760232.

64. Lothian J. Birth plans: the good, the bad, and the future. J Obstet Gynecol Neonatal Nurs. 2006;35(2):295-303. http://dx.doi.org/10.1111/j.1552-6909.2006.00042.x. PMid:16620258.

65. Declercq E, Sakala C, Corry M, Applebaum S, Risher P. Listening to mothers: Report of the First National US Survey of Women's Childbering Experiences. New York: Maternity Center Association; 2002.

66. Domingues RMSM, Dias MAB, Nakamura-Pereira M, Torres JA, d'Orsi E, Pereira APE, et al. Processo de decisão pelo tipo de parto no Brasil: da preferência inicial das mulheres à via de parto final. Cad Saude Publica. 2014;30(Supl):S101-S116. http://dx.doi.org/10.1590/0102-311X00105113.

67. Hart JT. The inverse care law. Lancet. 1971;1(7696):405-412. http://dx.doi.org/10.1016/S0140-6736(71)92410-X. PMid:4100731.

68. Gérvas J, Pérez Fernández M. El fundamento científico de la función de filtro del médico general. Rev Bras Epidemiol. 2005;8(2):205-218. http://dx.doi.org/10.1590/S1415-790X2005000200013.

69. Abenhaim HA, Welt M, Sabbah R, Audibert F. Obstetrician or family physician: are vaginal deliveries managed differently? J Obstet Gynaecol Can. 2010;29(10):801-805.

70. Ministério da Saúde (BR). Portaria GM/MS no 1459, de 24 de junho de 2011. Institui no âmbito do SUS, a Rede Cegonha. Diário Oficial da União. Brasília, 2011 [acesso em 2015 jun 17]. Disponível em: http://bvsms.saude.gov.br/bvs/saudelegis/gm/2011/prt1459_24_06_2011.html

71. Aquino EML. Para reinventar o parto e o nascimento no Brasil: de volta ao futuro. Cad Saude Publica. 2014;30(Supl):S8-S10. http://dx.doi.org/10.1590/0102-311XPE01S114.

72. Brasil L. Maternidade Pública Sofia Feldman atrai clientes de planos de saúde [Internet]. Belo Horizonte: Revista VejaBH; 2013 [acesso em 2013 Feb 2]. Disponível em: http://vejabh.abril.com.br/edicoes/maternidade-publica-sofia-feldman-atrai-clientes-planos-saude-733707.shtml

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ARTIGOS ORIGINAIS

Prevenção quaternária: as bases para sua operacionalização na relação médico-paciente

Quaternary prevention: the basis for its operationalization in the doctor-patient relationship

Prevención cuaternaria: las bases para su operacionalización en la relación médico-paciente

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Resumo

O objetivo deste artigo é apresentar as bases clínicas e conceituais para se operacionalizar a prevenção quaternária na prática dos serviços de Atenção Primária à Saúde e no ambiente de ensino e/ou programa de residência em medicina de família. Utilizou-se o modelo aprimorado de Calgary-Cambridge como substrato organizativo da consulta médica, de modo a inserir a prevenção quaternária em dois momentos: diagnóstico e plano de cuidados. Para fortalecer a prevenção quaternária nesses dois momentos da consulta discute-se: a) os eixos conceituais das doenças (anatomopatológico, fisiopatológico, semiológico e epidemiológico); b) as abordagens explicativas do fenômeno do adoecimento (ontológica e dinâmica); e c) o sofrimento em relação ao tempo (presente e futuro), diferenciando o sofrimento vivenciado no presente das preocupações com a saúde futura. Conclui-se que apesar das limitações da proposta, a formalização da prevenção quaternária no processo de consulta pode auxiliar a reduzir o automatismo diagnóstico e prescritivo que muito tem medicalizado as expressões do adoecer no cotidiano dos serviços da atenção primária à saúde.

Palavras-chave:
Prevenção Quaternária
Relações Médico-Paciente
Medicalização
Atenção Primária à Saúde
Medicina de Família e Comunidade

Abstract

The aim of this paper is to present the clinical and conceptual basis to operationalize quaternary prevention in primary healthcare services and teaching contexts and/or residency programmes in family medicine. The enhanced Calgary-Cambridge model of medical consultation is used as an organizational matrix to insert quaternary prevention in two moments: diagnosis and care plan. To strengthen quaternary prevention in these two consultation moments, the discussion explores: a) conceptual disease axes (pathological, physiopathological, semiological and epidemiological); b) illness explanatory approaches (ontological and dynamic); and c) suffering in relation to time (present and future), differentiating present lived suffering from concerns about future health. We conclude that despite limitations of the proposed framework, formalising quaternary prevention in the consultation process can help reduce the diagnostic and prescribing automatism, which has medicalized many illness expressions in the routines of primary health care services.

Keywords:
Quaternary Prevention
Physician-Patient Relations
Medicalization
Primary Health Care
Family Practice

Resumen

El objetivo de este artículo es presentar las bases clínicas y conceptuales para operacionalizar la prevención cuaternaria en la práctica de los servicios de Atención Primaria de Salud y contextos de educación y/o programas de residencia en medicina familiar. Se utilizó el modelo mejorado de Calgary-Cambridge como sustrato organizativo de la consulta médica para insertar la prevención cuaternaria en dos etapas: diagnóstico y plan de atención a la salud. Para reforzar la prevención cuaternaria en estos dos momentos de la consulta la discusión explora: a) los ejes conceptuales de las enfermedades (anatomopatológico, fisiopatológico, semiológico y epidemiológico); b) los enfoques explicativos de las enfermedades (ontológico y dinámico); y c) el sufrimiento con respecto al tiempo (presente y futuro), para diferenciar el sufrimiento vivido en el presente de las preocupaciones con la salud futura. Se concluye que a pesar de las limitaciones de la propuesta, la formalización de la prevención cuaternaria en el proceso de la consulta puede ayudar a reducir el automatismo diagnóstico y prescriptivo que mucho tiene medicalizado las expresiones del padecimiento en el cotidiano de los servicios de atención primaria de salud.

Palabras clave:
Prevención Cuaternaria
Relaciones Médico-Paciente
Medicalización
Atención Primaria de Salud
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Introdução

O tema do sobrediagnóstico e sobretratamento tem ganhado força nos países de língua inglesa, que usualmente lideram as discussões e pesquisas neste campo da medicina.[1] Este contexto ofuscou a temática da prevenção quaternária que tem sido pouco valorizada mesmo entre os médicos de família. Por exemplo, uma rápida pesquisa no PubMed com os descritores booleanos 'Quaternary Prevention' e 'Overdiagnosis' encontrou respectivamente 25 e 1630 artigos. Apesar de a prevenção quaternária ter sido definida oficialmente a mais de uma década,[2] sua disseminação no meio científico-acadêmico apresenta-se em um ritmo um tanto lento.

Uma das possíveis explicações é que as pesquisas relacionadas ao sobrediagnóstico e sobretratamento dialogam mais diretamente com os ensaios clínicos e os estudos epidemiológicos que buscam medir estes fenômenos.[3] Outra explicação é que com o advento da medicina baseada em evidências (MBE) esta rebaixou a autoridade do clínico (opinião dos *experts em clínica*), empoderando pesquisadores e aqueles *experts* em avaliação dos resultados de artigos científicos, especialmente ensaios clínicos randomizados e metanálises.[4,5] Ambos os contextos, reforçam uma abordagem de base populacional como fonte de evidências sólidas e boas práticas. Assim, a prevenção quaternária, que tem por definição uma abordagem centrada no paciente,[2] pode ter sido afetada por esta estrutura hierarquizada baseada em evidências.

No entanto, essa hierarquização das evidências tem se configurado mais como uma nova busca de poder sobre o conhecimento biomédico do que propriamente um novo rigor, ou cientificismo, em relação ao que é produzido na biomedicina.[6] Esta questão foi recentemente trazida à tona no artigo intitulado "*Evidence based Medicine: a movement in crises?*"[7] publicado no BMJ, alertando para os interesses da indústria farmacêutica. Existem vários vieses das companhias farmacêuticas relativos aos ensaios clínicos e suas metanálises, tais como: manipulação da dose-resposta das drogas em ambos os braços do estudo (intervenção e controle); recrutamento seletivo dos pacientes com maior probabilidade de responder à intervenção; adoção de desfechos substitutos; e finalmente, a não publicação dos resultados negativos das pesquisas.[7] Todos esses fatores superestimam os benefícios da intervenção biomédica, tornando mais difícil a replicação dos seus resultados na população em geral. Nesse contexto, a prevenção quaternária pode ganhar destaque, visto que resgata a autoridade do médico, que passa a ter maior responsabilidade diante das incertezas produzidas por esse complexo fenômeno que é a MBE.

Este artigo visa contribuir para a operacionalização da prevenção quaternária, não em termos de sua definição,[8] mas como esta pode ser integrada aos modelos de consulta utilizados para aprimorar a relação médico-paciente. Inicialmente, se resgata a importância da relação médico-paciente na definição da especialidade em medicina de família e comunidade. Depois, apresenta-se o modelo aprimorado de Calgary-Cambridge de consulta médica como substrato organizativo para inserir a prevenção quaternária em sua segunda etapa, que envolve dois momentos: diagnóstico e plano de cuidados. Para fortalecer a prevenção quaternária nesses dois momentos da consulta discute-se: a) os eixos conceituais das doenças (anatomopatológico, fisiopatológico, semiológico e epidemiológico); b) as abordagens explicativas do adoecimento (ontológica e dinâmica); e c) o sofrimento em relação ao tempo (presente e futuro), diferenciando o sofrimento vivenciado no presente das preocupações com a saúde futura. Dentro dessa análise proposta, a prevenção quaternária implica no uso criterioso das palavras, e na opção por um modelo explicativo dinâmico do fenômeno saúde-doença.

Relação médico-paciente

A relação médico-paciente é a pedra angular da prática do médico de família, sendo um dos pilares que a define enquanto especialidade.[9] Por trabalhar com muitos casos indiferenciados, centrados na pessoa e na comunidade, a medicina de família é a especialidade que mais apoia e valoriza a relação médico-paciente. Nesse sentido, buscas por recursos em outras áreas do conhecimento como a psicologia, a sociologia e a antropologia visam potencializar essa relação de forma a melhorar a compreensão do binômio saúde-doença.[8] Como afirma McWhinney,[9,10] o médico de família deve, além de compreender a natureza física das enfermidades, buscar compreender os pacientes e que significado o adoecer traz para os pacientes e suas famílias.

Esta necessidade de fortalecer e aprimorar a relação médico-paciente conduziu a vários modelos de consulta, que foram adotados por diferentes escolas médicas em diferentes momentos. Por exemplo, na década de 1970, o *Royal College of General Practitioners (RCGP)* utilizou o modelo biográfico de Balint[11,12] e o modelo biopsicossocial de Engel[13] para definir uma prática do médico de família centrada no paciente e preocupada com a experiência total do adoecer.[14]

Método clínico: modelo aprimorado de Calgary-Cambridge

No Brasil, com a influência de médicos de família canadenses, tem-se utilizado o método clínico centrado na pessoa (MCCP), que tem sido adotado tanto em cursos de medicina como nos cursos de pós-graduação ou residências médicas. O MCCP é organizado em seis componentes, os três primeiros, sequenciais: (1) Explorar a doença e a experiência do adoecer; (2) Compreender o adoecimento e a pessoa como um todo; e (3) Negociar um plano comum de manejo. Estes componentes são permeados pelos três últimos: (4) Incorporar prevenção/promoção; (5) Fortalecer a relação médico-pessoa; e (6) Ser realista.[15]

Entretanto, o presente artigo utilizará um modelo aprimorado de Calgary-Cambridge,[16] visto que este, diferente do MCCP, explicitamente integra dois pontos importantes: conteúdo (método clínico tradicional) e processo (habilidade de comunicação efetiva). Além do mais, o formato apresentado está configurado de forma operacional, isto é, para uma consulta com duração de 10 minutos, tempo padrão de consulta dos médicos de família no Reino Unido. Dois eixos norteiam o método de Calgary-Cambridge. O primeiro se refere à ***coleta de dados*** e o segundo ***ao manejo clínico***.

- ***Coleta de dados****:* o paciente é encorajado a falar sobre o problema ou queixa principal, bem como o contexto em que este ocorre, ou seja, os componentes biopsicossociais e/ou biográficos. No final desta primeira etapa - geralmente quando o paciente já expressou suas preocupações, ideias e expectativas - é que o médico faz algumas perguntas fechadas, explorando sinais de alerta (*Red Flags*), bem como o exame físico direcionado, para fechar a fase de coleta de dados ou informações acerca do problema (etapas Subjetivo e Objetivo do acróstico SOAP).[17]

- ***Manejo clínico***: a seguir, o médico deve compartilhar a sua impressão sobre o problema, para que juntos possam elaborar um plano terapêutico. Nessa segunda fase é que as informações colhidas na primeira etapa, referentes aos aspectos psicossociais e ocupacionais, ajudarão a contextualizar e individualizar o plano terapêutico (etapas Avaliação e Plano do acróstico SOAP).

Assim, o método sugere que se esgote primeiro uma fase para depois mover-se para a segunda (da mesma forma que se recomenda, em geral, respeitar a sequência do SOAP na condução de cada atendimento clínico). Portanto, o médico deve tentar manter um fluxo unidirecional e não cruzar (ir e voltar) entre esses dois momentos da consulta.

Modelo de consulta e prevenção quaternária

A inserção de atividades preventivas e/ou terapêuticas se localiza principalmente na segunda etapa (manejo clínico) do modelo de Calgary-Cambridge - ou no componente 3 (incluindo os componentes 4 e 5) do MCCP. Dentro dessa etapa, destacam-se dois momentos importantes: o primeiro refere-se à interpretação do(s) problema(s) que trouxe(ram) o paciente à consulta (ou fase do diagnóstico[s]) e sua socialização com o usuário; o segundo refere-se a formulação e compartilhamento de um plano comum de cuidado ou manejo do problema e/ou condição. A Figura 1 esquematicamente ilustra o modelo de Calgary-Cambridge e a inclusão da prevenção quaternária na segunda etapa deste modelo.

Prevenção quaternária e as bases para sua prática

A inclusão da prevenção quaternária na segunda etapa do modelo de Calgary-Cambridge envolve dois momentos da consulta. O primeiro é o diagnóstico/explicação que exige uma estratégia de organização dos fenômenos do adoecimento e suas abordagens interpretativas correspondentes; o segundo se refere a um plano de cuidados e/ou fase de manejo clínico que leve a uma menor medicalização dos processos de adoecimento. Estes dois momentos são discutidos a seguir.

Primeiro momento: a interpretação do(s) problema(as) dos pacientes

A prática do médico de família opera com maior grau de incertezas, visto que estes profissionais estão expostos a um espectro de indivíduos e situações que comumente se apresentam como casos indiferenciados.[9] Rose explica esse fenômeno estatisticamente como um "contínuo de risco e severidade".[19] A natureza se expressa populacionalmente em um gradiente que vai desde o assintomático, oligo-sintomático, sintomático, até o francamente manifesto. Por exemplo, a hepatite "A" se manifesta na sua forma fulminante em menos de 1% da população, na forma ictérica em 15 a 20%, sendo que sua maior expressão ocorre na forma oligo-sintomática (enjôos, dores abdominais inespecíficas, estados febris vagos, etc) e assintomática.

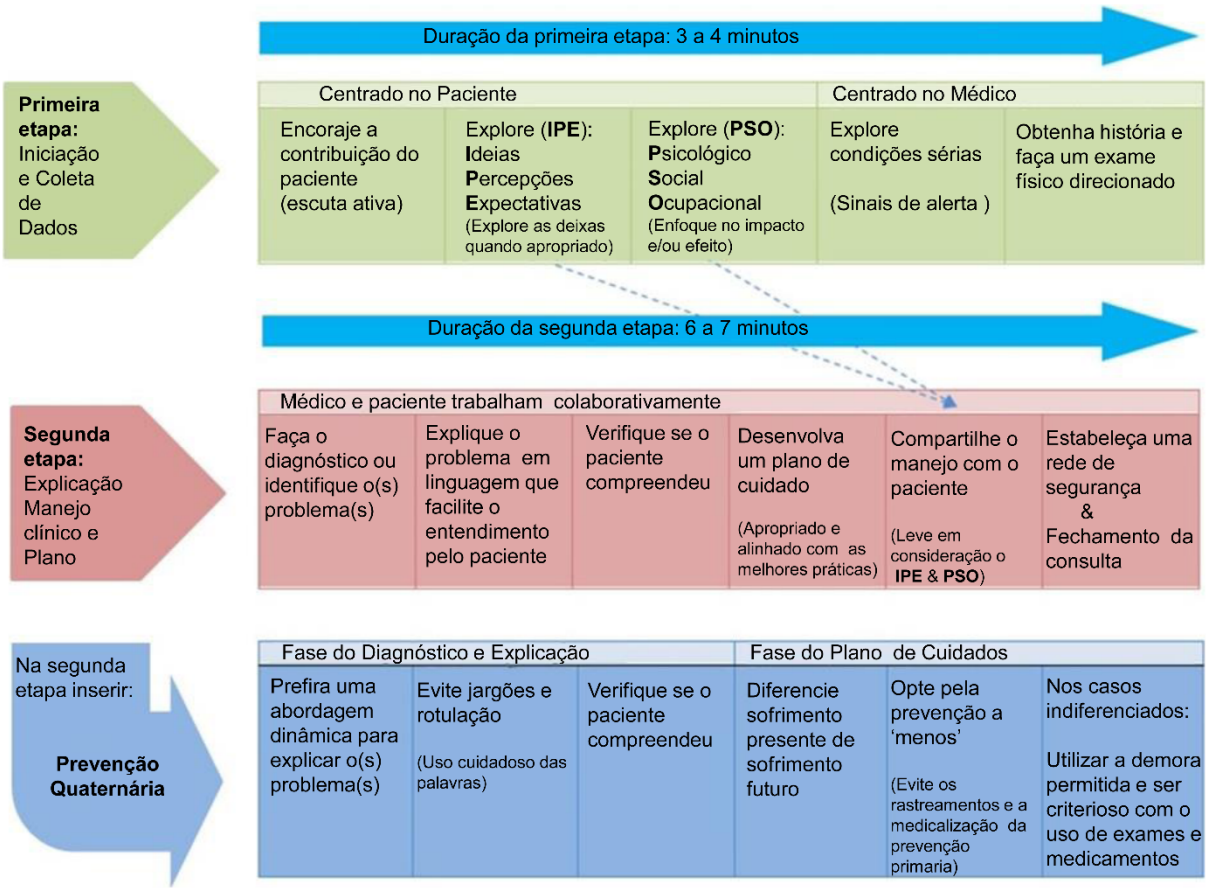

Figura 1. Modelo aprimorado de entrevista de Calgary-Cambridge[16] como matriz para a inserção da prevenção quaternária na consulta médica. Fonte: Programa de residência em MFC da região de Durham e Tees-Valley, Inglaterra.[18]

Esquematicamente, pode-se utilizar de um plano analítico proposto por Camargo Jr,[20] com quatro eixos constituintes das "doenças": anatomomorfológico, fisiopatológico, semiológico e epidemiológico. Esses eixos estão presentes em graus variáveis nas explicações das "doenças" concebidas pelo saber médico, mas também é possível tecer algumas considerações operacionais, seguindo a ideia de um contínuo de risco e severidade, proposto por Rose: do mais definido e cristalizado ao mais indefinido, incerto e volátil.

Este plano analítico pode auxiliar os profissionais da Atenção Primária à Saúde (APS) na interpretação dos problemas e/ou diagnóstico, bem como auxiliar na construção de um plano de cuidado. Quanto mais severos os sintomas e/ou quanto mais características e localizadas as expressões físicas que definem uma condição, mais se pode entender o adoecimento através de uma abordagem anatomomorfológica, centrada em 'lesões materiais' e no corpo biológico. Por outro lado, quanto mais oligo-sintomático, indiferenciado, volátil ou sem uma lesão material identificável (ou quando o foco da consulta está na preocupação com a saúde futura - prevenção) menos se deve usar uma abordagem anatomomorfológica, pois esta tende a causar danos ou medicalizar o paciente, devendo a interpretação ser mais artesanal e permanecer nos eixos **fisiopatológico** e/ou **semiológico** - e no caso da prevenção, **epidemiológico** (Quadro 1).

Além desta classificação orientar os complexos fenômenos que se apresentam como queixas e problemas nos consultórios dos médicos de família, ela também organiza os elementos da matriz conceitual que os profissionais utilizam comumente na formulação de seus modelos explicativos dos problemas dos pacientes. Neste sentido, o Quadro 2 resume as abordagens conceituais das doenças que são sustentadas pelos elementos discutidos no Quadro 1 e que podem ser aplicadas na explanação dos processos de adoecimento. A **abordagem ontológica** está associada ao eixo anatomopatológico (mas tende a ser aplicada disseminadamente) enquanto que a **abordagem dinâmica** é adequada a todos os eixos, particularmente aos eixos fisiopatológico, semiológico e epidemiológico.

Quadro 1. Eixos constitutivos dos adoecimentos.[20,21]

Eixos	Comentários	Exemplos
Anatomopatológico (Imagético-molecular-genético)	É o mais antigo eixo de construção das doenças, nascido da anatomia clínica, e também o mais valorizado. Deriva seu poder e legitimidade da objetividade das lesões, das imagens e dos laudos especializados referentes às estruturas materiais ou quadros objetivados que descrevem e definem as doenças, e que são, supostamente, a base de sua manifestação.	Os quadros clínicos bem evidentes e consagrados na medicina, como por exemplo, tuberculose, cólicas renais, infarto do miocárdio, a maior parte dos cânceres, e assim por diante.
Fisiopatológico	Busca propor relações causais (e modelos teóricos) envolvendo elementos materiais (em geral microscópicos, moleculares, celulares e físico-químicos) agrupados em tecidos, órgãos e sistemas, geralmente reducionistas e com pouco poder interpretativo para grande parte das doenças e dos adoecimentos trazidos pelos usuários da APS.	Asmas, alergias, refluxos gastresofágicos, etc. Também doenças crônicas como diabetes, retocolites, doenças reumáticas e imunológicas.
Semiológico	Os processos de adoecimento são caracterizados por constelações de sinais e sintomas trazidos pelos pacientes, e, portanto, os mais valorizados pelos doentes empiricamente, bem como, pouco ou nada explicados (fisiopatologicamente) pelas teorias disponíveis. Todavia, tendem a ser tratados como doenças, cujo tratamento se resume à supressão ou alívio dos sintomas.	A maior parte dos transtornos ou sofrimentos psíquicos (como ansiedades e depressões), dores de cabeça inespecíficas; dores lombares inespecíficas, fibromialgias, dores abdominais, síndrome do intestino irritável e várias outras manifestações que tem sido denominadas como sintomas físicos não explicáveis medicamente (ou MUPS - Medically Unexplained Physical Symptoms)
Epidemiológico	Refere-se aos processos estatísticos que mapeiam a morbimortalidade na população e que buscam estabelecer associações causais a fim de traçar ações preventivas e/ou de saúde pública, induzindo tratamentos preventivos (baseados em riscos).	São os casos dos fatores ou perfis de risco, associados principalmente às doenças crônicas não transmissíveis como: tabagismo, obesidade, sedentarismo, estresse, desvios alimentares, colesterol, etc.

Fonte: construído a partir de Camargo Jr.[20,21]

Quadro 2. Abordagens interpretativas dos adoecimentos: ontológica e dinâmica.[22,23]

Abordagem Ontológica	Abordagem Dinâmica
Concebe as doenças como "entidades" exteriores às pessoas e que as invadem, localizando-se em suas partes; ou são defeitos (lesões) no interior do corpo, cujos significados variam na história e nas culturas. Na medicina moderna, estão relacionadas com germes, agentes externos, lesões e genes. A concepção ontológica tem estado frequentemente ligada a uma prática médica que *dirige os seus esforços à classificação exata dos processos de doença (definição diagnóstica)* procurando identificar órgãos perturbados e lesões como causas únicas que provocam sintomas.	Concebe as doenças a partir de um desequilíbrio entre as forças presentes no ser humano, na natureza e na sociedade, que estão dentro e fora das pessoas. Assim, centra-se no paciente como um todo, e no seu ambiente, evitando ligar a doença a perturbações de órgãos corporais particulares ou causas únicas. Aborda a situação em termos *de processos complexos sobre os quais múltiplas influências são possíveis e coexistentes*, considerando a pessoa como uma totalidade e unidade complexa cambiante cujos aspectos psicológicos, sociais, e biológicos são indissociáveis e interinfluenciáveis, embora com sintomas muitas vezes localizados.

Fonte: construído a partir de Albuquerque e Oliveira,[22] e Myers e Benson.[23]

Como na APS a maioria dos casos atendidos é indiferenciada e/ou de grande complexidade, a **abordagem dinâmica** assume maior importância, dada sua flexibilidade no enfoque dos fenômenos do adoecimento e sua consideração sobre as transformações ao longo do processo de vida e cuidado. Consequentemente, independente da situação, como uma diretriz para a prática da prevenção quaternária, é possível sustentar que, em geral, deve haver preferência por uma concepção dinâmica e funcional para abordar e explicar os problemas e adoecimentos, valorizando a vivência dos pacientes, administrando a vasta gama de sintomas (geralmente pouco enquadráveis em patologias) e construindo interpretações contextualizadas que deem algum sentido às vivências e contribuam para a terapêutica, utilizando como aliados o tempo, o acesso fácil e a longitudinalidade do cuidado.

Em alguns casos agudos, em que o diagnóstico é rápido, o prognóstico é sabidamente benigno (devido à natureza da situação e/ou efetividade de terapêutica), abordagens simplificadas e ontológicas (uma amigdalite ou gastroenterite aguda, por exemplo) poderão ser apropriadas. No entanto, em grande parte da demanda da APS, situações crônicas reumáticas, endócrinas, psíquicas, osteomusculares (muitas destas com alto teor de dissociação clínico-radiológica),[24] quadros recorrentes e, em muitos casos agudos, uma abordagem funcional e dinâmica é muito mais protetora e construtora de sentidos educativos para o autocuidado e a participação no tratamento do que uma abordagem ontológica, centrada em patologias definidas e buscas de diagnósticos exatos, comprovados, e geradores de cascatas de intervenção.

Tanto nos casos das ações preventivas como no enfrentamento dos principais adoecimentos ou queixas que se apresentam na APS, a concepção dinâmica, fisiológica e processual é a mais recomendada. Ela se constitui em um instrumento para a operacionalização da prevenção quaternária por meio do uso cuidadoso da linguagem. Assim, as palavras escolhidas pelos médicos deveriam pertencer ao universo cultural das pessoas (ou pacientes) e precisariam ser cuidadosamente utilizadas para que suas crenças, ansiedades e medos possam ser calmamente acolhidos e processados conjuntamente, de modo a tematizar de forma tranquila as complexidades e incertezas inerentes ao processo do cuidado.

Ao incluir e organizar a atividade de prevenção quaternária, quando se elabora e socializa a interpretação da queixa do paciente (fase do diagnóstico) há que se ter cuidado com as palavras, pois elas podem: a) causar iatrogenia, por meio da rotulação e/ou efeito nocebo; b) dificultar a compreensão do sentido das intervenções a serem propostas e assim comprometer a participação da pessoa no processo de cuidado (ou vice-versa). Entretanto, a palavra também pode se constituir em potente instrumento terapêutico ao induzir o conhecido "efeito placebo", pois pode ajudar a reorganizar, simbólica e afetivamente, a vivência do paciente, preparando-o positivamente para o tratamento. Infelizmente, o efeito placebo é, sabidamente, subaproveitado na biomedicina, como destacou McWhinney em relação à abordagem do modelo biomédico.[10]

A palavra é a maior ferramenta da prevenção quaternária, ao evitar expressões populares ou técnicas com potencial de estigmatização e medicalização. É comum a fase de diagnose se restringir a uma conversão terminológica dos sintomas para jargão técnico: "dor nas costas" transforma-se em lombalgia, "dor de cabeça" em cefaleia, "dor nas juntas" em artralgia, etc. Alguns termos técnicos que vão sendo difundidos na sociedade carecem de explicações adicionais, devendo-se, portanto, alertar aos pacientes que fatores de risco como colesterol elevado, hipertensão, obesidade e outras condições não se constituem como doenças. Assim, pensar e falar processualmente é um auxílio na comunicação e na prevenção quaternária: comunicar que a pressão está um pouco alta e merece atenção é preferível e diferente de usar a palavra "hipertensão" ou "hipertenso", que implica em um diagnóstico de "doença" crônica, incurável, associada a uso de medicação, restrições dietéticas e controles laboratoriais vitalícios.

Segundo momento: plano de cuidado

Com relação ao desenvolvimento de um plano terapêutico comum, a Figura 1 ilustra que este momento é construído com base no IPE (Ideias, Preocupações e Expectativas) e no PSO (Psicológico, Social e Ocupacional), que formam o pano de fundo para se contratualizar o manejo do quadro clínico ou problema em questão. Para isso, é necessário ancorar o sofrimento no tempo, localizando-o no presente e separando-o do adoecimento potencial ou futuro, otimizando a prevenção quaternária no plano de cuidado, que fica organizado, então, no eixo presente-futuro. Isso é importante porque, em geral, quanto mais centrado no presente e/ou severo for o sofrimento vivido, mais favorável a razão risco-benefício da intervenção, desde que esta intervenção esteja sustentada pelas melhores evidências disponíveis. Do mesmo modo, quanto mais projetada no futuro essa possibilidade de sofrimento, pior é a relação risco-benefício e maiores as possibilidades de danos decorrentes da intervenção médica. Portanto, a prática da prevenção quaternária demanda uma clareza e diferenciação entre o sofrimento/adoecimento presente e a probabilidade de um adoecimento futuro.

O primeiro caso (sofrimento/adoecimento presente) requer interpretações e ações terapêuticas regidas por compromissos éticos e sociais da relação de cuidado profissional, não extensíveis ao segundo caso (de adoecimento futuro). Este último pretende uma antecipação, um agir em pessoas saudáveis no presente com a intenção de se evitar adoecimentos futuros, geralmente, fundamentada em inúmeros dispositivos preditores do risco de morbimortalidade (tabelas de escores de risco [i.e. Framingham], software de apoio à decisão clínica, auto teste on-line), em que os indivíduos têm de se ajustar a probabilidades rotineiras e resultados prováveis.[25] Trata-se de um pensamento abdutivo, em que se 'desloca temporalmente

o raciocínio a partir da obtenção de dados sobre o passado em simulações ou antecipações probabilísticas sobre o futuro que, por sua vez, demandam ação no presente'.[25]

O pensamento abdutivo, tão em voga nas últimas décadas, tem estimulado a medicalização dos riscos, quer pela introdução na prática clínica de tratamentos e intervenções preventivos (prevenção primária e secundária), quer pelo sucessivo e progressivo rebaixamento dos pontos de corte diagnósticos e metas de controle para níveis de pressão arterial, colesterol sérico, hemoglobina glicosilada, IMC, etc.[26,27]

Esta separação entre presente e futuro, muitas vezes obscurecida, devido à cultura geral de medicalização e ontologização dos riscos (manejados como doenças), deve estar clara para todos os médicos de família. Ou seja, na prevenção – adoecimento futuro – deve-se ter uma redobrada atividade de prevenção quaternária, particularmente nos casos de prevenção primária. Na prevenção é útil a distinção esboçada por Rose[19] entre prevenção 'a menos' e prevenção 'a mais', sumarizada no Quadro 3. Na prevenção quaternária deve imperar a recomendação geral de se evitar a prevenção 'a mais', principalmente quando se refere à prevenção primária (e secundária, no caso dos rastreamentos) a não ser que esta esteja muito bem justificada.

Quadro 3. Modalidades de prevenção: 'a menos' e 'a mais'.[19]

Prevenção	Conceituação	Exemplo
'prevenção a menos'	De acordo com Rose consiste em 'remover ou reduzir alguma exposição artificial de modo a restaurar o estado de normalidade biológica' (p. 148). São ações de correção de excessos ou faltas, hábitos, erros alimentares ou alterações de modo de viver não-saudáveis. O uso da expressão 'a menos' é metafórico, mas é preciso ao indicar medidas salutogênicas bem sintetizadas no qualificativo 'menos'. Significa na prática: menos sedentarismo, menos agrotóxicos, menos tabagismo, menos alcoolismo, menos psicotrópicos, menos aditivos químicos e psicoativos, etc. Na escala social significa: menos violência, menos hierarquia, menos desigualdade na distribuição da riqueza.	Orientações, aconselhamentos e tratamentos (individuais e coletivos) para parar de fumar, estimular atividade física, reduzir ingesta alcoólica excessiva, melhorar qualidade da alimentação com frutas e verduras agroecológicas, etc.
'prevenção a mais'	Rose define esta medida preventiva como 'a adição de algum outro fator artificial na esperança de conferir proteção' (p. 148). São intervenções estranhas à ecologia usual do organismo e da pessoa, em que se pretende uma solução tecnológica sem uma mudança correspondente na base causal dos determinantes sociais dos potenciais danos à saúde.	Ingesta ou aplicação de fármacos, testes diagnósticos, vacinas ou outros produtos biológicos (não habituais ou de uso autônomo), físicos ou químicos, cujo potencial de risco/dano é significativamente maior, visto que a suscetibilidade prévia a intervenção é baixa.

Fonte: elaborado a partir de Rose.[19]

Quanto ao adoecimento presente, partindo-se do enfoque preventivo de Rose, da abordagem dinâmica e dos eixos constitutivos das "doenças" na biomedicina, acima resumidos, é possível construir intervenções que sejam mais adequadas na prática da APS. Trata-se de um guia facilitador, que pretende auxiliar no plano de cuidado e expor áreas onde pode haver excesso de intervenções. Os eixos apresentados no Quadro 1 não são dicotômicos e suas fronteiras podem se sobrepor. Quando se tem uma correspondência coerente e equipotente entre os eixos interpretativos constituintes do adoecimento, o saber médico por meio de uma abordagem ontológica (mais valorizada socialmente e cientificamente) pode ser satisfatório em responder e explicar muito do que se passa com o paciente.

Porém, na medida em que há uma comum desproporção de potência explicativa entre esses eixos, com predomínio dos eixos semiológico e fisiopatológico, em quadros indiferenciados, mais se necessita de uma abordagem dinâmica e maior deve ser o cuidado para não causar danos aos pacientes, por meio de rotulação e/ou do uso desnecessário de exames e medicamentos. Assim, quanto mais inespecíficos ou pouco enquadráveis forem os sinais e sintomas e/ou quanto mais funcionais e/ou fisiológicas as possibilidades de interpretação, maior o espaço para e maior a necessidade de uma abordagem dinâmica e artesanal, que singularize mais e medicalize menos as queixas trazidas pelos pacientes.

Nesses casos, o plano de cuidado deve se apoiar no acompanhamento longitudinal, por meio da 'demora permitida' - uma vez descartados os sinais de alerta - associada à construção de uma rede de segurança em que o paciente possa retornar, em caso de agravamento e/ou que este esteja bem orientado sobre o que fazer em caso de mudança do padrão dos sintomas. Tanto na etapa de diagnóstico como na do plano terapêutico é importante checar com o paciente se ele entendeu e se está de acordo com o que está sendo comunicado. A Figura 2 resume as principais ideias discutidas, de modo a facilitar sua aplicabilidade.

Um grupo particular de situações de alta prevalência e relevância na APS merece destaque quanto ao uso da Figura 2: os sofrimentos psíquicos. Apesar de suas características, tende-se a priorizar uma abordagem ontológica em detrimento de uma abordagem mais dinâmica e contextualizada. Por exemplo, acredita-se que na depressão há falta de serotonina e que na

Prevenção Quaternária	**Aumenta a sua necessidade na medida em que se distancia do sofrimento presente**			
Tempo	**ADOECIMENTO PRESENTE**			**ADOECIMENTO FUTURO**
Eixo	Anatomopatológico	Fisiopatológico	Semiológico	Epidemiológico
Quadros clínicos	Bem definidos	Moderadamente definidos	Indefinidos/ Complexos	Imateriais/Risco
Abordagem	Ontológica/Dinâmica	Preferencialmente Dinâmica	Dinâmica	Probabilística Prefira prevenção "a menos"
Manejo: Exames e Tratamento	Direcionados para a condição (i.e. tuberculose, angina pectoris, DPOC)	De acordo com o grau de disfunção e/ou severidade do quadro (ex. asma: leve, moderada e severa)	Excluir sinais de alerta Evitar excesso de sintomáticos Aguardar evolução do quadro (demora assistida)	Evitar a medicalização da prevenção primária Desencorajar *checkups* e/ou rastreamento (ex. PSA, mamografia <40 anos, etc)

Figura 2. Prevenção quaternária: síntese das diretrizes para sua operacionalização na prática da medicina de família.
Fonte: Desenvolvido pelos autores, a partir da presente discussão.

esquizofrenia ocorre uma falta de dopamina, fazendo-se inclusive analogias com o diabetes e falta de insulina, sugerindo que tratamentos com antidepressivos somente visam repor o que está em falta no cérebro. Porém, os profissionais esquecem que psicotrópicos têm uma vasta gama de efeitos por todo o corpo, muitos dos quais são prejudiciais, e assim, este tipo de analogia, que simplifica o problema apenas como uma 'reposição química hormonal', deve ser enfaticamente evitada. Na verdade, não existe nenhuma confirmação dessa hipótese, pois pouco se sabe a respeito das interações entre as condições psicossociais e os processos bioquímicos (receptores e vias neurais) envolvidos nos transtornos mentais, como afirma Gøtzsche:[28]

> A verdade é exatamente o oposto. No começo não há desequilíbrio químico, mas quando se inicia o tratamento de doenças mentais com as drogas, criamos um desequilíbrio químico, uma condição artificial que o cérebro tenta neutralizar. Isso significa que o paciente ficar pior quando tenta suspender a medicação, assim como um alcoólico também fica pior quando não há mais álcool, mas isso não significa que ele não tinha álcool no cérebro, quando começou a beber [...] e grande parte dos médicos prejudicam seus pacientes ainda mais, dizendo-lhes que os sintomas de abstinência significam que os mesmos ainda estão doentes e que necessitam continuar com a medicação.

Portanto, os sofrimentos mentais devem ser entendidos como quadros sintomáticos complexos (semiológicos) uma vez que sua construção conceitual ontológica em "transtornos" é tão frágil quanto medicalizante (vide críticas ao DSM-V), assim como os profissionais de saúde deveriam fazer um esforço interpretativo (artesanal) qualificador do cuidado personalizado. Por isso, no momento da interpretação do problema ("formulação diagnóstica") deve ser utilizada uma abordagem dinâmica, que ajude a ressignificar os processos que afetam a saúde mental das pessoas.

Essa postura tem implicações para a fase seguinte de plano de cuidado, pois tende a restringir o uso de medicação, uma vez que os sofrimentos são explicados em termos de processo e não rotulados como doença. O uso de sintomáticos químicos, sobretudo psicotrópicos, que interferem na consciência e na autopercepção das pessoas, deve ser prescrito criteriosamente.[28] Ressalta-se ainda que os sintomas, inclusive psíquicos, muitas vezes são os únicos indicativos de processo subjacente desconhecido, e a sedação pode implicar em perda de contato com o mesmo e cronificação dos processos.[29] Além disso, no caso dos psicotrópicos, isso implica em risco comum de manipulação de comportamento e de alienação do paciente.

Conclusão

A proposta de um delineamento de dois momentos-chave (diagnóstico e plano terapêutico) no processo de consulta visa a clarear e operacionalizar a prática da prevenção quaternária na relação médico-paciente. Certamente, os esquemas propostos são imperfeitos, devido à natureza complexa dos cenários da APS e à limitação inerente a desenhos ou modelos de consulta. Entretanto, oferece uma matriz conceitual para a problematização da prevenção quaternária numa perspectiva operacional da consulta clínica, relevante tanto na prática dos serviços como no ensino da medicina de família e comunidade.

A prevenção quaternária implica no fortalecimento e na reconstrução da capacidade crítica e epistemológica dos médicos de família, capacidades essas em franco declínio decorrente das transformações recentes da medicina, cada vez mais padronizada em protocolos, que induzem uma estandardização e generalização das interpretações e dos tratamentos,[30,31] pressupondo uma homogeneidade cada vez maior dos doentes, cuja singularidade pessoal e existencial-social-psicológica demanda justamente uma direção oposta, a personalização das interpretações e do cuidado. Assim, a prevenção quaternária induz os profissionais a manterem uma proximidade longitudinal e centrarem o cuidado nas pessoas e em suas vivências, protegendo-as de desvios induzidos pelos automatismos da ânsia diagnóstica e terapêutica.

Referências

1. Moynihan R, Heneghan C, Godlee F. Too much medicine: from evidence to action. BMJ. 2013;347:f7141. http://dx.doi.org/10.1136/bmj.f7141
2. Norman AH, Tesser CD. Prevenção quaternária na atenção primária à saúde: uma necessidade do Sistema Único de Saúde. Cad Saúde Pública. 2009;25(9):2012–20. http://dx.doi.org/10.1590/S0102-311X2009000900015
3. Jørgensen KJ, Zahl PH, Gøtzsche PC. Breast cancer mortality in organised mammography screening in Denmark: comparative study. BMJ. 2010;340:c1241. http://dx.doi.org/10.1136/bmj.c1241
4. Harrison S, Moran M, Wood B. Policy emergence and policy convergence: the case of “scientific-bureaucratic medicine” in the United States and United Kingdom. British J Politics International Relations. 2002;4:1-24. http://dx.doi.org/10.1111/1467-856X.41068
5. Goldenberg MJ. On evidence and evidence-based medicine: lessons from the philosophy of Science. Soc Sci Med. 2006;62(11):2621-32. http://dx.doi.org/10.1016/j.socscimed.2005.11.031
6. Lambert H, Gordon EJ, Bogdan-Lovis E. Introduction: gift horse or Trojan horse? Social science perspectives on evidence-based health care. Soc Sci Med. 2006;62(11):2613-20. http://dx.doi.org/10.1016/j.socscimed.2005.11.022
7. Greenhalgh T, Howick J, Maskrey N. Evidence based medicine: a movement in crisis? BMJ. 2014;348:g3725. http://dx.doi.org/10.1136/bmj.g3725
8. Jamoulle M, Gomes LF. Prevenção Quaternária e limites em medicina. Rev Bras Med Fam Comunidade. 2014;9(31):186-91. http://dx.doi.org/10.5712/rbmfc9(31)867
9. McWhinney IR. William Pickles Lecture 1996. The importance of being different. Br J Gen Pract. 1996;46:433-6.
10. McWhinney IR. A textbook of Family Medicine. New York: Oxford University Press; 1989.
11. Lakasing E. Michael Balint: an outstanding medical life. British J Gen Pract. 2005;55(518):724-5.
12. Johnson AH. The Balint movement in America. Family Med. 2001;33(3):174-7.
13. Engel GL. The need for a new medical model: a challenge for biomedicine. Science. 1977;196(4286):129-136. http://dx.doi.org/10.1126/science.847460
14. Cheraghi-Sohi S. Contractual change and UK general practitioners: still a case of street-level bureaucrats? [dissertation]. Manchester, UK: Faculty of Medicine and Human Sciences, Manchester University School; 2011.
15. Stewart M, Brown JB, Weston WW, et al. Medicina centrada na pessoa - transformando o método clínico. Porto Alegre: Artmed; 2010.

16. Kurtz SM, Silverman JD, Benson J, Draper J. Marrying content and process in clinical method teaching: enhancing the Calgary-Cambridge guides. Acad Med. 2003;78(8):802-809. http://dx.doi.org/10.1097/00001888-200308000-00011

17. SOAP note [Internet]. St. Petesburg (FL): Wikimedia Foundation, Inc. 2001 – [acesso em 2014 Oct 07]. Disponível em: http://en.wikipedia.org/wiki/SOAP_note

18. Durham and Tees Valley GP Training Programme. Available at: http://www.dtvgptraining.co.uk/st3_consultation_skills_revision.html

19. Rose G. Estratégias da medicina preventiva. Porto Alegre: Artmed; 2010.

20. Camargo Jr KR. A construção das doenças na medicina ocidental contemporânea. Rev SBHC [Internet]. 1993 [acesso em 2014 Oct 07];9(31-40). Disponível em: www.sbhc.org.br/arquivo/download?ID_ARQUIVO=268

21. Camargo Jr KR. Biomedicina, saber & ciência: uma abordagem crítica. São Paulo: Hucitec; 2003.

22. Albuquerque CMS, Oliveira CPF. Saúde e doença: significações e perspectivas em mudança. Millenium Rev ISPV [Internet]. 2002 [acesso em 2008 Feb 23];25. Disponível em: http://www.ipv.pt/millenium/Millenium25/25_27.htm

23. Myers S, Benson H. Psychological factors in healing: a new perspective on an old debate. Behavioral Medicine. 1992;18:5-11. http://dx.doi.org/10.1080/08964289.1992.10544235

24. Jensen MC, Brant-Zawadzki MN, Obuchowski N, Modic MT, Malkasian D, Ross JS. Magnetic resonance imaging of the lumbar spine in people without back pain. N Engl J Med. 1994;331(2):69-73. http://dx.doi.org/10.1056/NEJM199407143310201

25. Adams V, Murphy M, Clarke AE. Anticipation: technoscience, life, affect, temporality. Subjectivity. 2009. 28:246–265. http://dx.doi.org/10.1057/sub.2009.18

26. Starfield B, Hyde J, Gérvas J, Heath I. The concept of prevention: a good idea gone astray? J Epidemiology Community Health. 2008;62(7):580–3. http://dx.doi.org/10.1136/jech.2007.071027

27. Montori V, Isley W, Guyatt G. Waking up from the DREAM of preventing diabetes with drugs. BMJ. 2007;334:882–884. http://dx.doi.org/10.1136/bmj.39169.447488.94

28. Gøtzsche P. Psychiatry Gone Astray. Mad in America: science, psychiatry and community. 2014 Jan 28 [acesso em 2014 Oct 07]. Disponível em: http://www.madinamerica.com/2014/01/psychiatry-gone-astray/

29. Tesser CD. Medicalização social (II): limites biomédicos e propostas para a clínica na atenção básica. Interface (Botucatu). 2006;10(20):347-62. http://dx.doi.org/10.1590/S1414-32832006000200006

30. Norman AH, Russell AJ, Macnaughton J. The payment for performance model and its influence on British general practitioners' principles and practice. Cad Saúde Pública. 2014;30(1):55–67. http://dx.doi.org/10.1590/0102-311X00149912

31. Tesser CD. A verdade na biomedicina, reações adversas e efeitos colaterais: uma reflexão introdutória. Physis. 2007;17(3):465-484. http://dx.doi.org/10.1590/S0103-73312007000300004

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Quaternary prevention: the basis for its operationalization in the doctor-patient relationship

Prevenção quaternária: as bases para sua operacionalização na relação médico-paciente

Prevención cuaternaria: las bases para su operacionalización en la relación médico-paciente

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Abstract

The aim of this paper is to present the clinical and conceptual basis to operationalize quaternary prevention in primary healthcare services and teaching contexts and/or residency programmes in family medicine. The enhanced Calgary-Cambridge model of medical consultation is used as an organizational matrix to insert quaternary prevention in two moments: diagnosis and care plan. To strengthen quaternary prevention in these two consultation moments, the discussion explores: a) conceptual disease axes (pathological, physiopathological, semiological and epidemiological); b) illness explanatory approaches (ontological and dynamic); and c) suffering in relation to time (present and future), differentiating present lived suffering from concerns about future health. We conclude that despite limitations of the proposed framework, formalising quaternary prevention in the consultation process can help reduce the diagnostic and prescribing automatism, which has medicalized many illness expressions in the routines of primary health care services.

Keywords:
Quaternary Prevention
Physician-Patient Relations
Medicalization
Primary Health Care
Family Practice

Resumo

O objetivo deste artigo é apresentar as bases clínicas e conceituais para se operacionalizar a prevenção quaternária na prática dos serviços de Atenção Primária à Saúde e no ambiente de ensino e/ou programa de residência em medicina de família. Utilizou-se o modelo aprimorado de Calgary-Cambridge como substrato organizativo da consulta médica, de modo a inserir a prevenção quaternária em dois momentos: diagnóstico e plano de cuidados. Para fortalecer a prevenção quaternária nesses dois momentos da consulta discute-se: a) os eixos conceituais das doenças (anatomopatológico, fisiopatológico, semiológico e epidemiológico); b) as abordagens explicativas do fenômeno do adoecimento (ontológica e dinâmica); e c) o sofrimento em relação ao tempo (presente e futuro), diferenciando o sofrimento vivenciado no presente das preocupações com a saúde futura. Conclui-se que apesar das limitações da proposta, a formalização da prevenção quaternária no processo de consulta pode auxiliar a reduzir o automatismo diagnóstico e prescritivo que muito tem medicalizado as expressões do adoecer no cotidiano dos serviços da atenção primária à saúde.

Palavras-chave:
Prevenção Quaternária
Relações Médico-Paciente
Medicalização
Atenção Primária à Saúde
Medicina de Família e Comunidade

Resumen

El objetivo de este artículo es presentar las bases clínicas y conceptuales para operacionalizar la prevención cuaternaria en la práctica de los servicios de Atención Primaria de Salud y contextos de educación y/o programas de residencia en medicina familiar. Se utilizó el modelo mejorado de Calgary-Cambridge como sustrato organizativo de la consulta médica para insertar la prevención cuaternaria en dos etapas: diagnóstico y plan de atención a la salud. Para reforzar la prevención cuaternaria en estos dos momentos de la consulta la discusión explora: a) los ejes conceptuales de las enfermedades (anatomopatológico, fisiopatológico, semiológico y epidemiológico); b) los enfoques explicativos de las enfermedades (ontológico y dinámico); y c) el sufrimiento con respecto al tiempo (presente y futuro), para diferenciar el sufrimiento vivido en el presente de las preocupaciones con la salud futura. Se concluye que a pesar de las limitaciones de la propuesta, la formalización de la prevención cuaternaria en el proceso de la consulta puede ayudar a reducir el automatismo diagnóstico y prescriptivo que mucho tiene medicalizado las expresiones del padecimiento en el cotidiano de los servicios de atención primaria de salud.

Palabras clave:
Prevención Cuaternaria
Relaciones Médico-Paciente
Medicalización
Atención Primaria de Salud
Medicina Familiar y Comunitaria

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Introduction

The theme of overdiagnosis and overtreatment has gained strength in English speaking countries, which usually lead the discussion and research on this medical field.[1] This context has blurred the theme of quaternary prevention, which has been undervalued even among family physicians. For instance, a quick search on PubMed using Boolean descriptors 'Quaternary prevention' and 'Overdiagnosis' found respectively 25 and 1630 articles. Despite quaternary prevention being officially defined more than a decade ago,[2] its development in the scientific-academic community shows a slow pace.

One possible explanation is that researches on overdiagnosis and overtreatment dialogue more directly with clinical trials and epidemiological studies that attempt to measure these phenomena.[3] Another explanation could be the advent of evidence-based medicine (EBM), which has lowered clinician's authority (clinician experts' opinion), empowering researchers and those experts in analysing scientific articles, specially randomized clinical trials outcomes or metanalysis.[4,5] Both contexts reinforce a population-based approach as a source of sound evidence and best practice. Thus, quaternary prevention, which has a patient-centred approach by its own definition,[2] might has been affected by this hierarchical evidence based framework.

However, this hierarchy of evidence has configured itself more as a new quest for power over biomedical knowledge than a new scientific rigour approach to what is produced in biomedicine.[6] This issue was recently brought to light in an article entitled *'Evidence-based Medicine: a movement in crisis'*,[7] published in the BMJ, highlighting the vested interests of pharmaceutical industries. Several pharmaceutical company biases can be found in clinical trials and their metanalysis, such as manipulation drugs' dose-responses in both study arms (intervention and control); selective recruitment of patients most likely to respond to interventions; adoption of surrogate outcomes; and finally, not publishing negative research results.[7] All these factors overestimate the benefits of biomedical interventions, making it difficult to replicate their results to the general population. In this context, quaternary prevention can gain prominence since it rescues clinicians' authority, who have now greater responsibility in the face of the uncertainty produced by the complex phenomenon of EBM.

This article aims to contribute to the operationalization of quaternary prevention - not in terms of its definition[8] - but on how it can be integrated into consultation models, which can be used to improve doctor-patient relationships. Initially, it highlights the importance of doctor-patient relationship for defining family medicine. Then, it presents the enhanced Calgary-Cambridge medical consultation model as an organizational matrix to insert quaternary prevention in its second stage, comprising two moments: diagnosis and care plan. To strengthen quaternary prevention in these two consultation moments, the discussion explores: a) conceptual disease axes (pathological, physiopathological, semiological and epidemiological); b) illness explanatory approaches (ontological and dynamic); and c) suffering in relation to time (present and future) differentiating present lived suffering from concerns about future health. Within this proposed analysis, quaternary prevention entails the careful use of words, and the option for a dynamic explanatory model of health-disease phenomenon.

Doctor-patient relationship

The doctor-patient relationship is the cornerstone of family physician practices, one of the pillars that define family medicine as a medical specialty.[9] By working with many undifferentiated cases, centred on the whole person and community, family medicine is the specialty that most supports and values doctor-patient relationships. It seeks for resources in other areas of knowledge such as psychology, sociology and anthropology to leverage this relationship in order to better comprehend health-disease diad.[9] As McWhinney[9,10] has stated, family physicians, besides understanding the physical nature of diseases, should seek to understand the patients and what meanings an illness bring to patients and their families.

This need to strengthen and improve the doctor-patient relationship has led to various models of consultation that were adopted across different medical schools at different times. For instance, in the 1970s, the Royal College of General Practitioners (RCGP), applied Balint's biographical model[11,12] and Engel's biopsychosocial model[13] in order to define the practice of the family doctors as patient-centred and concerned with patients' total illness experience.[14]

Clinical method: Calgary-Cambridge enhanced model

In Brazil, with the influence of Canadian family physicians, the patient-centred clinical method (PCCM), has largely been adopted both for undergraduate and postgraduate medical educational programmes. The PCCM is organised into six components, the first three in sequence: (1) Exploring disease and the disease experience; (2) Understanding illness process and the whole person; and (3) Negotiating a common management plan. These components are permeated by the last three ones: (4) Incorporating disease prevention and health promotion; (5) Strengthening doctor-patient relationship; and (6) Being realist.[15]

Nevertheless, this paper uses the enhanced Calgary-Cambridge consultation model,[16] since, different from the PCCM, the Calgary-Cambridge explicitly integrates two important points: content (traditional clinical method) and process (ability to communicate effectively). Moreover, the format presented is operationally designed for a 10-minute consultation, the standard general practitioners (GPs) consultations time in the UK. Two axes organise the Calgary-Cambridge method. The first refers to ***data gathering*** and the second to ***clinical care plan***.

- ***Data gathering****:* the patients are encouraged to talk about their problems or main complaints, as well as the context in which they occur, i.e. the biopsychosocial and/or biographical components. At the end of this first stage - usually when patients have expressed their ideas, concerns and expectations - is when the doctor does some closed questions exploring warning signs (Red Flags), as well as performing directed physical examination to close the data gathering stage (Subjective and Objective steps of SOAP acrostic).

- ***Clinical care plan****:* now, the doctor should share with the patient his/her impression about the problem and, together, they both can develop a care plan. It is in this second phase that the information gathered in the first stage, in regard to patients' psychosocial and occupational aspects, will be used to contextualize and individualize the care plan (Assessment and Plan steps of SOAP acrostic).

Thus, the method suggests exhausting the first phase and then, moving to the second (the same as recommended in the SOAP[17] sequence in each clinical care). Therefore, the physician should try to maintain a unidirectional flow and not go back and forth crossing between these two moments of consultation.

Consultation model and quaternary prevention

In the proposed consultation model, the preventive and/or therapeutic activity is located mainly in the second step (clinical management) of Calgary-Cambridge model - or in component three (including components four and five) of the PCCM. Within this step there are two important moments: the first refers to the interpretation(s) of patients' problem(s) that have brought the patients to the consultation (diagnosis stage) and its socialization with them; the second refers to the formulation and sharing of a common care plan or management of patients' problem(s). Figure 1 schematically illustrates the Calgary-Cambridge consultation model and the inclusion of quaternary prevention in the second step of this model.

Quaternary prevention and the basis for its practice

The inclusion of quaternary prevention in the second stage of the Calgary-Cambridge model involves two moments in the consultation. The first is the diagnosis/explanation moment that requires an organization strategy of illness phenomena and their corresponding interpretative approaches; the second refers to a care plan and/or clinical management moment leading to a lower medicalization of disease processes. These two moments are discussed below.

First moment: the interpretation of patients' problem(s)

The practice of family doctors operates with the greatest degree of uncertainty, since these professionals are exposed to a spectrum of individuals and situations that commonly present themselves as undifferentiated cases.[9] Rose explains this phenomenon statistically as a 'continuum of risk and severity',[19] since nature expresses itself in a gradient that ranges from asymptomatic, oligo-symptomatic, symptomatic to frankly manifested. For example, hepatitis "A" in its fulminant form represents less than 1% in general population, the icteric form 15-20%, and the remaining occurring as oligo-symptomatic (i.e. nausea, nonspecific abdominal pain, vague febrile states, and so on) and asymptomatic.

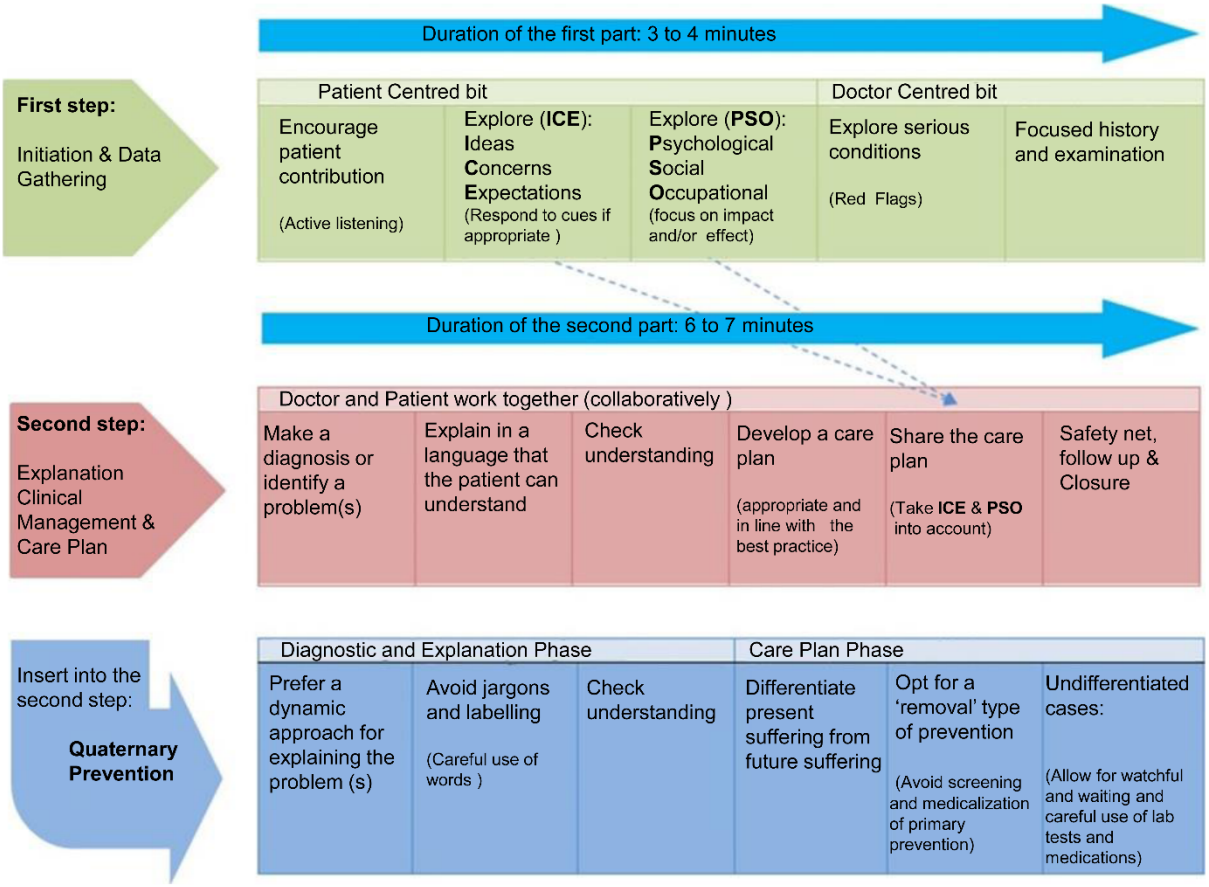

Figure 1. Enhanced Calgary-Cambridge consultation Model[16] as a matrix for inserting quaternary prevention in medical consultation. Source: Durham and Tees-Valley GP Training Programme, England.[18]

Schematically, it is possible to use the analytical outline proposed by Camargo Jr[20] organised in four 'diseases' constituent axes: the anatomopathological; pathophysiological, semiological and epidemiological. The four axes exist in various degrees of disease explanation models conceptualized by medical knowledge, but it possible to make some operational considerations following Rose's idea of continuum of risk and severity: from the more defined and crystallized to the more undefined, uncertain and volatile.

This analytical outline can help primary health care professionals in interpreting patient's problems (the diagnostic phase), as well as can assist in developing a care plan. Thus, the more severe the symptoms or the more characteristic, localized and physical the expressions that define a condition, the more it is possible to understand illness through an anatomopathological approach, focusing on the 'material injury' and the biological body. Conversely, the more oligo-symptomatic, undifferentiated, volatile or without an identifiable 'material lesion' (or when the focus of consultation is concerned about the future health - prevention), the less there is a need for anatomopathological approach, which tends to cause more damage or medicalise the patients' illness experience. Thus, in these cases, the interpretation should be more crafted, remaining closer to the pathophysiological and/or semiological axes - and in the case of prevention, the epidemiological axis (Table 1).

The classification in Table 1, besides categorising complex phenomena that present themselves as complaints and problems to family physicians, it also clarifies some of the elements commonly used as conceptual framework by health professionals to formulate their explanatory models about patient's problems. In this regard, Table 2 summarises two conceptual approaches to illness that are underpinned by those elements discussed in Table 1, which usually are applied to elaborate on sickness processes. The **ontological approach** is associated with the anatomopathological axis (but tends to be applied widely), whereas the **dynamic approach** is more suitable for all axes, but especially to the pathophysiological, semiological and epidemiological axes.

Table 1. Disease constitutive axes.[20,21]

Axes	Commentary	Examples
Anatomopathological (Imagetic-molecular-genetic)	This is the oldest axis of disease construction born from clinical anatomy, and is the most valued. It derives its power and legitimacy from the objectivity of lesions, images and objective specialized reports of material structures that describe and define the disease, and that are supposedly the basis of its manifestation.	The well established and obvious clinical conditions in medicine such as tuberculosis, renal colic, myocardial infarction, most cancers, and so on.
Pathophysiological	It proposes causal relationships (and theoretical models) involving material elements (usually microscopic, molecular, cellular and physicochemical) grouped into tissues, organs and systems, usually reductionist and with little interpretive power for most diseases and illnesses brought by patients in PHC.	Asthma, allergies, gastroesophageal reflux and so on, as well as some chronic diseases such as diabetes, retocolites, rheumatic and immunological diseases.
Semiological	The disease processes are characterised by constellations of signs and symptoms brought by patients to the consultation, and therefore the most empirically valued by them. These symptoms usually are little or not at all explained (physiologically) by the available theories. Nonetheless, they tend to be treated as a disease, whose treatments are characterised by symptoms' suppression or relief.	Most disorders or psychological distress (such as anxiety and depression), unspecified headaches; nonspecific low back pain, fibromyalgia, abdominal pain, irritable bowel syndrome and various other events that have been designated as medically unexplained physical symptoms (MUPS)
Epidemiological	Refers to statistical processes that map the population morbidity and mortality and seek to establish causal associations in order to plan preventive and/or public health actions, inducing preventive treatments (risk-based prevention).	It refers to risk factors or profiles, mainly associated to chronic noncommunicable diseases such as smoking, obesity, sedentary lifestyle, stress, dietary deviations, cholesterol, etc.

Source: based on Camargo Jr.[20,21]

Table 2. Interpretative approaches of illnesses: ontological and dynamic.[22,23]

Ontological Approach	Dynamic Approach
Conceives diseases as 'entities' exterior to people, that invade them locating themselves in body parts; or are defects (lesions) inside the body, whose meanings vary according to history and cultures. In modern medicine, they are related to bacteria, external agents, and genes lesions. The ontological conception has often been linked to a *medical practice that directs their efforts to the exact classification of disease processes (diagnostic definition),* seeking to identify disturbed organs and lesions as sole causes and sources of symptoms.	Conceives diseases from an imbalance between the forces present in human beings, nature and society that are inside and outside the individuals. Thus, it focuses on the patient as a whole and in its environment, avoiding connecting disease disorders to particular body organs or sole causes. Addresses the situation in terms of *complex processes over which multiple influences are possible and co-exist*, considering the person as a whole unit and changeable complex whose psychological, social, and biological aspects are inseparable and inter-influencing, albeit often presented with localised symptoms.

Source: based on Albuquerque and Oliveira[22], and Myers and Benson.[23]

As most cases in PHC are undifferentiated and/or highly complex, the **dynamic approach** to illness assumes greater importance given its flexibility in addressing the illness phenomena, which entails lifelong changes and care processes over time. Hence, regardless the situation, as rule of thumb for practicing quaternary prevention, it is possible to state that, in general, there should be a preference over a functional and dynamic approach to illness. This approach addresses patients' problems and illnesses by valuing their illness experiences, managing a wide range of symptoms (usually not easily framed in terms of pathology) and constructing contextualised interpretations that give some meaning to the patients' experiences and contribute to therapeutic processes using time, easy access and continuity of care as allies.

In some acute cases, where the diagnosis is fast, the prognosis is known to be benign (due to the nature of situation and/or effectiveness of therapy), simplified and ontological approaches (tonsillitis or acute gastroenteritis, for example) may be appropriate. However, in the majority of undifferentiated cases seen in PHC and in many other clinical situations such as chronic rheumatic

conditions, endocrine, psychological, musculoskeletal (many of them with high levels of radiological-clinical dissociation),[24] relapsing cases, and in many acute cases as well, a functional and dynamic approach is much more protective. Additionally, the dynamic approach also allows for a constructive of a self-care participatory educative process for managing the situation than the ontological approach, which commonly focuses on defined pathologies and the quest for a proven accurate diagnose leading to a cascade of interventions.

Thus, it is advisable in most cases - when dealing with patients' complaints or discussing preventive measures – the use of a dynamic, physiological and processual concept of illness. This approach constitutes an instrument for the operationalization of quaternary prevention through the carefully use of language. Thus, the words used by doctors in the communication process should belong to the cultural universe of people (or patients) and need to be carefully applied so that their beliefs, anxieties and fears can be calmly accepted and processed together in order to easy the complexities and uncertainties inherent in the care process.

When including and organising the quaternary prevention activities while elaborating and socializing an interpretation about patient's complaints (diagnostic phase) health professionals should be careful with what they utter, because words can have important consequences: a) be iatrogenic through labelling and/or nocebo effects; b) make it difficult to understand the meaning of the interventions being proposed and, consequently, being detrimental to patient's participation in the care plan process (or vice versa). However, the words can also constitute a powerful therapeutic instrument for inducing the well-known 'placebo effect', since words can help to organise symbolic and affectively patient's experience, preparing him/her positively to the treatment. Unfortunately, the placebo effect is known to be undervalued in biomedicine, as highlighted by McWhinney concerning the biomedical model approach.[10]

Words are the greatest tools of quaternary prevention. For instance, avoiding popular terms or technical concepts reduce the chances of stigmatizing or medicalising. Often the diagnostic phase limits itself to a terminology conversion process where patients' symptoms become technical jargons: 'back pain' becomes lumbago, 'headache' becomes cephalalgia, 'joint pain' becomes arthralgia, and so on. Some technical terms, which are being circulated in society may be misleading and need additional explanations. For instance, patients' should be informed that risk factors such as high cholesterol, hypertension, and obesity are not diseases. Thus, processual thinking and speaking in communication facilitate quaternary prevention, for example, communicating that the blood pressure is 'a little high' and deserves attention is better and different from using words like "hypertensive" or "hypertension", which imply a diagnosis of an incurable chronic 'disease', associated with the use of medications, lifelong dietary restrictions and laboratory check controls.

Second moment: the care plan

Regarding the development of a common therapeutic plan, Figure 1 illustrates that this moment is based on ICE (Ideas, Concerns and Expectations) and PSO (Psychological, Social and Occupational), which form the background against which a care plan is built for managing a clinical problem. For this reason, it is necessary to place suffering in relation to time, differentiating the present suffering from a potential or future suffering, and consequently optimizing quaternary prevention in a care plan through a present-future axis framework. The importance of this concept lies in its focus on the present and/or current severity suffering. This approach tends to improve the risk-benefit ratio of the medical intervention, as long as the intervention is supported by the best available evidence. Similarly, the more projected into the future the possibility of suffering, the worse the risk-benefit ratio and the higher the chances of harm by the medical intervention. Therefore, the practice of quaternary prevention requires this clarity in differentiating present illness/suffering from the probability of future disease or suffering.

In the first case (present suffering) the requirements for interpretation and therapeutic action is governed by ethical and social commitments regulating healthcare professionals that are not extensive to the second case (future suffering). The latter aims anticipatory process, an action performed on healthy people in the present with the intention of avoiding future illness, usually based on numerous predictor devices of morbimortality risk assessment (i.e. Framingham risk scores tables, clinical-decision support software, on-line self-assessment tests), in which individuals have to adjust themselves to routine odds and likely outcomes.[25] This abdutive thinking 'moves reasoning temporally from data gathered about the past to simulations or probabilistic anticipations of the future that in turn demand action in the present'.[25]

The abductive thinking, so promoted in recent decades, has encouraged the medicalization of risk either by introducing preventive treatment interventions into clinical practice (primary and secondary prevention) or by successive and progressive lowering of diagnostic and control targets thresholds for blood pressure, serum cholesterol, glycosylated haemoglobin, BMI etc.[26,27]

This separation between present and future, often obscured by the general culture of medicalization and ontologization of risks (managed as diseases), should be clear to all family physicians. Hence, in regard to prevention – 'future disease' – one should intensify quaternary prevention action, particularly in primary prevention. Moreover, when it comes to prevention, it is useful the distinction between the 'removal' preventive measures and 'additional' preventive measures outlined by Rose,[19] summarized in Table 3. In quaternary prevention it should prevails the general recommendation to avoid the 'additional' preventive measures, especially when it comes to primary prevention (and secondary, in the case of screening) unless it is very well justified.

Table 3. Preventive measures: 'removal' and 'additional.'[19]

Prevention	Conceptualisation	Examples
'removal measure'	According to Rose this measure 'consists of removing or reducing some unnatural exposure in order to restore a state of biological normality' (p. 148). Actions which seek to correct excesses or lacks in people's behaviour, habits, dietary patterns or unhealthy ways of living. The 'removal measure' implies 'less intervention' indicating salutogenic actions well synthetized by the qualifying 'less'. In practice, it means: less sedentary lifestyle, less chemicals, less smoking, less alcohol, less psychotropic, less psychoactive and chemical additives, etc. At the macro-social scale means: less violence, less hierarchy, and less inequality in wealth distribution.	Guidance, counselling and treatment (individual and collective) to smoke cessation, increase physical activity, reduce excessive alcohol intake, improve diet quality with agroecological fruits and vegetables, etc.
'additional measure'	Rose defines this preventive measure as 'adding some other unnatural factor in the hope of conferring protection' (p. 148). Strange interventions to the usual ecology of organism and human beings, within which a technological solution is proposed without the corresponding changes in social determinants of health.	Intake or application of drugs, diagnostic tests, vaccines and other biological products (not habitual or autonomous use), physical or chemical hazards whose potential risk/harm ratio are significantly higher since the susceptibility before the intervention is low.

Source: based on Rose.[19]

In regard to the present illness, using Rose's preventive approach, the dynamic approach, and biomedical constitutive 'diseases' axes summarised above, it is possible to develop interventions that are most suitable in family practice. What follows is a guideline scheme that aims to facilitate the care plan and to highlight areas where there may be excess of medical interventions. The biomedical constitutive 'diseases' axes presented in Table 1 are not dichotomous and their boundaries may overlap. When there is a consistent and equipotent correspondence amongst the interpretative constitutive illness axes, the medical knowledge with its ontological approach (more valued socially and scientifically) can be satisfactory in responding and explaining most of what is going on with the patient.

However, as there are a disproportion of explanatory power amongst these axes, with the predomination of semiological and pathophysiological axes - as in undifferentiated or poorly classifiable cases - the greater the need for a more dynamic approach to illness and the greater the attention to not cause harm to patients through labelling and/or unnecessary use of tests and medications. Thus, the more undifferentiated or nonspecific the signs and symptoms and/or the more functional and physiological condition, the greater the space and the need for a dynamic and craftsmanship approach to patient's complaints, which singularize and medicalise less.

In such cases, the care plan should be based on continuity of care through watchful waiting, once the warning signs (red flags) have been ruled out and a safety net has been established, so that the patient can return in case of symptoms aggravation and/or the patient is well guided on what to do in case of changes in symptom patterns. In both diagnostic and care plan moments it is important to check with the patient if he/she understood and has agreed with what has been communicated. Figure 2 summarises the main ideas discussed in order to facilitate their applicability.

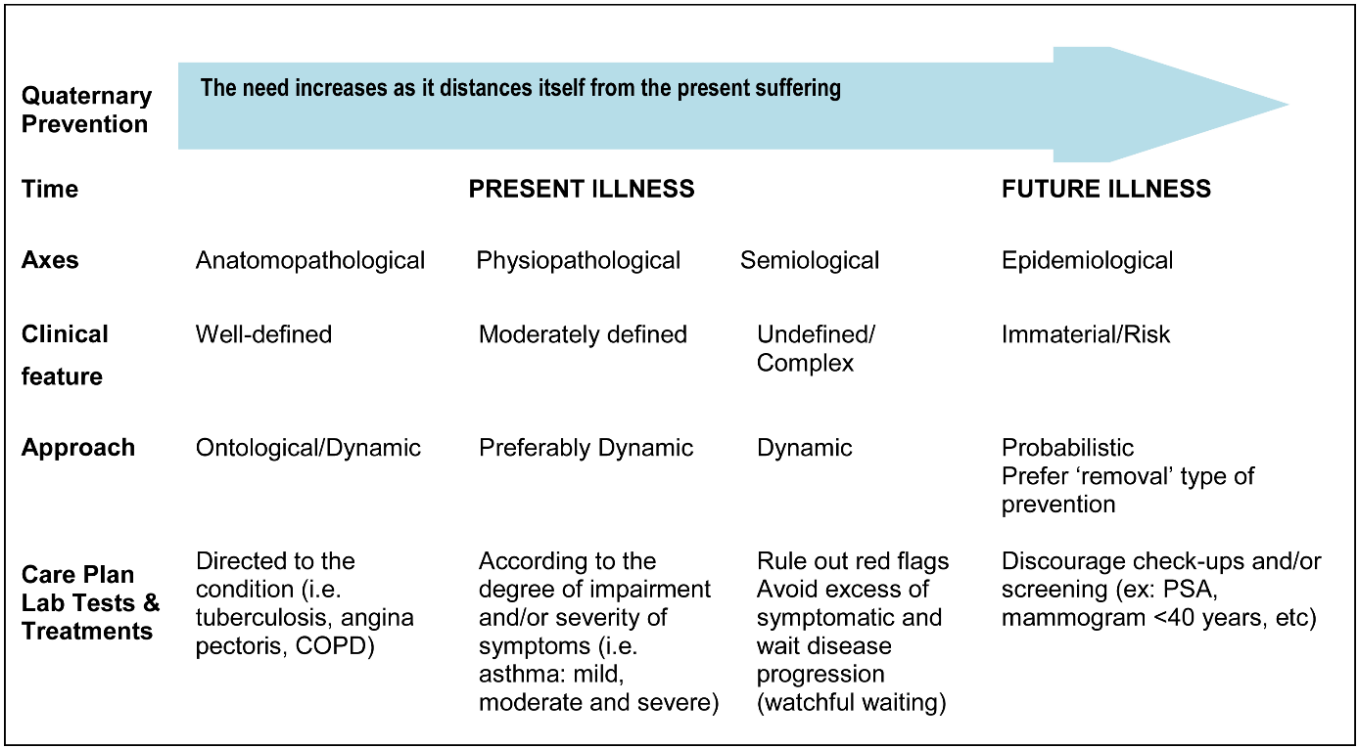

Figure 2. Quaternary Prevention: summary of guidelines for its operationalization in the practice of family medicine.

A particular cluster of health conditions, which is relevant and highly prevalent in PHC deserves a careful attention when applying Figure 2 scheme: the psychological suffering. Despite its subjective nature, the trend is to prioritise an ontological explanatory approach to the detriment of a more dynamic and contextualised explanatory approach. For instance, the prevailing understanding in depression is that it is caused by a lack of serotonin and that in schizophrenia there is a lack of dopamine, and consequently, making analogies with diabetes and the lack of insulin, suggesting that treatment with antidepressants only seeks to restore what is missing in the brain. However, clinicians should not forget that psychotropic drugs have a wide range of effects throughout the body, many of which are harmful, and thus this type of analogy to a 'chemical hormone-like replacement' must be strongly avoided. In fact, there is no scientific confirmation of this hypothesis, since little is known about the interactions between psychosocial conditions and biochemical processes (receptors and neural pathways) related to mental disorders as stated by Gotzsche:[28]

> *'The truth is just the opposite. There is no chemical imbalance to begin with, but when treating mental illness with drugs, we create a chemical imbalance, an artificial condition that the brain tries to counteract. This means that you get worse when you try to stop the medication. An alcoholic also gets worse when there is no more alcohol, but this does not mean that he lacked alcohol in the brain when he started drinking [...] The vast majority of doctors harm their patients further by telling them that the withdrawal symptoms mean that they are still sick and still need the medication'.*

Therefore, the mental suffering must be understood as complex symptomatic case (semiological) and its ontological construct into a 'disorder' is as fragile as medicalising (see criticism of the DSM-V). Thus, health professionals should make an interpretive effort (crafting effort) in order to promote a personalised care. In other words, health professionals should give preference to a dynamic approach when interpreting patients' psychological distress (i.e. formulating a diagnosis).

This approach has implications for the next stage of the care plan, because it tends to restrict the use of medication since mental symptoms are explained in terms of processes and not labelled as diseases. The use of symptomatic chemicals, especially psychotropic drugs, that interfere with people's consciousness and self-perception, should be judiciously prescribed.[28] Regarding symptoms - including the psychological ones – they are often the only indicative of an unknown underlying process, and their sedation may result in losing the contact with them and potentially leading to chronify the condition.[29] In the case of psychotropic drugs, this implies a risk of behaviour manipulation and patient's alienation.

Conclusion

The purpose of outlining a consultation process organised in two key moments (diagnosis and treatment plan) aims to clarify and operationalize the practice of quaternary prevention in the doctor-patient relationship. Certainly, the suggested structure is imperfect due to the complex nature of PHC settings and the inherent limitations of consultation models. However, it offers a conceptual framework for operationally discussing quaternary prevention from doctor-patient relationship perspective, which is relevant for both service practices and teaching settings such as family and community medicine residency programmes.

Quaternary prevention entails the strengthening and reconstruction of family physicians critical and epistemological reasoning, capabilities which are in frank decline as a result of recent changes in medicine increasingly regulated through protocols. This has induced a standardization and generalization of interpretations and treatments,[30,31] assuming an homogeneity of patients, whose personal and social-psychological-existential uniqueness demand precisely the opposite direction, a tailored interpretation and personalised care plan. Therefore, quaternary prevention induces in health professionals the attitude of maintaining a close continued and personalised care which values patients' experiences, protecting them from the deviations induced by therapeutic eagerness and diagnostic automatism.

References

1. Moynihan R, Heneghan C, Godlee F. Too much medicine: from evidence to action. BMJ. 2013;347:f7141. http://dx.doi.org/10.1136/bmj.f7141
2. Norman AH, Tesser CD. Prevenção quaternária na atenção primária à saúde: uma necessidade do Sistema Único de Saúde. Cad Saúde Pública. 2009;25(9):2012–20. http://dx.doi.org/10.1590/S0102-311X2009000900015
3. Jørgensen KJ, Zahl PH, Gøtzsche PC. Breast cancer mortality in organised mammography screening in Denmark: comparative study. BMJ. 2010;340:c1241. http://dx.doi.org/10.1136/bmj.c1241
4. Harrison S, Moran M, Wood B. Policy emergence and policy convergence: the case of "scientific-bureaucratic medicine" in the United States and United Kingdom. British J Politics International Relations. 2002;4:1-24. http://dx.doi.org/10.1111/1467-856X.41068
5. Goldenberg MJ. On evidence and evidence-based medicine: lessons from the philosophy of Science. Soc Sci Med. 2006;62(11):2621-32. http://dx.doi.org/10.1016/j.socscimed.2005.11.031
6. Lambert H, Gordon EJ, Bogdan-Lovis E. Introduc¬tion: gift horse or Trojan horse? Social science per¬spectives on evidence-based health care. Soc Sci Med. 2006;62(11):2613-20. http://dx.doi.org/10.1016/j.socscimed.2005.11.022
7. Greenhalgh T, Howick J, Maskrey N. Evidence based medicine: a movement in crisis? BMJ. 2014;348:g3725. http://dx.doi.org/10.1136/bmj.g3725
8. Jamoulle M, Gomes LF. Prevenção Quaternária e limites em medicina. Rev Bras Med Fam Comunidade. 2014;9(31):186-91. http://dx.doi.org/10.5712/rbmfc9(31)867
9. McWhinney IR. William Pickles Lecture 1996. The importance of being different. Br J Gen Pract. 1996;46:433-6.
10. McWhinney IR. A textbook of Family Medicine. New York: Oxford University Press; 1989.
11. Lakasing E. Michael Balint: an outstanding medical life. British J Gen Pract. 2005;55(518):724-5.
12. Johnson AH. The Balint movement in America. Family Med. 2001;33(3):174-7.
13. Engel GL. The need for a new medical model: a challenge for biomedicine. Science. 1977;196(4286):129-136. http://dx.doi.org/10.1126/science.847460
14. Cheraghi-Sohi S. Contractual change and UK general practitioners: still a case of street-level bureaucrats? [dissertation]. Manchester, UK: Faculty of Medicine and Human Sciences, Manchester University School; 2011.
15. Stewart M, Brown JB, Weston WW, et al. Medicina centrada na pessoa - transformando o método clínico. Porto Alegre: Artmed; 2010.
16. Kurtz SM, Silverman JD, Benson J, Draper J. Marrying content and process in clinical method teaching: enhancing the Calgary-Cambridge guides. Acad Med. 2003;78(8):802-809. http://dx.doi.org/10.1097/00001888-200308000-00011
17. SOAP note [Internet]. St. Petesburg (FL): Wikimedia Foundation, Inc. 2001 – [acesso em 2014 Oct 07]. Disponível em: http://en.wikipedia.org/wiki/SOAP_note
18. Durham and Tees Valley GP Training Programme. Available at: http://www.dtvgptraining.co.uk/st3_consultation_skills_revision.html
19. Rose G. Estratégias da medicina preventiva. Porto Alegre: Artmed; 2010.
20. Camargo Jr KR. A construção das doenças na medicina ocidental contemporânea. Rev SBHC [Internet]. 1993 [acesso em 2014 Oct 07];9(31-40). Disponível em: www.sbhc.org.br/arquivo/download?ID_ARQUIVO=268

21. Camargo Jr KR. Biomedicina, saber & ciência: uma abordagem crítica. São Paulo: Hucitec; 2003.

22. Albuquerque CMS, Oliveira CPF. Saúde e doença: significações e perspectivas em mudança. Millenium Rev ISPV [Internet]. 2002 [acesso em 2008 Feb 23];25. Disponível em: http://www.ipv.pt/millenium/Millenium25/25_27.htm

23. Myers S, Benson H. Psychological factors in healing: a new perspective on an old debate. Behavioral Medicine. 1992;18:5-11. http://dx.doi.org/10.1080/08964289.1992.10544235

24. Jensen MC, Brant-Zawadzki MN, Obuchowski N, Modic MT, Malkasian D, Ross JS. Magnetic resonance imaging of the lumbar spine in people without back pain. N Engl J Med. 1994;331(2):69-73. http://dx.doi.org/10.1056/NEJM199407143310201

25. Adams V, Murphy M, Clarke AE. Anticipation: technoscience, life, affect, temporality. Subjectivity. 2009. 28:246–265. http://dx.doi.org/10.1057/sub.2009.18

26. Starfield B, Hyde J, Gérvas J, Heath I. The concept of prevention: a good idea gone astray? J Epidemiology Community Health. 2008;62(7):580–3. http://dx.doi.org/10.1136/jech.2007.071027

27. Montori V, Isley W, Guyatt G. Waking up from the DREAM of preventing diabetes with drugs. BMJ. 2007;334:882–884. http://dx.doi.org/10.1136/bmj.39169.447488.94

28. Gøtzsche P. Psychiatry Gone Astray. Mad in America: science, psychiatry and community. 2014 Jan 28 [acesso em 2014 Oct 07]. Disponível em: http://www.madinamerica.com/2014/01/psychiatry-gone-astray/

29. Tesser CD. Medicalização social (II): limites biomédicos e propostas para a clínica na atenção básica. Interface (Botucatu). 2006;10(20):347-62. http://dx.doi.org/10.1590/S1414-32832006000200006

30. Norman AH, Russell AJ, Macnaughton J. The payment for performance model and its influence on British general practitioners' principles and practice. Cad Saúde Pública. 2014;30(1):55–67. http://dx.doi.org/10.1590/0102-311X00149912

31. Tesser CD. A verdade na biomedicina, reações adversas e efeitos colaterais: uma reflexão introdutória. Physis. 2007;17(3):465-484. http://dx.doi.org/10.1590/S0103-73312007000300004

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Incidentalomas: concept, relevance and challenges for medical practice

Incidentalomas: conceito, relevância e desafios para a prática médica

Incidentalomas: concepto, relevancia y retos para la práctica médica

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Abstract

Incidentaloma (which has not been included as a MeSH term neither in other medical databases or Bioportal) is a neologism used to describe an incidentally discovered mass (or abnormality) in asymptomatic persons. Incidentaloma, or incidental finding, is extremely common now and in most cases harmless, but sometimes it is not possible to exclude the possibility of real damage and in very few cases, some people can get benefit from its discovery. Therefore, most of incidentalomas represent overdiagnosis originated by the massive use of high-resolution diagnostic procedures. In many cases, incidentaloma causes anxiety, consume time and resources, and can even cause further damage to patients' health as a result of procedures performed in the post-finding follow-up. Thus, it is important to recognize the problem to try to avoid it if possible, and learn strategies to deal with it once we stumbled upon an incidentaloma.

Keywords:
Incidentaloma
Incidental Findings
Medicalization
Quaternary Prevention

Resumo

O incidentaloma (ainda não incluído como um termo MeSH, nem em outros bancos de dados biomédicos ou 'BioPortais') é um neologismo utilizado para descrever uma massa (ou anormalidade) descoberta de modo incidental em pessoas assintomáticas. Os incidentalomas, ou achados incidentais, são extremamente comuns nos dias de hoje, e na maioria dos casos, inofensivos, mas por vezes não se pode excluir a possibilidade real de dano, e em raríssimos casos, algumas pessoas podem se beneficiar devido à sua descoberta. Isso ocorre porque a maioria dos incidentalomas representa sobrediagnóstico causado pelo uso massivo de métodos de diagnóstico de alta-resolução. Em muitos casos, o incidentaloma causa ansiedade, consome tempo e recursos, e pode até causar maiores danos para a saúde dos pacientes, como resultado dos procedimentos realizados no seguimento posterior ao achado. Sendo assim, é importante reconhecer o problema para se tentar evitá-lo tanto quanto possível, e aprender estratégias para lidar com situações onde nos deparamos com incidentalomas.

Palavras-chave:
Incidentaloma
Achados Incidentais
Medicalização
Prevenção Quaternária

Resumen

El incidentaloma (que no ha sido incluido como un término MeSH, ni tampoco en otras bases de datos biomédicas o 'Bioportales') es un neologismo usado para describir una masa (o anormalidad) descubierta en forma incidental en personas asintomáticas. Los incidentalomas, o hallazgos incidentales, son extremadamente comunes actualmente, y en la mayoría de los casos son inofensivos, pero algunas veces no se puede excluir la posibilidad real de daño, y en muy pocos casos algunas personas se beneficiarán debido a su descubrimiento. Esto se debe a que la mayoría de los incidentalomas representa sobrediagnóstico originado por el uso masivo de métodos diagnósticos de alta resolución. En muchos casos, el incidentaloma causa ansiedad, consume tiempo y recursos, e incluso puede causar un mayor daño a la salud de los pacientes como consecuencia de los procedimientos realizados en el seguimiento posterior al hallazgo. Resulta importante reconocer el problema, para tratar de evitarlo en cuanto sea posible, y aprender estrategias para lidiar con situaciones donde nos encontramos con incidentalomas.

Palabras clave:
Incidentaloma
Hallazgos Incidentales
Medicalización
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Introduction

Incidental findings in diagnostic procedures are actually an increasing problem derived from the massive use of medical technology. The increased availability of sophisticated high-resolution tests has uncovered too often finds or "abnormalities" that in the past remained hidden. Many people (symptomatic or not) are subject to increasingly numerous procedures, including CT (computed tomography) and MRI (magnetic resonance imaging) which often visualizes much more than the area of interest. This is the origin of incidental findings or "incidentalomas": the unexpected results of a workup made for another purposes. This narrative review will try to explain briefly the concept of incidentaloma and some examples different from adrenal incidentaloma, the magnitude of the problem we face once it is discovered, and different visions about how to cope with it.

"Incidentaloma" is not a MeSH term. It is included in the compound term "Adrenal incidentaloma", a supplementary concept introduced in 2010. The equivalent MeSH term is "Incidental findings".[1] It is also not included in another medical databases or Bioportal (DeCS, Hetop, Woncadic); but it appears in other non-specialized sites (like BabelNet or Wikipedia) where it is defined as a tumor found by coincidence without clinical symptoms or suspicion.[2] Incidentaloma is a neologism that describes a totally asymptomatic mass or lesion that is discovered "incidentally" in an asymptomatic patient due to the common use of diagnostic imaging techniques.[3] First, this term was introduced to describe an adrenal mass incidentally found[4-7] but later on, it has also appeared in the literature in reference to other endocrine organs,[8-12] or in organs such as liver,[13] kidney,[14] and brain.[15] The concept does not imply etiology neither prognosis of the findings, because they may be benign or malignant lesions, hormonally active or inactive, metastases, infections, granulomas, infiltrations, cysts and pseudocysts, hemorrhages, etc.[3] These findings fall outside the primary purpose for conducting a test or procedure used in clinical care (as a screening or diagnostic test) or research, and may be anticipated (known to be potentially associated with the test) or unanticipated (not typically associated with the procedure).[16-18]

The burden of the problem

Human beings have a lot of reservoirs of incidentalomas, and most of them are subclinical indolent malignancies besides minor benign abnormalities.[19-22] It is more probably to find an incidentaloma than the searched diagnosis, as shown in one study of CT angiography for pulmonary embolism where incidental findings requiring follow-up were nearly three times more common than emboli.[23,24] Incidental findings have changed disease incidence,[24] for instance, thyroid cancer incidence has increased more than doubled over 30 years because of the increasing use of thyroid ultrasound and the high rate of incidental nodules,[25] (later discussed in this paper); there has also been a 61% increased incidence of renal cell carcinomas attributed to their incidental detection on CT scans performed for other reasons.[24]

Small lung nodules are the most common incidentaloma as they are detected on chest TC in roughly 15 percent of nonsmokers and in up to 50 percent of smokers. Of every ten thousand CT scans, at least a thousand will have an incidentaloma, but less than five will progress to overt cancer.[26,27] Unexpected findings can be found by cancer screening (for example, screening for colon cancer with CT - colonography or "virtual" colonoscopy - detects extra-colonic abnormalities in up to 50% of examinations, and the detection rate of unsuspected extra-colonic cancer is approximately one per 200 asymptomatic adults);[28-32] but interventions unrelated to screening can also lead to early cancer detection.[19] Diagnostic scanning of the abdomen, pelvis, chest, head, and neck can reveal incidentalomas in 25 to up to 80% of individuals being tested for other reasons.[33,34] In the 86% of the radiologic reports of 1.192 consecutive patients who underwent whole-body CT screening of the chest, abdomen, and pelvis at an outpatient imaging center, incidental findings were discovered. Thirty seven percent of patients received at least one recommendation for further evaluation. Only in 14% scans were completely negative for any findings.[33] The frequency of incidentalomas for any test in a review of 44 studies (41,866 patients) was 23.6% (95% confidence interval [CI] 15.8-31.3%), was higher in studies involving CT technology (mean 31.1%, 95% CI 20.1-41.9%), in patients with an unspecific initial diagnosis (mean 30.5%, 95% CI 0-81.6%) and when the location of the incidental findings was unspecified (mean 33.9%, 95% CI 18.1-49.7%). Sixty four percent of incidental findings had clinical follow-up (95% CI 52.9-76.1%) and the mean frequency of clinical confirmation was 45.6% (95% CI 32.1-59.2%).[34]

Brain incidentalomas have become very frequent and problematic due to the increased use of MRI of the brain by physicians (in clinical situations where the prevalence of any relevant finding is likely to be low), researchers and companies that sell health "check-ups". In a meta-analysis of 19,559 apparently healthy participants (healthy people, volunteers, research controls, and people undergoing commercial, clinical, or occupational screening), the global prevalence of incidental findings on brain MRI, was 2.7% with a number needed to scan = 37 (it means, for every 37 scans there is one incidental finding), 0.7% for neoplastic findings and 2% for non-neoplastic findings. The more common neoplastic finding was meningioma, and the non-neoplastic findings were arachnoid cyst and aneurysms in second place.[15,35]

Detection is potentially detrimental because the treatment can be harmful, as well as the complication it tries to prevent. For instance, the risk of rupture of a non-complicated aneurysm seems to be low: an average annual incidence of 1.1% (in a study with a median follow-up time was 21.0 years - range: 0.8 - 52.3 years - of 142 patients with 181 unruptured intracranial aneurysms[36]) to 1.4%.[37] But the risk associated with the treatment is higher: procedure-related poor outcomes occurred in 4.7% of patients in a review of endovascular treatment of intracranial unruptured aneurysms, with 1.4% of deaths per year.[38] In most of intracranial vascular incidentalomas, the 5-year risk of complications is higher in treated patients than in untreated persons.[39] So, people probably would be better off not hearing that they had a potentially serious condition for which treatment is more likely to damage than the vascular incidentaloma left to its natural evolution.

A task force of the Stroke Council of the American Heart Association (USA) published recommendations for the management of patients with an unruptured intracranial aneurysm. They said that given the apparent low risk of hemorrhage from incidental, small (<7 mm) aneurysms in patients without previous subarachnoid hemorrhages, observation rather than intervention is generally suggested; however, special consideration for treatment should be given to patients <50 years in this group. In the case of asymptomatic aneurysms ≥7 to 10 mm in diameter warrant strong consideration for treatment, taking into account patient age, existing medical and neurologic conditions, and relative risks for treatment.[40]

Suppose a person who faces an aneurysm chooses to undergo the surgical treatment. Complete reassurance for this person is not even possible after treatment, because further aneurysms may yet develop. Therefore, patients must repeat the screening (whose optimum interval and duration remain unknown), situation that can cause stress and anxiety, and prior to which an aneurysmal subarachnoid hemorrhage might still occur. Even if a further aneurysm is identified by follow-up angiography, it might be too small to be treatable, and this knowledge is likely to impair quality of life.[15]

The massive use of image studies of the pelvis has led to the detection of incidental ovarian, uterine, vascular and pelvic nodal abnormalities in the oncology and non-oncology patient population that in the past remained undiscovered. In a retrospective review of 3,448 CT scans performed in both pre- and postmenopausal women, incidental adnexal lesions were found in 168 patients (5% of cases), 72 of which had extra-ovarian neoplasms. In both pre- and postmenopausal women, these lesions most often proved to be benign, even in the presence of a known malignancy (excluding ovarian carcinoma). In the 40% of patients with known non-gynecologic malignancies, no primary ovarian neoplasms were discovered, and only three percent of the lesions represented metastases, all of which were found in postmenopausal women. No primary ovarian malignancies were discovered incidentally in the non-oncology population either.[41]

The risk of malignancy in a premenopausal woman with an indeterminate ovarian mass is approximately 8.75%; in postmenopausal women, this risk increases to 32.4%. There are findings that suggest malignancy: size, solid mass, necrosis, involvement of adjacent organs or the pelvic side walls; etc.[42] Unilocular, benign-appearing ovarian cysts represent the vast majority of abnormal findings at transvaginal ultrasonography. Eighty percent of the incidentalomas will disappear in several months;[43] but the problem is that, even in cases of suspected malignancy image, finding and treating ovarian cancer in asymptomatic women has proven to be not only useless but dangerous. In the PLCO trial (Prostate, lung, colon and ovarian cancer screening trial), simultaneous screening with CA-125 and transvaginal ultrasound did not reduce ovarian cancer mortality. Approximately 10% of screened women suffered false positive results; a third of whom underwent surgical follow-up; and 15% of that women experienced at least one serious complication.[44]

Despite in this case there is not a visible lesion, incidental findings in genetic or genomic examinations have been also called incidentalomas (genomic or genetic incidentalomas).[45] A broader definition of genomic incidental findings includes health-informative variants that are unrelated to the specific purposes of testing, but may have been identified through an intentional search, including an untargeted scan for any genetic finding of interest.[17] The broad array of genome-scale screening tests (increasingly prevalent in clinical and research) may lead to a phenomenon in which multiple abnormal genomic findings are discovered, analogous to the radiologic incidentalomas.[45]

Genetics incidentalomas can be identified by any genetic test; however, they are likely to be increasingly identified from genome sequencing methods such as whole genome sequencing or whole exome sequencing. As in others incidentalomas, genomic incidental findings are classified according to their likely pathogenicity, but each laboratory has its own policies for identifying, analyzing, and reporting incidental findings. Also, each laboratory decides what risk assessment to assign to each variant within the gene; this is generally done according to an accepted classification scheme based on the likely clinical significance of each variant. However, laboratory assessments regarding the significance of a variant may diverge when the pathogenicity of the variant has not been established previously.[46] Again, one controversial area involves the handling of the medical information found through genomic sequencing.

The American College of Medical Genetics and Genomics has identified a list of genes associated with 24 conditions that it considers a minimal set for which known or likely pathogenic variants should be reported, that usually consider the existence of validated screening procedures to confirm the presence or absence of disease.[47] But, genetic is not destiny. In this case, we incidentally find not even a risk factor, let alone an early disease. We have to deal with the risk to develop a risk factor or a disease.

The risk of disease is also influenced by the disease penetrance and expressivity, which varies by patient population. Few genetic abnormalities have penetrance of 100% (that is the measure of how well the genotype predicts phenotype). There may be relatively broad consensus in reporting a known pathogenic variant in a known cancer gene (e.g. pathogenic BRCA1 mutation). But even the BRCA 1 and 2 have an estimated penetrance from 30% to 70%, and this is the possibility of develop breast cancer by age seventy, not dying from it. Virtually, everybody has genetic abnormalities despite the most have normal phenotype.[27] Between 25 and 50 percent of individuals are carriers for at least one severe, recessive childhood disorder, although estimates as high as 2.8 carrier variants per person have been noted.[46] Many times there are incomplete and changing knowledge of the specific effects of single variants, and of clinically relevant genomic biology in general; and some genomic variants predict a strong chance of disease at some point in the future, but there may be no clinical signs of the disease at the time of detection meaning that we have no way to exclude or confirm the diagnosis, thus we add more doubts and concerns than certainties.[48]

In summary, the word incidentaloma implies the discovery by chance of some lesion that probably never will harm the person,[19,22,27,49] but sometimes we cannot exclude that there could be a real possibility of damage. As Welch points out, that´s why radiologists have called them 'incidentalomas', from incidental as in 'minor or trivial', and 'oma' meaning growths or tumors.[27] Therefore, the word incidentaloma implies uncertainty. In very few cases we know that screening of the tumor or disease reduces mortality or morbidity associated with it. Moynihan states that a diagnostic test is usually assessed according to how well it detects presence *versus* absence of a certain disease, rather than how well it detects clinically meaningful stages of diseases or abnormalities (where a disease label and associated intervention will do more harm than good).[50]

The vast majority of the malignant tumors incidentally found represent overdiagnosis because basically there are much more incidentalomas, than people dying from the respective cancers.[26,27] We can see changes in the incidence for some cancers, where the rapidly rising in diagnosis (for example, thyroid cancer), [25,51-54] is not followed by a decrease of death rates (they remain relatively stable), and this is a phenomenon suggestive of widespread overdiagnosis.[49] Cancer overdiagnosis happens due to the detection of some malignant lesions that will never progress (or, in fact, regress) or will progress too slowly enough that the patient dies of other causes before the cancer becomes symptomatic.[19] Less than 5% of lung nodules in smokers, and less than 1% of this incidentalomas could possible represent lethal cancers.[27] So, 'a very small number of people will benefit from early detection of an incidental malignant tumor, while others will suffer the anxiety and adverse effects of further investigation and treatment of an "abnormality" that would never have harmed them'.[49]

How to deal with incidentalomas

The issue of what to do about incidentalomas is not simple. Doctors are not punished for overdiagnosis (neither for false-positive results), but they are punished for failing to diagnose. Guided in part by fears of lawsuits, and because of they were learning to be afraid to the uncertainty, clinicians tend to request additional tests which too often do not result in clinical clarity, diagnostic certainty, or patient satisfaction. The widespread belief in the unlimited capacity of medical science is one of a number of myths that reinforce the excess of medical activity.[27,55-57] Medical technology is interventive, expansive, defines diseases and makes generalizations as well as strongly influences the concept of disease, and hence medical actions by defining what is diagnosed and what is treated. As it can generate reproducible results, technology has contributed to making medicine more scientific, and has made medical knowledge independent from the subjective experience of the patient.

However, despite remarkable technologic advancement, the practice of medicine continues to involve uncertainty that along with faith in technology - as well as other factors - have contributed to increase the use of technology and technological development.[58] Improvement in image quality combined with visualization as a cultural preference have contributed to a belief that imaging is a superior diagnostic method for acquiring knowledge about the body.[59] Dealing with these findings inevitably consumes time and efforts, creates substantial anxiety for patients and doctors, and distracts them from their primary concerns.[24] The additional medical care, including treatments, which in some cases may pose an additional risk to the patient triggered by an incidental finding, has been called the 'cascade effect'.[60] A way to avoid incidental findings is to make an adequate selection of diagnostic or screening tests. The best approach is not to start the cascade, whenever we can.

Once the incidentaloma has been discovered, a way to deal with it is defining rational approaches to the problem. We can ask "What is the responsible use of information that nobody asked for?"[31] Practitioners must use expensive resources responsibly, apply evidence rigorously, and validate the benefits of new technologies.[18,55] Some reviews or consensus had been redacted for addressing incidental findings,[24,47,61-65] but many of them implies to engage the patient in routine follow-ups with risks and costs for the health system and the patient.

In this regard, the EEUU Presidential Commission on Bioethics has developed a set of recommendations on this issue with four ethical principles applicable to the ethical assessment of incidental findings: (1) respect for persons (right to self-determination); (2) beneficence (and involves non-maleficence principle); (3) justice and fairness; and (4) intellectual freedom and responsibility (protects intellectual exploration that furthers scientific progress, but requiring that practitioners take responsibility for their actions).[17] Recommendations of guidelines panels composed of generalists tend to be more conservative than those elaborated by experts, in part because they are chosen for their skills in critical appraisal and because they have little to gain from the recommendations.[66]

Patients' preferences should be taken into account, but they may have unrealistic expectations about the benefits of test results and are not typically aware that disclosure of results may actually be harmful. In many circumstances, a lot of patients will choose a test for low-probability conditions despite attendant costs, anxiety, and physical risks (e.g. prostate specific antigen[67] or mammography in young women).[68] Their decisions may depend not only on the likelihood of a particular event but also the perceived severity and significance of the consequences.[18,24]

Physicians ideally collaborate with patients to achieve decisions that are well informed and consonant with patients' values and preferences (shared decision making). It implies that clinicians and patients share the best available evidence, and clinicians have to discuss risk with patients in a straightforward and transparent manner, unless patients specify that they do not want the information.[24,69]

There are now evidence-based decision support tools for clinicians and decision aids for patients; however, the knowledge about benefits, risks, and scientific uncertainty is not enough. In real life, decisions are strongly influenced by emotions such as beliefs and trust, fears, vulnerability, long-standing routines, personal experiences, messages conveyed by advertising and media, and the advice, testimonials, and transmitted knowledge imparted by trusted sources. People need hope, safety and a sense of control of their lives. If they are widely convinced that a screening test or drug is beneficial, confronting these beliefs can, if anything, engender suspicions about one's veracity and motives. There is still a universe dominated by the idea of unpolluted prevention (fostered by mass media, health insurance systems, pharmacy and health technology industries, and many doctors' messages).

Unrealistic expectations therefore persist, not only due to misinformation. False expectations fuel market demand for products, industries, and health delivery systems and can be fomented by misleading advertising. Confronting these expectations can not only dash hopes but potentially threaten profits, shareholders, clinical practices, industries, legislation, and political careers. In order to avoid the harm of excessive prevention activity, the doctor should consider the fears and expectations of the patient, but as we see, the landscape is not an easy one.[65,70]

When evidence is clear regarding benefit *versus* harm (i.e. screening might reduce cancer mortality by that specific tumor), we can agree with patients whether or not incidentaloma will be disclosed when obtaining their consent for testing. However, when evidence is not clear, we will need to describe potential benefits and risks to patients and helping them make decisions that incorporate their own values and preferences.[18,27] In that case, one could tell the patient about the incidentaloma, and engaging the patient in shared decision making (but then we could scare the patient about the risk of a possible cancer). Radiologists could consider ignoring incidentalomas in this category, [27] but it is not a general consensus ('Despite the potential harms, radiologists should report incidental imaging findings and frame reports to help patients make optimal decisions about them').[24]

Finally, when it is known that screening does not reduce mortality, doctors can avoid call it abnormality, and so protect their patient from overdiagnosis and overtreatment.[27] A working group at a meeting convened by the National Cancer Institute to mitigate overdiagnosis, proposed that the use of the term "cancer" should be reserved for describing lesions with a reasonable likelihood of lethal progression if left untreated. They said that premalignant conditions (e.g. ductal carcinoma *in situ* or high-grade prostatic intraepithelial neoplasia) should not be labeled as cancer, carcinoma or neoplasia, but rename such cancers as IDLE (indolent lesions of epithelial origin) conditions.[20] Changing the words probably would help to change the symbolic meaning of them, and facilitate the paradigm shift towards a less intrusive medicine.

Conclusion

A disease can be now diagnosed based on laboratory tests in the absence of clinical signs and symptoms, and it is not always a good thing. The unintended findings of diagnostic procedures have changed diseases definition and incidence (have created a new kind of disease, the incidentaloma), and have generated substantial amounts of overdiagnosis and overtreatment, because in very few cases they represent a disease that deserves to be considered and treated. In a world dominated by images, by the search for certainty and reinsurance, by the medicalization of everyday life, resisting the onslaught of medical technology is not easy. Additionally, incidental findings usually cause fear, anxiety, worry and create the need for a follow-up to ensure the persons to feel healthy.

Hence, even when incidentalomas are non-significant they will have broken the sense of health. In some sense, incidentaloma has to do with the impossibility of not to do. Many times, because of fears and beliefs of patients and doctors, as well as in many others situations, the incidentaloma is one possible consequence of not saying 'don't do it' while adverse effects could be the consequence of a good care process. A popular phrase says 'the road to hell is paved with good intentions', advances in medical technology have brought countless positive changes, but also have unintended consequences, sometimes negative. It is essential to minimize these undesirable consequences, and perhaps it is time to change the paradigms.

References

1. Choyke PL, ACR Committee on Appropriateness Criteria. ACR Appropriateness Criteria on incidentally discovered adrenal mass. J Am Coll Radiol. 2006;3(7):498-504. http://dx.doi.org/10.1016/j.jacr.2006.02.031. PMid:17412112.
2. BabelNet. Dictionnary and semantic network [Internet]. Rome: Sapienza University of Rome. [cited 2014 Nov 14]. Available from: http://babelnet.org/synset?word=incidentaloma&lang=EN&details=1&orig=incidentaloma.
3. Mirilas P, Skandalakis JE. Benign anatomical mistakes: incidentaloma. Am Surg. 2002;68(11):1026-1028. PMid:12455801.
4. Geelhoed GW, Druy EM. Management of the adrenal "incidentaloma". Surgery. 1982;92(5):866-874. PMid:7135206.
5. O'Leary TJ, Ooi TC. The adrenal incidentaloma. Can J Surg. 1986;29(1):6-8. PMid:3940589.
6. Waldner H, Wilker D, Eibl-Eibesfeldt B. Therapeutic procedure in "incidentaloma" of the adrenal glands. Chirurg. 1986;57(9):557-559. PMid:3780354.
7. Ooi TC. Adrenal incidentalomas: incidental in detection, not significance. CMAJ. 1997;157(7):903-904. PMid:9327799.
8. Molitch ME, Russell EJ. The pituitary "incidentaloma". Ann Intern Med. 1990;112(12):925-931. http://dx.doi.org/10.7326/0003-4819-112-12-925. PMid:2187392.
9. Cohen MS, Arslan N, Dehdashti F, Doherty GM, Lairmore TC, Brunt LM, et al. Risk of malignancy in thyroid incidentalomas identified by fluorodeoxyglucose-positron emission tomography. Surgery. 2001;130(6):941-946. http://dx.doi.org/10.1067/msy.2001.118265. PMid:11742321.
10. Pesenti M, Frasoldati A, Azzarito C, Valcavi R. Parathyroid incidentaloma discovered during thyroid ultrasound imaging. J Endocrinol Invest. 1999;22(10):796-799. http://dx.doi.org/10.1007/BF03343646. PMid:10614530.
11. Reincke M, Allolio B, Saeger W, Menzel J, Winkelmann W. The 'incidentaloma' of the pituitary gland. Is neurosurgery required? JAMA. 1990;263(20):2772-2776. PMid:2332920. http://dx.doi.org/10.1001/jama.1990.03440200076026.
12. Bramnert M. Hypophyseal incidentaloma is a common finding requiring investigation. The question is: surgery, medication or wait-and-see? Lakartidningen. 1998;95(30-31):3300-3303. PMid:9715067.
13. Little JM, Kenny J, Hollands MJ. Hepatic incidentaloma: a modern problem. World J Surg. 1990;14(4):448-451. http://dx.doi.org/10.1007/BF01658665. PMid:2166378.
14. Iannicelli P, Rosa A. Diagnostic imaging of kidney carcinomas. Our experience and review of the literature. Minerva Urol Nefrol. 1992;44(3):177-183. PMid:1492268.

15. Al-Shahi Salman R, Whiteley WN, Warlow C. Screening using whole-body magnetic resonance imaging scanning: who wants an incidentaloma? J Med Screen. 2007; 14(1):2-4. http://dx.doi.org/10.1258/096914107780154530. PMid:17362563.

16. Wolf SM, Lawrenz FP, Nelson CA, Kahn JP, Cho MK, Clayton EW, et al. Managing incidental findings in human subjects research: analysis and recommendations. J Law Med Ethics. 2008; 36(2):219-248. http://dx.doi.org/10.1111/j.1748-720X.2008.00266.x. PMid:18547191.

17. Presidential Commission for the Study of Bioethical Issues. Anticipate and communicate: ethical management of incidental and secondary findings in the clinical, research, and direct-to-consumer contexts [Internet]. Washington: Presidential Commission for the Study of Bioethical Issue; 2013 [cited 2014 Nov 11]. Available from: http://bioethics.gov/sites/default/files/FINALAnticipateCommunicate_PCSBI_0.pdf.

18. Ells C, Thombs BD. The ethics of how to manage incidental findings. CMAJ. 2014;186(9):655-656. http://dx.doi.org/10.1503/cmaj.140136. PMid:24688013.

19. Welch HG, Black WC. Overdiagnosis in cancer. J Natl Cancer Inst. 2010;102(9):605-613. http://dx.doi.org/10.1093/jnci/djq099. PMid:20413742.

20. Esserman LJ, Thompson IM Jr, Reid B. Overdiagnosis and overtreatment in cancer: an opportunity for improvement. JAMA. 2013;310(8):797-798. http://dx.doi.org/10.1001/jama.2013.108415. PMid:23896967.

21. Esserman LJ, Thompson IM, Reid B, Nelson P, Ransohoff DF, Welch HG, et al. Addressing overdiagnosis and overtreatment in cancer: a prescription for change. Lancet Oncol. 2014;15(6):e234-e242. http://dx.doi.org/10.1016/S1470-2045(13)70598-9. PMid:24807866.

22. Moynihan R, Doust J, Henry D. Preventing overdiagnosis: how to stop harming the healthy. BMJ. 2012; 344:e3502. http://dx.doi.org/10.1136/bmj.e3502. PMid:22645185.

23. Hall WB, Truitt SG, Scheunemann LP, Shah SA, Rivera MP, Parker LA, et al. The prevalence of clinically relevant incidental findings on chest computed tomographic angiograms ordered to diagnose pulmonary embolism. Arch Intern Med. 2009;169(21):1961-1965. http://dx.doi.org/10.1001/archinternmed.2009.360. PMid:19933956.

24. Brown SD. Professional norms regarding how radiologists handle incidental findings. J Am Coll Radiol. 2013;10(4):253-257. http://dx.doi.org/10.1016/j.jacr.2012.10.003. PMid:23545084.

25. Davies L, Welch HG. Increasing incidence of thyroid cancer in the United States, 1973-2002. JAMA. 2006;295(18):2164-2167. http://dx.doi.org/10.1001/jama.295.18.2164. PMid:16684987.

26. Black WC, Haggstrom DA, Welch HG. All-cause mortality in randomized trials of cancer screening. J Natl Cancer Inst. 2002;94(3):167-173. http://dx.doi.org/10.1093/jnci/94.3.167. PMid:11830606.

27. Welch HG, Schwartz L, Woloshin S. Overdiagnosed: making people sick in the pursuit of health. Boston: Beacon Press; 2011.

28. Ginnerup Pedersen B, Rosenkilde M, Christiansen TE, Laurberg S. Extracolonic findings at computed tomography colonography are a challenge. Gut. 2003;52(12):1744-1747. http://dx.doi.org/10.1136/gut.52.12.1744. PMid:14633954.

29. Xiong T, Richardson M, Woodroffe R, Halligan S, Morton D, Lilford RJ. Incidental lesions found on CT colonography: their nature and frequency. Br J Radiol. 2005;78(925):22-29. http://dx.doi.org/10.1259/bjr/67998962. PMid:15673525.

30. Yee J, Kumar NN, Godara S, Casamina JA, Hom R, Galdino G, et al. Extracolonic abnormalities discovered incidentally at CT colonography in a male population. Radiology. 2005;236(2):519-526. http://dx.doi.org/10.1148/radiol.2362040166. PMid:16040909.

31. Fletcher RH, Pignone M. Extracolonic findings with computed tomographic colonography: asset or liability? Arch Intern Med. 2008;168(7):685-686. http://dx.doi.org/10.1001/archinte.168.7.685. PMid:18413549.

32. Pickhardt PJ, Kim DH, Meiners RJ, Wyatt KS, Hanson ME, Barlow DS, et al. Colorectal and extracolonic cancers detected at screening CT colonography in 10,286 asymptomatic adults. Radiology. 2010;255(1):83-88. http://dx.doi.org/10.1148/radiol.09090939. PMid:20308446.

33. Furtado CD, Aguirre DA, Sirlin CB, Dang D, Stamato SK, Lee P, et al. Whole-body CT screening: spectrum of findings and recommendations in 1192 patients. Radiology. 2005;237(2):385-394. http://dx.doi.org/10.1148/radiol.2372041741. PMid:16170016.

34. Lumbreras B, Donat L, Hernández-Aguado I. Incidental findings in imaging diagnostic tests: a systematic review. Br J Radiol. 2010;83(988):276-289. http://dx.doi.org/10.1259/bjr/98067945. PMid:20335439.

35. Morris Z, Whiteley WN, Longstreth WT Jr, Weber F, Lee YC, Tsushima Y, et al. Incidental findings on brain magnetic resonance imaging: systematic review and meta-analysis. BMJ. 2009; 339:b3016. http://dx.doi.org/10.1136/bmj.b3016. PMid:19687093.

36. Juvela S, Poussa K, Lehto H, Porras M. Natural history of unruptured intracranial aneurysms: a long-term follow-up study. Stroke. 2013;44(9):2414-2421. http://dx.doi.org/10.1161/STROKEAHA.113.001838. PMid:23868274.

37. Greving JP, Wermer MJ, Brown RD Jr, Morita A, Juvela S, Yonekura M, et al. Development of the PHASES score for prediction of risk of rupture of intracranial aneurysms: a pooled analysis of six prospective cohort studies. Lancet Neurol. 2014;13(1):59-66. http://dx.doi.org/10.1016/S1474-4422(13)70263-1. PMid:24290159.

38. Naggara ON, Lecler A, Oppenheim C, Meder JF, Raymond J. Endovascular treatment of intracranial unruptured aneurysms: a systematic review of the literature on safety with emphasis on subgroup analyses. Radiology. 2012;263(3):828-835. http://dx.doi.org/10.1148/radiol.12112114. PMid:22623696.

39. Al-Shahi Salman R, White PM, Counsell CE, du Plessis J, van Beijnum J, Josephson CB, et al. Outcome after conservative management or intervention for unruptured brain arteriovenous malformations. JAMA. 2014;311(16):1661-1669. http://dx.doi.org/10.1001/jama.2014.3200. PMid:24756516.

40. Bederson JB, Awad IA, Wiebers DO, Piepgras D, Haley EC Jr, Brott T, et al. Recommendations for the management of patients with unruptured intracranial aneurysms: A statement for healthcare professionals from the Stroke Council of the American Heart Association. Circulation. 2000;102(18):2300-2308. http://dx.doi.org/10.1161/01.CIR.102.18.2300. PMid:11056108.

41. Slanetz PJ, Hahn PF, Hall DA, Mueller PR. The frequency and significance of adnexal lesions incidentally revealed by CT. AJR Am J Roentgenol. 1997;168(3):647-650. http://dx.doi.org/10.2214/ajr.168.3.9057508. PMid:9057508.

42. Gore RM, Newmark GM, Thakrar KH, Mehta UK, Berlin JW. Pelvic incidentalomas. Cancer Imaging. 2010; 10 Spec no A(1A):S15-S26. http://dx.doi.org/10.1102/1470-7330.2010.9021. PMid:20880789.

43. Solnik MJ, Alexander C. Ovarian incidentaloma. Best Pract Res Clin Endocrinol Metab. 2012;26(1):105-116. http://dx.doi.org/10.1016/j.beem.2011.07.002. PMid:22305456.

44. Buys SS, Partridge E, Black A, Johnson CC, Lamerato L, Isaacs C, et al. Effect of screening on ovarian cancer mortality: the Prostate, Lung, Colorectal and Ovarian (PLCO) Cancer Screening Randomized Controlled Trial. JAMA. 2011;305(22):2295-2303. http://dx.doi.org/10.1001/jama.2011.766. PMid:21642681.

45. Kohane IS, Masys DR, Altman RB. The incidentalome: a threat to genomic medicine. JAMA. 2006;296(2):212-215. http://dx.doi.org/10.1001/jama.296.2.212. PMid:16835427.

46. Christensen K, Kalia S, Green R. Incidental findings from genetic testing [cited 2014 Nov 13]. In: UpToDate [Internet]. Filadelfia (PA): WoltersKluwer Health; 2014. Available from: http://www.uptodate.com/es/home

47. Green RC, Berg JS, Grody WW, Kalia SS, Korf BR, Martin CL, et al. ACMG recommendations for reporting of incidental findings in clinical exome and genome sequencing. Genet Med. 2013;15(7):565-574. http://dx.doi.org/10.1038/gim.2013.73. PMid:23788249.

48. Solomon BD. Incidentalomas in genomics and radiology. N Engl J Med. 2014;370(11):988-990. http://dx.doi.org/10.1056/NEJMp1310471. PMid:24620864.

49. Moynihan R, Doust J, Henry D. Preventing overdiagnosis: how to stop harming the healthy. BMJ. 2012;344:e3502. http://dx.doi.org/10.1136/bmj.e3502. PMid:22645185.

50. Moynihan R, Henry D, Moons KG. Using evidence to combat overdiagnosis and overtreatment: evaluating treatments, tests, and disease definitions in the time of too much. PLoS Med. 2014;11(7):e1001655. http://dx.doi.org/10.1371/journal.pmed.1001655. PMid:24983872.

51. Brito JP, Morris JC, Montori VM. Thyroid cancer: zealous imaging has increased detection and treatment of low risk tumours. BMJ. 2013; 347:f4706. http://dx.doi.org/10.1136/bmj.f4706. PMid:23982465.

52. Morris LG, Sikora AG, Tosteson TD, Davies L. The increasing incidence of thyroid cancer: the influence of access to care. Thyroid. 2013;23(7):885-891. http://dx.doi.org/10.1089/thy.2013.0045. PMid:23517343.

53. Guay B, Johnson-Obaseki S, McDonald JT, Connell C, Corsten M. Incidence of differentiated thyroid cancer by socioeconomic status and urban residence: Canada 1991-2006. Thyroid. 2014;24(3):552-555. http://dx.doi.org/10.1089/thy.2013.0308. PMid:24003960.

54. Udelsman R, Zhang Y. The epidemic of thyroid cancer in the United States: the role of endocrinologists and ultrasounds. Thyroid. 2014;24(3):472-479. http://dx.doi.org/10.1089/thy.2013.0257. PMid:23937391.

55. Stone JH. Incidentalomas--clinical correlation and translational science required. N Engl J Med. 2006;354(26):2748-2749. http://dx.doi.org/10.1056/NEJMp058264. PMid:16807411.

56. Heath I. Role of fear in overdiagnosis and overtreatment-an essay by Iona Heath. BMJ. 2014; 349:g6123. http://dx.doi.org/10.1136/bmj.g6123. PMid:25954986.

57. Hoffman JR, Kanzaria HK. Intolerance of error and culture of blame drive medical excess. BMJ. 2014; 349:g5702. http://dx.doi.org/10.1136/bmj.g5702. PMid:25315302.

58. Hofmann B. Too much of a good thing is wonderful? A conceptual analysis of excessive examinations and diagnostic futility in diagnostic radiology. Med Health Care Philos. 2010;13(2):139-148. http://dx.doi.org/10.1007/s11019-010-9233-8. PMid:20151206.

59. Wagner J, Aron DC. Incidentalomas: a “disease” of modern imaging technology. Best Pract Res Clin Endocrinol Metab. 2012;26(1):3-8. http://dx.doi.org/10.1016/j.beem.2011.08.006. PMid:22305448.

60. Mold JW, Stein HFC. The cascade effect in the clinical care of patients. N Engl J Med. 1986;314(8):512-514. http://dx.doi.org/10.1056/NEJM198602203140809. PMid:3945278.

61. Berland LL, Silverman SG, Gore RM, Mayo-Smith WW, Megibow AJ, Yee J, et al. Managing incidental findings on abdominal CT: white paper of the ACR incidental findings committee. J Am Coll Radiol. 2010;7(10):754-773. http://dx.doi.org/10.1016/j.jacr.2010.06.013. PMid:20889105.

62. Terzolo M, Stigliano A, Chiodini I, Loli P, Furlani L, Arnaldi G, et al. AME position statement on adrenal incidentaloma. Eur J Endocrinol. 2011;164(6):851-870. http://dx.doi.org/10.1530/EJE-10-1147. PMid:21471169.

63. Freda PU, Beckers AM, Katznelson L, Molitch ME, Montori VM, Post KD, et al. Pituitary incidentaloma: an endocrine society clinical practice guideline. J Clin Endocrinol Metab. 2011;96(4):894-904. http://dx.doi.org/10.1210/jc.2010-1048. PMid:21474686.

64. Patel MD, Ascher SM, Paspulati RM, Shanbhogue AK, Siegelman ES, Stein MW, et al. Managing incidental findings on abdominal and pelvic CT and MRI, part 1: white paper of the ACR Incidental Findings Committee II on adnexal findings. J Am Coll Radiol. 2013;10(9):675-681. http://dx.doi.org/10.1016/j.jacr.2013.05.023. PMid:24007607.

65. Berland LL. Overview of white papers of the ACR incidental findings committee ii on adnexal, vascular, splenic, nodal, gallbladder, and biliary findings. J Am Coll Radiol. 2013;10(9):672-674. http://dx.doi.org/10.1016/j.jacr.2013.05.012. PMid:23816427.

66. Woolf SH. The price of false beliefs: unrealistic expectations as a contributor to the health care crisis. Ann Fam Med. 2012;10(6):491-494. http://dx.doi.org/10.1370/afm.1452. PMid:23149524.

67. U.S. Preventive Services Task Force (USPSTF). Prostate cancer: screening [Internet]. Rockville: USPSTF; 2012 [cited 2014 Nov 14]. Available from: http://www.uspreventiveservicestaskforce.org/Page/Topic/recommendation-summary/prostate-cancer-screening.

68. Yankaskas BC, Haneuse S, Kapp JM, Kerlikowske K, Geller B, Buist DS, et al. Performance of first mammography examination in women younger than 40 years. J Natl Cancer Inst. 2010;102(10):692-701. http://dx.doi.org/10.1093/jnci/djq090. PMid:20439838.

69. Elwyn G, Laitner S, Coulter A, Walker E, Watson P, Thomson R. Implementing shared decision making in the NHS. BMJ. 2010; 341:c5146. http://dx.doi.org/10.1136/bmj.c5146. PMid:20947577.

70. Gérvas J, Heath I, Durán A, Gené J, Members of the Seminar of Primary Health Innovation 2008. Clinical prevention: patients' fear and the doctor's guilt. Eur J Gen Pract 2009;15(3):122-124. PMid:19883148. http://dx.doi.org/10.3109/13814780903242481.

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Incidentalomas: concepto, relevancia y retos para la práctica médica

Incidentalomas: conceito, relevância e desafios para a prática médica

Incidentalomas: concept, relevance and challenges for medical practice

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Resumen

El incidentaloma (que no ha sido incluido como un término MeSH, ni tampoco en otras bases de datos biomédicas o 'Bioportales') es un neologismo usado para describir una masa (o anormalidad) descubierta en forma incidental en personas asintomáticas. Los incidentalomas, o hallazgos incidentales, son extremadamente comunes actualmente, y en la mayoría de los casos son inofensivos, pero algunas veces no se puede excluir la posibilidad real de daño, y en muy pocos casos algunas personas se beneficiarán debido a su descubrimiento. Esto se debe a que la mayoría de los incidentalomas representa sobrediagnóstico originado por el uso masivo de métodos diagnósticos de alta resolución. En muchos casos, el incidentaloma causa ansiedad, consume tiempo y recursos, e incluso puede causar un mayor daño a la salud de los pacientes como consecuencia de los procedimientos realizados en el seguimiento posterior al hallazgo. Resulta importante reconocer el problema, para tratar de evitarlo en cuanto sea posible, y aprender estrategias para lidiar con situaciones donde nos encontramos con incidentalomas.

Palabras clave:
Incidentaloma
Hallazgos Incidentales
Medicalización
Prevención Cuaternaria

Resumo

O incidentaloma (ainda não incluído como um termo MeSH, nem em outros bancos de dados biomédicos ou 'BioPortais') é um neologismo utilizado para descrever uma massa (ou anormalidade) descoberta de modo incidental em pessoas assintomáticas. Os incidentalomas, ou achados incidentais, são extremamente comuns nos dias de hoje, e na maioria dos casos, inofensivos, mas por vezes não se pode excluir a possibilidade real de dano, e em raríssimos casos, algumas pessoas podem se beneficiar devido à sua descoberta. Isso ocorre porque a maioria dos incidentalomas representa sobrediagnóstico causado pelo uso massivo de métodos de diagnóstico de alta-resolução. Em muitos casos, o incidentaloma causa ansiedade, consome tempo e recursos, e pode até causar maiores danos para a saúde dos pacientes, como resultado dos procedimentos realizados no seguimento posterior ao achado. Sendo assim, é importante reconhecer o problema para se tentar evitá-lo tanto quanto possível, e aprender estratégias para lidar com situações onde nos deparamos com incidentalomas.

Palavras-chave:
Incidentaloma
Achados Incidentais
Medicalização
Prevenção Quaternária

Abstract

Incidentaloma (which has not been included as a MeSH term neither in other medical databases or Bioportal) is a neologism used to describe an incidentally discovered mass (or abnormality) in asymptomatic persons. Incidentaloma, or incidental finding, is extremely common now and in most cases harmless, but sometimes it is not possible to exclude the possibility of real damage and in very few cases, some people can get benefit from its discovery. Therefore, most of incidentalomas represent overdiagnosis originated by the massive use of high-resolution diagnostic procedures. In many cases, incidentaloma causes anxiety, consume time and resources, and can even cause further damage to patients' health as a result of procedures performed in the post-finding follow-up. Thus, it is important to recognize the problem to try to avoid it if possible, and learn strategies to deal with it once we stumbled upon an incidentaloma.

Keywords:
Incidentaloma
Incidental Findings
Medicalization
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Introducción

Los hallazgos incidentales en los procedimientos diagnósticos son un problema creciente derivado del uso masivo de la tecnología médica. La amplia disponibilidad de pruebas sofisticadas de alta resolución ha llevado muy a menudo al descubrimiento de "anormalidades" que en el pasado habían permanecido ocultas. Un gran número de personas (sintomáticas o no) son sometidas a numerosos procedimientos, incluyendo TC (tomografía computada) y RMN (resonancia magnética nuclear), métodos que a menudo visualizan mucho más que el área de interés. Este es el origen de los hallazgos incidentales o "incidentalomas", son los resultados inesperados de un examen diagnóstico realizado con otros propósitos. Esta revisión narrativa tratará de explicar brevemente el concepto del incidentaloma y algunos ejemplos distintos del incidentaloma adrenal; la magnitud del problema al que nos enfrentamos una vez descubierto, y diferentes opiniones acerca de cómo manejarlo.

"Incidentaloma" no es un término MeSH por sí mismo. Está incluido en el término compuesto "incidentaloma adrenal", que es un concepto suplementario introducido en 2010. El término MeSH equivalente es "hallazgo incidental".[1] Tampoco está incluido en otras bases de datos médicos o Bioportales (DeCS, Hetop, Woncadic); en cambio aparece en otros sitios no especializados (como BabelNet o Wikipedia) donde se lo define como un tumor encontrado de forma casual (incidental) en ausencia de signos clínicos o síntomas específicos al realizar una exploración radiológica a un paciente.[2] Incidentaloma es un neologismo que describe a una masa o lesión totalmente asintomática que es descubierta "incidentalmente" en un paciente asintomático debido al uso común de técnicas de diagnóstico por imágenes.[3] En un primer momento, la palabra fue introducida para designar una masa suprarrenal encontrada incidentalmente,[4-7] pero luego aparece en la literatura en referencia a otros órganos endocrinos,[8-12] así como al hígado,[13] el riñón,[14] el cerebro,[15] y otros órganos. El concepto no implica una etiología específica como tampoco el pronóstico de los hallazgos, ya que puede tratarse de lesiones benignas o malignas, hormonalmente funcionantes o no, metástasis, infecciones, granulomas, infiltraciones, quistes o pseudoquistes, hemorragias, etc.[3] Estos hallazgos van más allá del propósito original que motivó la realización del procedimiento, tanto en la práctica clínica (como rastreo o como prueba diagnóstica), o en investigación; y pueden ser previsibles (esto es, se sabe que el hallazgo puede estar potencialmente asociado con el procedimiento) o no (es un hallazgo que no se asocia clásicamente con el procedimiento realizado).[16-18]

La magnitud del problema

Los seres humanos presentan un monto considerable de reservorios de incidentalomas, y la mayoría de ellos son malignidades indolentes y subclínicas, además de anormalidades benignas menores.[19-22] Resulta más probable encontrar un incidentaloma que la entidad nosológica investigada, como lo demuestra un estudio de angiografía por TC para embolia pulmonar, donde los hallazgos incidentales que requirieron seguimiento fueron cerca de tres veces más frecuentes que los émbolos.[23,24] Los hallazgos incidentales han cambiado la incidencia de enfermedades.[24] Por ejemplo, la incidencia del cáncer de tiroides se ha incrementado más del doble en los últimos 30 años, debido al uso cada vez más común de la ecografía tiroidea, y a la alta tasa de nódulos tiroideos incidentales[25] (a ser discutido más adelante); y la de nefrocarcinomas mostró un aumento del 61% atribuido a la detección incidental en imágenes de TC realizadas por otras razones.[24]

Los nódulos pulmonares pequeños constituyen el incidentaloma más común; son detectados en las TCs de tórax en aproximadamente un 15% de los no fumadores y en más del 50% de los fumadores. De cada ciento diez estudios tomográficos, al menos cien tendrán un incidentaloma,[26,27] pero menos de cinco progresarán a un cáncer clínico. Los hallazgos incidentales pueden ser descubiertos por maniobras de rastreo de cáncer (por ejemplo, el cribado de cáncer de colon con colonografía por TC - o colonoscopia "virtual"- detecta anormalidades extracolónicas en más del 50% de las examinaciones, y la tasa de detección de cáncer extracolónico no sospechado es aproximadamente de uno por cada 200 adultos asintomáticos[28-32]); pero las intervenciones no relacionadas con el cribado también pueden llevar a la detección temprana de cánceres.[19] El rastreo diagnóstico del abdomen, pelvis, tórax, cabeza y cuello pueden revelar incidentalomas en el 25 a más del 80% de los individuos que son chequeados por otros motivos.[33,34] En un estudio se descubrieron hallazgos incidentales en el 86% de los reportes radiológicos de 1.192 pacientes consecutivos que fueron sometidos a rastreo tomográfico del cuerpo completo, en un centro ambulatorio de diagnóstico por imágenes. El treinta por ciento de los pacientes recibieron al menos una recomendación para realizarse una evaluación posterior. Sólo en un 14% las tomografías no revelaron ninguna anormalidad.[33] La frecuencia de los incidentalomas en cualquier examen, en una revisión de 44 estudios (41.866 pacientes)

fue del 23.6% (95% intervalo de confianza (IC) 15.8-31.3%), fue más alto en estudios que emplearon TC (media de 31.1%, 95% IC 20.1-41.9%), en pacientes con un diagnóstico inicial inespecífico (media 30.5%, 95% IC 0-81.6%) y cuando la localización del hallazgo incidental no fue especificada (media 33.9%, 95% IC 18.1-49.7%). Sesenta y cuatro por ciento de los hallazgos tuvieron seguimiento clínico posterior (95% IC 52.9-76.1%) y la frecuencia media de confirmación clínica fue del 45.6% (95% CI 32.1-59.2%).[34]

Los incidentalomas cerebrales se han vuelto muy frecuentes y problemáticos debido al extenso uso de la RMN de cerebro por clínicos (en situaciones clínicas en las que la prevalencia de cualquier hallazgo relevante es probablemente muy baja), investigadores y compañías que venden "chequeos" de salud. En un meta-análisis de 19.559 participantes aparentemente sanos (personas sanas, voluntarios, participantes de estudios de investigación y personas que se someten a cribados comerciales, clínicos u ocupacionales), la prevalencia global de hallazgos incidentales en RMN de cerebro fue del 2.7% con un número necesario a rastrear de 37 (esto significa que por cada 37 escáneres se encuentra un incidentaloma), 0.7% fueron hallazgos neoplásicos y 2% fueron no neoplásicos. La neoplasia más común fue el meningioma, y los no neoplásicos fueron el quiste aracnoide en primer lugar, y los aneurismas en segundo lugar.[15,35]

La detección es potencialmente peligrosa porque el tratamiento tiene riesgo, a veces tanto como las complicaciones que trata de prevenir. Por ejemplo, el riesgo de ruptura de un aneurisma no complicado parece ser bajo: con una incidencia anual promedio de 1.1% (en un estudio con un tiempo medio de seguimiento de 21 años - rango: 0.8-52.3 años - de 142 pacientes con 181 aneurismas intracraneales no complicados[36]) a 1.4%.[37] Pero el riesgo asociado con el tratamiento es mayor: las complicaciones relacionadas con los procedimientos quirúrgicos ocurrieron en un 4.7% de los pacientes en una revisión de tratamiento endovascular de los aneurismas intracraneales no complicados, con un 1.4% de muertes por año.[38] En la mayoría de los incidentalomas intracraneales vasculares, el riesgo de complicaciones a los 5 años fue mayor en las personas tratadas que en las no tratadas.[39] Por lo tanto, las personas harían mejor en no enterarse de que tienen una condición potencialmente seria pero para la cual el tratamiento tiene más probabilidad de daño que el incidentaloma vascular librado a su evolución natural.

La fuerza de tareas del *Stroke Council of the American Heart Association* (EEUU) publicó sus recomendaciones para el manejo de los pacientes con aneurisma intracraneal no complicado. Establecen que dado el bajo riesgo aparente de hemorragia en un aneurisma incidental pequeño (<7 mm) en pacientes sin hemorragia subaracnoidea previa, se recomienda la observación más que la intervención; sin embargo se debería hacer una consideración especial para realizar el tratamiento en pacientes <50 años con este tipo de aneurismas. En el caso de los aneurismas asintomáticos ≥7 a 10 mm de diámetro se sugiere fuertemente considerar la reparación, considerando la edad del paciente, las condiciones médicas y neurológicas existentes y el riesgo relativo del tratamiento.[40]

Supongamos que una persona que se entera de la existencia de un aneurisma intracraneal decide optar por el tratamiento quirúrgico. No será posible darle un completo reaseguro aún después de realizado el tratamiento, ya que puede desarrollar nuevos aneurismas, por lo tanto deberá continuar con el rastreo de los mismos (la duración óptima del intervalo es desconocida), pudiendo padecer estrés y ansiedad, y antes de lo cual puede sufrir igualmente una hemorragia subaracnoidea. Además puede detectarse en una angiografía posterior un nuevo aneurisma demasiado pequeño para ser intervenido, pero saberse portadora del mismo puede afectar su calidad de vida.[15]

El uso masivo de estudios por imagines de la pelvis ha llevado a la detección de anormalidades incidentales ováricas, uterinas, vasculares y de los ganglios linfáticos pelvianos, tanto en pacientes oncológicas como no oncológicas, que en el pasado permanecieron ocultas. En una revisión retrospectiva de 3.448 exámenes tomográficos realizados en mujeres pre y pos menopáusicas se encontraron lesiones anexiales incidentales en 168 pacientes (5% de los casos), 72 de las cuales tenían neoplasias extra-ováricas. En todas las mujeres la mayoría de las lesiones fueron benignas, aun teniendo otra malignidad conocida (excluyendo el carcinoma ovárico). En el 40% de las pacientes con malignidad no ginecológica conocida, no se descubrió malignidad ovárica primaria, y sólo el 3% de las lesiones fueron metástasis (todas en mujeres posmenopáusicas). Ninguna neoplasia maligna ovárica primaria fue descubierta incidentalmente en la población no oncológica.[41]

El riesgo de malignidad en una mujer premenopáusica con una masa ovárica indeterminada es de aproximadamente 8.75%; en las mujeres postmenopáusicas el riesgo aumenta a 32.4%. Los criterios que sugieren malignidad son el tamaño, una masa sólida, la presencia de necrosis, el compromiso de los órganos adyacentes o de las paredes pelvianas entre otros.[42] Los quistes uniloculares aparentemente benignos representan la vasta mayoría de los hallazgos anormales en la ecografía transvaginal. El ochenta por ciento de los incidentalomas desaparecerán espontáneamente en varios meses.[43] Pero el problema reside en que, aún en los casos de una imagen sospechosa de malignidad, encontrar y tratar un cáncer ovárico en

las mujeres asintomáticas ha demostrado ser no sólo inútil sino también peligroso. En el ensayo clínico PLCO (*Prostate, Lung, Colon and Ovarian Cancer Screening Trial*), el rastreo simultaneo con la determinación del antígeno CA-125 y ecografía transvaginal anual no redujo la tasa de mortalidad por cáncer ovárico. Aproximadamente un 10% de las mujeres rastreadas presentaron resultados falsos positivos; un tercio de las cuales fueron sometidas por ello a intervenciones quirúrgicas, y un 15% experimentaron al menos una complicación seria.[44]

Aunque en este caso no se trata de lesiones visibles, los hallazgos incidentales en estudios genéticos o genómicos también han sido denominados incidentalomas (incidentalomas genéticos o genómicos).[45] La definición de incidentaloma genómico incluye el hallazgo de variantes en los genes que no están relacionadas con el propósito específico de la prueba, pero que han sido identificadas a través de una búsqueda intencional.[17] La amplia gama de las pruebas de secuenciación genómica utilizadas en cribado (cada vez más prevalentes en la clínica y en investigación) pueden llevar a un fenómeno por el cual se descubren múltiples anormalidades genómicas del mismo modo que los incidentalomas radiológicos.[45]

Los incidentalomas genéticos pueden ser identificados por cualquier estudio genético; sin embargo son más frecuentes en los métodos de secuenciación de genoma completo o del exoma completo. Como en otros incidentalomas, éstos se evalúan de acuerdo con su riesgo de patogenicidad, pero cada laboratorio posee su propia política acerca de la identificación, el análisis y el reporte de los hallazgos incidentales. Además cada laboratorio decide que evaluación de riesgo asigna a cada variante dentro del gen; en general se hace acorde a un esquema de clasificación consensuado que se basa en la probabilidad del significado clínico de cada variante. Sin embargo, las evaluaciones de los laboratorios acerca del significado de una variante pueden divergir cuando la patogenicidad de la misma no ha sido establecida previamente.[46] Nuevamente resulta controversial cómo se realiza el manejo de la información médica derivada de la secuenciación genómica.

El *American College of Medical Genetics and Genomics* realizó una lista de genes asociados con 24 patologías cuyas variantes deberían ser reportadas, ya sea con patogenicidad cierta o probable, y que generalmente considera la existencia de procedimientos de *screening* validados para confirmar la presencia o la ausencia de la enfermedad.[47] Pero la genética no es destino. En esta situación no se descubre ni siquiera un factor de riesgo, menos aún una enfermedad temprana. El hallazgo incidental implica el riesgo de desarrollar un factor de riesgo o una enfermedad.

El riesgo de padecer una enfermedad está influenciado por la penetrancia y la expresividad genética, las que varían según la población considerada. Existen pocas anormalidades genéticas con una penetrancia del 100% (la medición de la probabilidad de que el genotipo prediga con mayor exactitud el fenotipo). Existe un consenso relativamente amplio y aceptado en reportar una variante patogénica conocida en un gen relacionado con cáncer (ejemplo, la mutación patogénica BRCA1 y 2). Pero aún estas mutaciones BRCA 1 y 2 tienen una penetrancia estimada del 30 al 70%, y esta es la posibilidad de desarrollar cáncer de mama hacia la edad de 70 años, no la de morir por esta causa. Y virtualmente todos tenemos anormalidades genéticas a pesar de que la mayoría presentamos un fenotipo normal.[27] Entre el 25 y el 50% de los individuos son portadores de al menos un desorden severo recesivo de la infancia, aunque otras estimaciones sugieren que la portación de variantes puede ser tan alta como de 2.8 por persona.[46] Muchas veces existe un conocimiento incompleto y variable de los efectos específicos de variantes simples, y de la relevancia clínica de la biología genómica en general; además algunas variantes genómicas predicen una fuerte probabilidad de enfermedad en el futuro, pero no presentan signos clínicos en el momento de la detección, de modo que no es posible excluir o confirmar el diagnóstico, agregando más preocupación y dudas que certezas.[48]

Entonces, la palabra incidentaloma implica el descubrimiento por azar de una lesión que probablemente nunca hubiera dañado a la persona,[19,22,27,49] pero en algunas ocasiones no es posible excluir una posibilidad real de daño (por lo tanto involucra la falta de certezas). Como puntualiza Welch, los radiólogos han llamado ´incidentalomas´ a estas lesiones, derivado de "incidental" como en ´menor o trivial´, y "oma" que significa crecimiento o tumor.[27] En muy pocos casos sabemos que el rastreo del tumor o enfermedad reduce la morbilidad o mortalidad asociadas. Moynihan señala que una prueba diagnóstica es evaluada habitualmente de acuerdo con que tan bien detecte la presencia *versus* la ausencia de una cierta enfermedad, más que por su capacidad para detectar una anormalidad o enfermedad en un estadio clínicamente significativo (mientras que la etiqueta de enfermedad y las intervenciones asociadas pueden generar más daño que beneficio).[50]

La vasta mayoría de los tumores malignos encontrados incidentalmente constituyen sobrediagnóstico básicamente porque existen muchos más incidentalomas que personas que fallecen por los respectivos cánceres.[26,27] Se pueden observar cambios en la incidencia de algunos cánceres, donde el número rápidamente creciente de diagnósticos precoces (por ejemplo, el cáncer de tiroides),[25,51-54] no se ve seguido de una disminución en las tasas de mortalidad, que permanecen relativamente estables. Este fenómeno es sugestivo de un amplio sobrediagnóstico.[49] El sobrediagnóstico en cáncer ocurre debido a la detección

de algunas lesiones malignas que nunca progresarán (o incluso pueden remitir) o lo harán tan lentamente que el paciente fallecerá por otras razones antes de que el cáncer se vuelva sintomático.[19] Menos del 5% de los nódulos pulmonares en los fumadores, y menos del 1% del resto de los incidentalomas probablemente representen cánceres letales.[27] Por lo tanto, solo un pequeño número de personas se beneficiarán de la detección temprana de un tumor maligno encontrado incidentalmente, mientras que otros sufrirán la ansiedad y los efectos adversos de las investigaciones adicionales y los tratamientos de una "anormalidad" que probablemente nunca los hubiera dañado.[49]

Cómo enfrentar los incidentalomas

Qué hacer con los incidentalomas no es una cuestión simple. Los médicos no son castigados por el sobrediagnóstico (ni por obtener resultados falsos positivos), pero sí lo son por haber fallado en hacer un diagnóstico. Guiados en parte por el temor a las demandas judiciales y en parte porque han aprendido a temer la incertidumbre, los médicos tienden a ordenar pruebas adicionales que a menudo no aportan claridad, certeza diagnóstica ni satisfacción del paciente. La creencia en la ilimitada capacidad de la ciencia médica es uno de los mitos que refuerzan el exceso de la actividad médica.[27,55-57] La tecnología médica es intervencionista, expansiva, define enfermedades y produce generalizaciones. Influencia fuertemente el concepto de enfermedad y por ende, del accionar médico. Define los diagnósticos y lo que debe ser tratado. Debido a que puede generar resultados reproducibles, la tecnología ha contribuido a hacer más científica a la medicina, y ha hecho al conocimiento médico independiente de las experiencias subjetivas de los pacientes.

Sin embargo, a pesar de los remarcables avances tecnológicos, la práctica de la medicina continua teniendo incertidumbres, que, junto con la fe en la tecnología - así como otros factores - ha contribuido al creciente uso de la misma y al desarrollo tecnológico para tratar de paliar esas incertidumbres.[58] El gran avance en la calidad de las imágenes combinado con la preferencia cultural por la visualización ha contribuido a la creencia que este tipo de estudios diagnósticos es superior para obtener conocimientos certeros acerca del cuerpo.[59] Lidiar con los incidentalomas inevitablemente consume tiempo y esfuerzos, crea ansiedad sustancial en los pacientes y en los médicos y distrae de los problemas principales que aquejan a las personas.[24] El cuidado médico adicional, incluyendo tratamientos (los que en algunos casos tienen la posibilidad de poner en riesgo a la persona) generados por un hallazgo incidental, ha sido denominado el "efecto cascada".[60] Una manera de evitar los hallazgos incidentales es hacer una adecuada selección de las pruebas de rastreo y de diagnóstico. La mejor opción es no comenzar la cascada, siempre que se pueda.

Una vez que el incidentaloma ha sido descubierto, una forma de afrontarlo es definir un enfoque racional del problema. Podríamos preguntarnos cuál sería el uso responsable de una información que nadie solicitó.[31] Los médicos deberían usar los recursos sofisticados y costosos responsablemente, aplicando la evidencia rigurosamente y validar los beneficios de la nueva tecnología.[18,55] Se han redactado algunas revisiones o consensos para el adecuado manejo de los hallazgos incidentales,[24,47 61-65] pero la mayoría de ellos implica involucrar al paciente en un esquema de seguimientos de rutina, con riesgos y costos para el sistema de salud y para el paciente.

En este sentido, la comisión presidencial de EEUU en Bioética desarrolló un conjunto de recomendaciones sobre este tópico y consideró cuatro principios éticos aplicables al manejo de los hallazgos incidentales: (1) respeto por las personas (derecho a la auto-determinación); (2) beneficencia (que implica el principio de la no maleficencia); (3) justicia, y (4) libertad intelectual y responsabilidad (protege la exploración intelectual que garantiza el progreso científico pero requiere que los investigadores y proveedores de salud sean responsables de sus acciones).[17] Las recomendaciones de guías elaboradas por paneles compuestos de médicos generalistas tienden a ser más conservadoras que las elaboradas por expertos, en parte porque ellos son elegidos por sus habilidades en la evaluación crítica y además porque tienen poco que ganar de las recomendaciones.[66]

Las preferencias de los pacientes deben ser tenidas en cuenta, pero es frecuente que tengan expectativas poco realistas sobre los beneficios de los resultados de pruebas y típicamente no suelen ser conscientes de que el descubrimiento de los resultados en realidad puede ser perjudicial. En muchas circunstancias, una gran cantidad de pacientes elegirá someterse a una prueba para diagnósticos de baja probabilidad a pesar de los costos, la ansiedad y los riesgos físicos que pueden acarrear (por ejemplo, la determinación del antígeno prostático específico[67] o la mamografía en la mujer joven) [68]. Las decisiones de las personas pueden depender no sólo de la probabilidad de un evento en particular, sino también de su propia percepción de la gravedad y la importancia de las consecuencias de dicho padecimiento.[18,24]

Los médicos idealmente deberían colaborar con los pacientes para lograr decisiones basadas en la adecuada información y en consonancia con los valores y preferencias de los pacientes (toma de decisiones compartida). Esto implica que ambos compartan la mejor evidencia disponible, y los médicos tienen que discutir con los pacientes los riesgos de una manera directa y transparente, a menos que los pacientes expresamente indiquen que no desean recibir esa información.[24,69]

En la actualidad hay herramientas de apoyo para tomar decisiones basadas en la evidencia para los médicos y los pacientes. Pero el conocimiento sobre los beneficios, los riesgos y la incertidumbre científica no es suficiente. En la vida real, las decisiones están fuertemente influenciadas por las emociones: las creencias y la confianza, los miedos, la vulnerabilidad, las viejas rutinas, las experiencias personales, los mensajes transmitidos por la publicidad y los medios de comunicación, y los consejos, testimonios y conocimientos impartidos por fuentes en las que se confía. La gente necesita esperanza, seguridad y un sentido de control sobre sus vidas. Si están ampliamente convencidos de que una droga o prueba de detección es beneficiosa, confrontar estas creencias puede engendrar sospechas sobre la veracidad y los motivos que guían a los médicos. Y todavía existe un universo dominado por la idea de que la prevención es siempre absolutamente deseable, segura e infalible (fomentado por los medios de comunicación, los sistemas de seguros de salud, las industrias farmacéutica y de tecnologías sanitarias y los mensajes de muchos médicos).

Por lo tanto, las expectativas poco realistas persisten no sólo debido a la desinformación. Las falsas expectativas crean un mercado que demanda productos, industrias y sistemas de salud y pueden ser fomentadas por publicidad engañosa. Confrontar estas expectativas no sólo puede golpear la esperanza sino también potencialmente amenazar a accionistas, ganancias, prácticas clínicas, industrias, legislación y aún carreras políticas. Con el fin de evitar el daño producido por un exceso en la prevención, el médico debe tener en cuenta los temores y las expectativas del paciente, pero como vemos, el panorama no es fácil.[65,70]

Cuando la evidencia es clara en cuanto al balance de beneficios y riesgos (cuando el cribado puede reducir la mortalidad por ese cáncer), podemos acordar con los pacientes si quieren que se les comunique o no un posible incidentaloma al obtener su consentimiento para la prueba que podría encontrarlo. Sin embargo, cuando la evidencia no es clara, es necesario describir los beneficios y riesgos potenciales a los pacientes y ayudarles a tomar decisiones que incorporan sus propios valores y preferencias.[18,27] En ese caso, se podría decir al paciente sobre el incidentaloma, e involucrarlo en la toma de decisiones compartida (pero se introducirá la posibilidad de asustar al paciente sobre el riesgo de un posible cáncer). Los radiólogos podrían considerar ignorar a los incidentalomas en esta categoría,[27] pero no existe un consenso general ('A pesar de los daños potenciales, los radiólogos deben reportar los hallazgos de imágenes incidentales y elaborar informes que sirvan como marco para ayudar a los pacientes a tomar las mejores decisiones para sí mismos').[24]

Y finalmente, cuando se sabe que el cribado no reduce la mortalidad, evitemos llamarlo anormalidad, para así proteger al paciente del sobrediagnóstico y sobretratamiento.[27] Un grupo de trabajo en una reunión convocada por el Instituto Nacional del Cáncer de EEUU para mitigar el sobrediagnóstico, propuso que el uso del término "cáncer" se debe reservar sólo para la descripción de las lesiones con una probabilidad razonable de progresión letal librado a su evolución natural. Ellos dicen que las lesiones premalignas (por ejemplo, el carcinoma ductal in situ o la neoplasia prostática intraepitelial de alto grado) no deben ser etiquetadas como cáncer, carcinoma o neoplasia; sería mejor por ejemplo llamarlas condiciones tipo IDLE (sigla en inglés, lesiones indolentes de origen epitelial).[20] Usar otras palabras probablemente ayudará a cambiar el significado simbólico de las entidades, y de esta manera facilite el cambio de paradigma hacia una medicina menos disruptiva.

Conclusión

Una enfermedad actualmente puede ser diagnosticada basándose en las pruebas de laboratorio en ausencia de signos y síntomas clínicos, y esto no siempre es algo bueno. Los hallazgos no intencionales de los procedimientos de diagnóstico han cambiado la definición y la incidencia de enfermedades (han creado un nuevo tipo de enfermedad, el incidentaloma), y han generado grandes cantidades de sobrediagnóstico y sobretratamiento, porque en muy pocos casos representan una amenaza cierta para la salud (una enfermedad que merece ser considerada y tratada). En un mundo dominado por las imágenes, por la búsqueda de las certezas y de reaseguros, por la medicalización de la vida cotidiana; no es fácil resistir los embates de la tecnología médica. Pero los hallazgos incidentales casi siempre causan miedo, ansiedad, preocupación y crean la necesidad de un seguimiento para garantizar a las personas que se encuentran saludables.

Es así que, incluso cuando los incidentalomas no resulten significativos, habrán lesionado la percepción de salud de las personas. En cierto sentido, el incidentaloma tiene que ver con la imposibilidad de 'no hacer'. Muchas veces, por causa de los temores y creencias de los pacientes y los médicos, pero en muchos otros el incidentaloma es una posible consecuencia de no decir 'no hacer' mientras los efectos adversos generados podrían ser la consecuencia de un buen proceso de atención. Una frase popular dice que 'el camino al infierno está empedrado de buenas intenciones'; los avances en la tecnología médica han traído innumerables cambios positivos, pero también consecuencias no deseadas, a veces negativas. Resulta pues esencial minimizar estas consecuencias indeseables, tal vez es hora de cambiar los paradigmas.

Referencias

1. Choyke PL, ACR Committee on Appropriateness Criteria. ACR Appropriateness Criteria on incidentally discovered adrenal mass. J Am Coll Radiol. 2006;3(7):498-504. http://dx.doi.org/10.1016/j.jacr.2006.02.031. PMid:17412112.
2. BabelNet. Dictionnary and semantic network [Internet]. Rome: Sapienza University of Rome. [cited 2014 Nov 14]. Available from: http://babelnet.org/synset?word=incidentaloma&lang=EN&details=1&orig=incidentaloma.
3. Mirilas P, Skandalakis JE. Benign anatomical mistakes: incidentaloma. Am Surg. 2002;68(11):1026-1028. PMid:12455801.
4. Geelhoed GW, Druy EM. Management of the adrenal "incidentaloma". Surgery. 1982;92(5):866-874. PMid:7135206.
5. O'Leary TJ, Ooi TC. The adrenal incidentaloma. Can J Surg. 1986;29(1):6-8. PMid:3940589.
6. Waldner H, Wilker D, Eibl-Eibesfeldt B. Therapeutic procedure in "incidentaloma" of the adrenal glands. Chirurg. 1986;57(9):557-559. PMid:3780354.
7. Ooi TC. Adrenal incidentalomas: incidental in detection, not significance. CMAJ. 1997;157(7):903-904. PMid:9327799.
8. Molitch ME, Russell EJ. The pituitary "incidentaloma". Ann Intern Med. 1990;112(12):925-931. http://dx.doi.org/10.7326/0003-4819-112-12-925. PMid:2187392.
9. Cohen MS, Arslan N, Dehdashti F, Doherty GM, Lairmore TC, Brunt LM, et al. Risk of malignancy in thyroid incidentalomas identified by fluorodeoxyglucose-positron emission tomography. Surgery. 2001;130(6):941-946. http://dx.doi.org/10.1067/msy.2001.118265. PMid:11742321.
10. Pesenti M, Frasoldati A, Azzarito C, Valcavi R. Parathyroid incidentaloma discovered during thyroid ultrasound imaging. J Endocrinol Invest. 1999;22(10):796-799. http://dx.doi.org/10.1007/BF03343646. PMid:10614530.
11. Reincke M, Allolio B, Saeger W, Menzel J, Winkelmann W. The 'incidentaloma' of the pituitary gland. Is neurosurgery required? JAMA. 1990;263(20):2772-2776. PMid:2332920. http://dx.doi.org/10.1001/jama.1990.03440200076026.
12. Bramnert M. Hypophyseal incidentaloma is a common finding requiring investigation. The question is: surgery, medication or wait-and-see? Lakartidningen. 1998;95(30-31):3300-3303. PMid:9715067.
13. Little JM, Kenny J, Hollands MJ. Hepatic incidentaloma: a modern problem. World J Surg. 1990;14(4):448-451. http://dx.doi.org/10.1007/BF01658665. PMid:2166378.
14. Iannicelli P, Rosa A. Diagnostic imaging of kidney carcinomas. Our experience and review of the literature. Minerva Urol Nefrol. 1992;44(3):177-183. PMid:1492268.
15. Al-Shahi Salman R, Whiteley WN, Warlow C. Screening using whole-body magnetic resonance imaging scanning: who wants an incidentaloma? J Med Screen. 2007; 14(1):2-4. http://dx.doi.org/10.1258/096914107780154530. PMid:17362563.
16. Wolf SM, Lawrenz FP, Nelson CA, Kahn JP, Cho MK, Clayton EW, et al. Managing incidental findings in human subjects research: analysis and recommendations. J Law Med Ethics. 2008; 36(2):219-248. http://dx.doi.org/10.1111/j.1748-720X.2008.00266.x. PMid:18547191.
17. Presidential Commission for the Study of Bioethical Issues. Anticipate and communicate: ethical management of incidental and secondary findings in the clinical, research, and direct-to-consumer contexts [Internet]. Washington: Presidential Commission for the Study of Bioethical Issue; 2013 [cited 2014 Nov 11]. Available from: http://bioethics.gov/sites/default/files/FINALAnticipateCommunicate_PCSBI_0.pdf.
18. Ells C, Thombs BD. The ethics of how to manage incidental findings. CMAJ. 2014;186(9):655-656. http://dx.doi.org/10.1503/cmaj.140136. PMid:24688013.
19. Welch HG, Black WC. Overdiagnosis in cancer. J Natl Cancer Inst. 2010;102(9):605-613. http://dx.doi.org/10.1093/jnci/djq099. PMid:20413742.
20. Esserman LJ, Thompson IM Jr, Reid B. Overdiagnosis and overtreatment in cancer: an opportunity for improvement. JAMA. 2013;310(8):797-798. http://dx.doi.org/10.1001/jama.2013.108415. PMid:23896967.
21. Esserman LJ, Thompson IM, Reid B, Nelson P, Ransohoff DF, Welch HG, et al. Addressing overdiagnosis and overtreatment in cancer: a prescription for change. Lancet Oncol. 2014;15(6):e234-e242. http://dx.doi.org/10.1016/S1470-2045(13)70598-9. PMid:24807866.
22. Moynihan R, Doust J, Henry D. Preventing overdiagnosis: how to stop harming the healthy. BMJ. 2012; 344:e3502. http://dx.doi.org/10.1136/bmj.e3502. PMid:22645185.

23. Hall WB, Truitt SG, Scheunemann LP, Shah SA, Rivera MP, Parker LA, et al. The prevalence of clinically relevant incidental findings on chest computed tomographic angiograms ordered to diagnose pulmonary embolism. Arch Intern Med. 2009;169(21):1961-1965. http://dx.doi.org/10.1001/archinternmed.2009.360. PMid:19933956.

24. Brown SD. Professional norms regarding how radiologists handle incidental findings. J Am Coll Radiol. 2013;10(4):253-257. http://dx.doi.org/10.1016/j.jacr.2012.10.003. PMid:23545084.

25. Davies L, Welch HG. Increasing incidence of thyroid cancer in the United States, 1973-2002. JAMA. 2006;295(18):2164-2167. http://dx.doi.org/10.1001/jama.295.18.2164. PMid:16684987.

26. Black WC, Haggstrom DA, Welch HG. All-cause mortality in randomized trials of cancer screening. J Natl Cancer Inst. 2002;94(3):167-173. http://dx.doi.org/10.1093/jnci/94.3.167. PMid:11830606.

27. Welch HG, Schwartz L, Woloshin S. Overdiagnosed: making people sick in the pursuit of health. Boston: Beacon Press; 2011.

28. Ginnerup Pedersen B, Rosenkilde M, Christiansen TE, Laurberg S. Extracolonic findings at computed tomography colonography are a challenge. Gut. 2003;52(12):1744-1747. http://dx.doi.org/10.1136/gut.52.12.1744. PMid:14633954.

29. Xiong T, Richardson M, Woodroffe R, Halligan S, Morton D, Lilford RJ. Incidental lesions found on CT colonography: their nature and frequency. Br J Radiol. 2005;78(925):22-29. http://dx.doi.org/10.1259/bjr/67998962. PMid:15673525.

30. Yee J, Kumar NN, Godara S, Casamina JA, Hom R, Galdino G, et al. Extracolonic abnormalities discovered incidentally at CT colonography in a male population. Radiology. 2005;236(2):519-526. http://dx.doi.org/10.1148/radiol.2362040166. PMid:16040909.

31. Fletcher RH, Pignone M. Extracolonic findings with computed tomographic colonography: asset or liability? Arch Intern Med. 2008;168(7):685-686. http://dx.doi.org/10.1001/archinte.168.7.685. PMid:18413549.

32. Pickhardt PJ, Kim DH, Meiners RJ, Wyatt KS, Hanson ME, Barlow DS, et al. Colorectal and extracolonic cancers detected at screening CT colonography in 10,286 asymptomatic adults. Radiology. 2010;255(1):83-88. http://dx.doi.org/10.1148/radiol.09090939. PMid:20308446.

33. Furtado CD, Aguirre DA, Sirlin CB, Dang D, Stamato SK, Lee P, et al. Whole-body CT screening: spectrum of findings and recommendations in 1192 patients. Radiology. 2005;237(2):385-394. http://dx.doi.org/10.1148/radiol.2372041741. PMid:16170016.

34. Lumbreras B, Donat L, Hernández-Aguado I. Incidental findings in imaging diagnostic tests: a systematic review. Br J Radiol. 2010;83(988):276-289. http://dx.doi.org/10.1259/bjr/98067945. PMid:20335439.

35. Morris Z, Whiteley WN, Longstreth WT Jr, Weber F, Lee YC, Tsushima Y, et al. Incidental findings on brain magnetic resonance imaging: systematic review and meta-analysis. BMJ. 2009; 339:b3016. http://dx.doi.org/10.1136/bmj.b3016. PMid:19687093.

36. Juvela S, Poussa K, Lehto H, Porras M. Natural history of unruptured intracranial aneurysms: a long-term follow-up study. Stroke. 2013;44(9):2414-2421. http://dx.doi.org/10.1161/STROKEAHA.113.001838. PMid:23868274.

37. Greving JP, Wermer MJ, Brown RD Jr, Morita A, Juvela S, Yonekura M, et al. Development of the PHASES score for prediction of risk of rupture of intracranial aneurysms: a pooled analysis of six prospective cohort studies. Lancet Neurol. 2014;13(1):59-66. http://dx.doi.org/10.1016/S1474-4422(13)70263-1. PMid:24290159.

38. Naggara ON, Lecler A, Oppenheim C, Meder JF, Raymond J. Endovascular treatment of intracranial unruptured aneurysms: a systematic review of the literature on safety with emphasis on subgroup analyses. Radiology. 2012;263(3):828-835. http://dx.doi.org/10.1148/radiol.12112114. PMid:22623696.

39. Al-Shahi Salman R, White PM, Counsell CE, du Plessis J, van Beijnum J, Josephson CB, et al. Outcome after conservative management or intervention for unruptured brain arteriovenous malformations. JAMA. 2014;311(16):1661-1669. http://dx.doi.org/10.1001/jama.2014.3200. PMid:24756516.

40. Bederson JB, Awad IA, Wiebers DO, Piepgras D, Haley EC Jr, Brott T, et al. Recommendations for the management of patients with unruptured intracranial aneurysms: A statement for healthcare professionals from the Stroke Council of the American Heart Association. Circulation. 2000;102(18):2300-2308. http://dx.doi.org/10.1161/01.CIR.102.18.2300. PMid:11056108.

41. Slanetz PJ, Hahn PF, Hall DA, Mueller PR. The frequency and significance of adnexal lesions incidentally revealed by CT. AJR Am J Roentgenol. 1997;168(3):647-650. http://dx.doi.org/10.2214/ajr.168.3.9057508. PMid:9057508.

42. Gore RM, Newmark GM, Thakrar KH, Mehta UK, Berlin JW. Pelvic incidentalomas. Cancer Imaging. 2010; 10 Spec no A(1A):S15-S26. http://dx.doi.org/10.1102/1470-7330.2010.9021. PMid:20880789.

43. Solnik MJ, Alexander C. Ovarian incidentaloma. Best Pract Res Clin Endocrinol Metab. 2012;26(1):105-116. http://dx.doi.org/10.1016/j.beem.2011.07.002. PMid:22305456.

44. Buys SS, Partridge E, Black A, Johnson CC, Lamerato L, Isaacs C, et al. Effect of screening on ovarian cancer mortality: the Prostate, Lung, Colorectal and Ovarian (PLCO) Cancer Screening Randomized Controlled Trial. JAMA. 2011;305(22):2295-2303. http://dx.doi.org/10.1001/jama.2011.766. PMid:21642681.

45. Kohane IS, Masys DR, Altman RB. The incidentalome: a threat to genomic medicine. JAMA. 2006;296(2):212-215. http://dx.doi.org/10.1001/jama.296.2.212. PMid:16835427.

46. Christensen K, Kalia S, Green R. Incidental findings from genetic testing [cited 2014 Nov 13]. In: UpToDate [Internet]. Filadelfia (PA): WoltersKluwer Health; 2014. Available from: http://www.uptodate.com/es/home

47. Green RC, Berg JS, Grody WW, Kalia SS, Korf BR, Martin CL, et al. ACMG recommendations for reporting of incidental findings in clinical exome and genome sequencing. Genet Med. 2013;15(7):565-574. http://dx.doi.org/10.1038/gim.2013.73. PMid:23788249.

48. Solomon BD. Incidentalomas in genomics and radiology. N Engl J Med. 2014;370(11):988-990. http://dx.doi.org/10.1056/NEJMp1310471. PMid:24620864.

49. Moynihan R, Doust J, Henry D. Preventing overdiagnosis: how to stop harming the healthy. BMJ. 2012;344:e3502. http://dx.doi.org/10.1136/bmj.e3502. PMid:22645185.

50. Moynihan R, Henry D, Moons KG. Using evidence to combat overdiagnosis and overtreatment: evaluating treatments, tests, and disease definitions in the time of too much. PLoS Med. 2014;11(7):e1001655. http://dx.doi.org/10.1371/journal.pmed.1001655. PMid:24983872.

51. Brito JP, Morris JC, Montori VM. Thyroid cancer: zealous imaging has increased detection and treatment of low risk tumours. BMJ. 2013; 347:f4706. http://dx.doi.org/10.1136/bmj.f4706. PMid:23982465.

52. Morris LG, Sikora AG, Tosteson TD, Davies L. The increasing incidence of thyroid cancer: the influence of access to care. Thyroid. 2013;23(7):885-891. http://dx.doi.org/10.1089/thy.2013.0045. PMid:23517343.

53. Guay B, Johnson-Obaseki S, McDonald JT, Connell C, Corsten M. Incidence of differentiated thyroid cancer by socioeconomic status and urban residence: Canada 1991-2006. Thyroid. 2014;24(3):552-555. http://dx.doi.org/10.1089/thy.2013.0308. PMid:24003960.

54. Udelsman R, Zhang Y. The epidemic of thyroid cancer in the United States: the role of endocrinologists and ultrasounds. Thyroid. 2014;24(3):472-479. http://dx.doi.org/10.1089/thy.2013.0257. PMid:23937391.

55. Stone JH. Incidentalomas--clinical correlation and translational science required. N Engl J Med. 2006;354(26):2748-2749. http://dx.doi.org/10.1056/NEJMp058264. PMid:16807411.

56. Heath I. Role of fear in overdiagnosis and overtreatment-an essay by Iona Heath. BMJ. 2014; 349:g6123. http://dx.doi.org/10.1136/bmj.g6123. PMid:25954986.

57. Hoffman JR, Kanzaria HK. Intolerance of error and culture of blame drive medical excess. BMJ. 2014; 349:g5702. http://dx.doi.org/10.1136/bmj.g5702. PMid:25315302.

58. Hofmann B. Too much of a good thing is wonderful? A conceptual analysis of excessive examinations and diagnostic futility in diagnostic radiology. Med Health Care Philos. 2010;13(2):139-148. http://dx.doi.org/10.1007/s11019-010-9233-8. PMid:20151206.

59. Wagner J, Aron DC. Incidentalomas: a "disease" of modern imaging technology. Best Pract Res Clin Endocrinol Metab. 2012;26(1):3-8. http://dx.doi.org/10.1016/j.beem.2011.08.006. PMid:22305448.

60. Mold JW, Stein HFC. The cascade effect in the clinical care of patients. N Engl J Med. 1986;314(8):512-514. http://dx.doi.org/10.1056/NEJM198602203140809. PMid:3945278.

61. Berland LL, Silverman SG, Gore RM, Mayo-Smith WW, Megibow AJ, Yee J, et al. Managing incidental findings on abdominal CT: white paper of the ACR incidental findings committee. J Am Coll Radiol. 2010;7(10):754-773. http://dx.doi.org/10.1016/j.jacr.2010.06.013. PMid:20889105.

62. Terzolo M, Stigliano A, Chiodini I, Loli P, Furlani L, Arnaldi G, et al. AME position statement on adrenal incidentaloma. Eur J Endocrinol. 2011;164(6):851-870. http://dx.doi.org/10.1530/EJE-10-1147. PMid:21471169.

63. Freda PU, Beckers AM, Katznelson L, Molitch ME, Montori VM, Post KD, et al. Pituitary incidentaloma: an endocrine society clinical practice guideline. J Clin Endocrinol Metab. 2011;96(4):894-904. http://dx.doi.org/10.1210/jc.2010-1048. PMid:21474686.

64. Patel MD, Ascher SM, Paspulati RM, Shanbhogue AK, Siegelman ES, Stein MW, et al. Managing incidental findings on abdominal and pelvic CT and MRI, part 1: white paper of the ACR Incidental Findings Committee II on adnexal findings. J Am Coll Radiol. 2013;10(9):675-681. http://dx.doi.org/10.1016/j.jacr.2013.05.023. PMid:24007607.

65. Berland LL. Overview of white papers of the ACR incidental findings committee ii on adnexal, vascular, splenic, nodal, gallbladder, and biliary findings. J Am Coll Radiol. 2013;10(9):672-674. http://dx.doi.org/10.1016/j.jacr.2013.05.012. PMid:23816427.

66. Woolf SH. The price of false beliefs: unrealistic expectations as a contributor to the health care crisis. Ann Fam Med. 2012;10(6):491-494. http://dx.doi.org/10.1370/afm.1452. PMid:23149524.

67. U.S. Preventive Services Task Force (USPSTF). Prostate cancer: screening [Internet]. Rockville: USPSTF; 2012 [cited 2014 Nov 14]. Available from: http://www.uspreventiveservicestaskforce.org/Page/Topic/recommendation-summary/prostate-cancer-screening.

68. Yankaskas BC, Haneuse S, Kapp JM, Kerlikowske K, Geller B, Buist DS, et al. Performance of first mammography examination in women younger than 40 years. J Natl Cancer Inst. 2010;102(10):692-701. http://dx.doi.org/10.1093/jnci/djq090. PMid:20439838.

69. Elwyn G, Laitner S, Coulter A, Walker E, Watson P, Thomson R. Implementing shared decision making in the NHS. BMJ. 2010; 341:c5146. http://dx.doi.org/10.1136/bmj.c5146. PMid:20947577.

70. Gérvas J, Heath I, Durán A, Gené J, Members of the Seminar of Primary Health Innovation 2008. Clinical prevention: patients' fear and the doctor's guilt. Eur J Gen Pract 2009;15(3):122-124. PMid:19883148. http://dx.doi.org/10.3109/13814780903242481.

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ESSAYS

Multimorbidity and Quaternary Prevention (P4)

Multimorbidade e Prevenção Quaternária (P4)

Multimorbilidad y Prevención Cuaternaria (P4)

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Abstract

Multimorbidity has become the norm for the majority of patients attending primary care, and while the proportion of those with multimorbidity is higher in older age, the absolute number of people with multimorbidity is greater in those under 65. The specialist-based single-disease model of treatment assumes that each index disease is the dominant illness within the complex system and that the other comorbid illnesses are held constant while management is focussed on the single condition. Thus, applying single disease guidelines to a person with five chronic comorbidities, no matter what they are, results in potentially harmful polypharmacy. This approach has led to the current 'epidemic' in morbidity and mortality from adverse drug reactions that now outstrip the target diseases as a cause of death. In this article, we highlight four characteristics of quaternary prevention framework that policymakers should take into account when considering the quality of health care.

Keywords:
Health of the Elderly
Comorbidity
Drug Interactions
Medicalization
Quaternary Prevention

Resumo

A multimorbidade se tornou a norma para a maioria dos pacientes atendidos nos serviços de atenção primária à saúde, e enquanto a proporção de pessoas com multimorbidade é maior em idades mais avançadas, o número absoluto de pessoas com multimorbidade é maior em pessoas com menos de 65 anos. O modelo de tratamento de doença única, com base no especialista focal, pressupõe que cada doença-índice seja a doença dominante dentro de um sistema complexo e que as outras comorbidades se mantenham constantes, enquanto o seu manejo é centrado em uma única condição. Assim, aplicando-se as diretrizes de doenças-únicas para uma pessoa com cinco comorbidades crônicas, não importando quais sejam elas, resulta em uma polifarmácia, potencialmente nociva. Esta abordagem tem conduzido a atual "epidemia" da morbidade e mortalidade por reações adversas a medicamentos, que já ultrapassa as doenças-alvo como causas de morte. Neste artigo, destacam-se quatro características da prevenção quaternária, que gestores de saúde deveriam levar em conta ao considerarem a qualidade dos cuidados em saúde.

Palavras-chave:
Saúde do Idoso
Comorbidade
Interações de Medicamentos
Medicalização
Prevenção Quaternária

Resumen

La multimorbilidad se convirtió en la norma para la mayoría de los pacientes que acuden a la atención primaria, y mientras que la proporción de los que tienen multimorbilidad es mayor en la edad avanzada, el número absoluto de personas con multimorbilidad es mayor en los menores de 65 años. El modelo de tratamiento de enfermedad-única, basado en el especialista focal, supone que cada enfermedad-índice es la enfermedad dominante en un sistema complejo, y que las otras comorbilidades se mantienen constantes, mientras que su manejo es centrado en una única condición. Así, las directrices de enfermedades-únicas para una persona con cinco comorbilidades crónicas, no importando cuales sean ellas, resulta en una polifarmacia, potencialmente dañosa. Este enfoque ha dado lugar a la actual "epidemia" de morbilidad y mortalidad debido a las reacciones adversas a los medicamentos, que ya superan las enfermedades-objetivo como causas de muerte. En este artículo, se destacan cuatro características de la prevención cuaternaria, que los administradores de salud deberían tener en cuenta al considerar la calidad de la atención de salud.

Palabras clave:
Salud del Anciano
Comorbilidad
Interacciones de Drogas
Medicalización
Prevención Cuaternaria

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The Challenge of Multimorbidity

When patients suffer more than one illness or disease simultaneously, they are described as having multimorbidity and this is the biggest challenge facing contemporary medical care.[1] It is well understood that multimorbidity is the norm for the majority of patients attending primary care, and while the proportion of those with multimorbidity is higher in older age, the absolute number of people with multimorbidity is greater in those under 65.[2]

There is also general agreement that neither the current theoretical framework of medicine nor the practical structure of medical care is fit for purpose when dealing with multimorbidity. The experience of chronic illnesses by patients is highly variable.[3,4] The specialist-based single-disease model of treatment assumes that each index disease is the dominant illness within the complex system, and that the other comorbid illness are held constant while management is focussed on the single condition. This siloing results in complex, chaotic care that is confusing for the patient.

Applying single disease guidelines to a person with five chronic comorbidities, no matter what they are, results in potentially harmful polypharmacy.[5] One study found that applying individual disease guidelines to a patient with five chronic conditions would result in the prescription of 19 doses of 12 different drugs, taken at five time points during the day, and carrying the risk of 10 attendant interactions or adverse events.[5] In such situations, measurably better care may be meaningfully worse for the patient. In fact the evidence base for treatments in the context of multimorbidity is poor, as such patients are excluded from clinical trials. It is likely that multimorbidity attenuates the effect size of treatments, however the extent to which this occurs is unknown. There is therefore little information for doctors and patients on the expected benefits of these treatments in the context of multimorbidity against which to balance the harms.

The siloed approach to treatment decision making has led inevitably to polypharmacy, and the current 'epidemic' in morbidity and mortality from adverse drug reactions that now outstrips the target diseases as a cause of death. Older adults are now taking a mean of seven medications in most developed countries and those taking >5 medications are more likely to experience a medication related side effect that requires health care than those taking <2 (13% vs 6%).[6] Adverse drug events are listed in the top five causes of death in many developed countries, and rates of hospital admission for this indication in people over 65 are estimated at 17%. This is an important, expensive, and iatrogenic source of morbidity in people with multiple chronic conditions. Each year more people die of adverse drug effects in Europe alone than die of colon cancer, or breast cancer, or prostate cancer.[7,8] It is the equivalent of more than two jumbo jets crashing and killing all on board every day. If this was an airline, would you fly on it? Patients do, and they do it every day. Yet this cause of death and illness is largely lost in the hype around the epidemics of cardiovascular disease or cancer. There are no preventive measures in place to prevent death from this far more common yet largely invisible cause. In Canada, less than half of those taking more than five medications report having a medication review.[6]

This overtreatment has been embedded by policies and increasing top down micromanagement of care based on single disease guidelines, and often incentivised by payment linked to adherence to these guidelines.[9,10] While benevolently applied in most cases, this medical care may actually add to the dual burdens of multimorbidity and its social causes and overwhelm the capacity the patient has to participate in their own healthcare. This inappropriate model of care increases health inequity, as multimorbidity is experienced to a greater degree by the more deprived, and this group are least resourced to manage adverse drug effects. The ensuing morbidity and mortality places an enormous and unsustainable burden on health budgets. In Canada, adverse drug events (ADEs) give rise to over 70,000 preventable admissions per year.[11] Estimates suggest that for every million older adults, 27 million dollars are lost in the costs of avoidable adverse drug events each year.[12] Polypharmacy can also waste the potential benefits of treatment. When the number of pills leads to confusion, it is often impossible to take them all as such confusion reduces an individual's capacity to participate in their own care.[13] Approximately 50% of patients with chronic diseases follow treatment recommendations.[14] One study found only 27% of patients with recent heart failure admission were compliant with medication they had been prescribed on hospital discharge.[15] Perceived side effects and discordance between patients and doctors around treatment goals and decisions influence non-adherence as much as difficulty remembering to take medication.[16] In the absence of conversations to prioritise medicines according to patients' goals for care, the pills that get skipped might also be the ones likely to be most helpful.

Multimorbidity is tacitly understood to mean a combination of diseases, but a disease label is not synonymous with illness. An individual focuses on their own problems and on their subjective experience of pain or distress, influenced by their particular biographical context and their perception of what is normal and what is not. The medical/epidemiological gaze is increasingly focussed on pathological processes, diagnostic labels and now on risk factors for disease in populations.

Attention has shifted away from the actuality of patient experience towards defining disease on the basis of biomarkers. Hypertension, hypercholesterolemia and other biomedical markers are not diseases, but are increasingly viewed, described and managed as though they were. Preventive activities are the basis of the marketing of medicines and the taxonomies of both disease and disease risk have been adapted incrementally to meet the needs of the pharmaceutical industry.[17] For example, it is now common for population health agencies and research papers worldwide to talk of hypertension as a disease or comorbidity.[18-20] This leads both to long term treatments being given to individuals who are not suffering from illness, and the seemingly harmless act of giving these patients a label. However this seemingly harmless act demonstrably leads to poorer health outcomes. A recent study showed poorer self-rated health as a result of disease labelling on the basis of three asymptomatic physiological measures (hypertension, diabetes and thyroid disease).[21] Living with multiple chronic illnesses is already associated with psychological distress. Adding labels that extend this range is likely to increase this further. Such labelling is not justifiable nor necessary. Physiological markers such as blood pressure and glycaemia have associations with subsequent illness but they do not inevitably lead to illness. These associations are even less certain for older people. Levels considered abnormal in younger patients are normal in older patients and associated with better health – cholesterol level is a good example of this, as is blood pressure. The putative overall benefits of any treatment are equally uncertain in a situation of both multimorbidity and in older seniors. It is been demonstrated repeatedly that lowering glucose levels to a 'normal' range does more harm than good in older adults, and that being on an antihypertensive in older old age increases the risk of serious injury due to a fall.[22,23] Trying to target treatment at what is normal in younger patients may increase the risk of poor health in older people.

How might P4 benefit patients with multimorbidity?

Reduction in the burden of medication and the harms of polypharmacy is a key clinical task in the face of multimorbidity but one which is not easily achievable within current medical structures. Trials of stopping medicines indicate that stopping or reducing doses of diuretics, antihypertensives, antipsychotics and proton pump inhibitors can be successful and their effectiveness is often increased by tapering.[24-26] Trials of the discontinuation of multiple medications also indicate that this can be done successfully, without adverse consequences for the patient and with indications of an overall improvement in health.[27,28]

So how are doctors and patients to negotiate this uncertain landscape? Quaternary prevention is defined as action taken to identify patient at risk of overmedicalization, to protect him or her from further biomedical intrusion or medical invasion, and to suggest interventions that are ethically acceptable. Ethically acceptable means both interventions likely to offer a balance of benefit over harm in that individual, as well as interventions that are within the patient's capacity to incorporate given their level of biographical complexity. Using this definition as a framework, clinicians can assess whether interventions that might offer benefit in patients with single diseases have any chance of offering an overall benefit to a particular patient with multimorbidity. The P4 conceptual framework provides a useful basis for modelling safer health care for patients with multimorbidity for four reasons:

(1) It requires active consideration of not doing things – tests, treatments or labels – that may cause more harm than good. It describes and makes visible an active clinical process of avoiding overdiagnosis and overtreatment and gives a name to what doctors are actively doing when they are doing nothing. This gives confidence to individual doctors and helps policymakers to understand that this is an important, active part of the management in chronic comorbidity, and a good use of the resources they oversee on behalf of taxpayers.

(2) The relational model of P4 integrates doctors' understanding of the causal mechanisms of disease with patients' experience of illness, without giving either ascendancy. Patients experience chronic illness variably and uniquely and when multiple chronic illnesses are experienced simultaneously the experience of illness and effects of treatments becomes even more particular. Situating care within the context of the particular patient will focus on their particular experience of illness and allow them to decide what is most important, and align treatment to this. Patients' priorities for personal care may differ from medical priorities based on the science of disease. Until recently, medical priorities have been in the ascendant. Overdiagnosis and overtreatment include diagnostic labels and treatments that are not just medically inappropriate but also those that the patient doesn't want, or seek. Diagnosis of dementia is a good example, and P4 would prioritise conversations with the patient as to whether or not they wish to explore early cognitive issues over current pressure to screen for dementia.

(3) P4 provides a method for overcoming some of the barriers to good care in patients with multimorbidity. Fear of complaints or of 'getting it wrong' compared with guidelines are barriers to stopping unhelpful treatments. With multimorbidity in particular, this increases vulnerability to excessive investigation and treatment offering no overall benefits, and adding morbidity due to drug interactions and adverse effects. Incorporating P4 'red flags' in future management guidance documents might discourage overuse of investigations and diagnoses, and incorporating P4 in quality measures could reward judicious prescribing and harm avoidance. This would give the doctor a marker to point to, and even record when justifying decisions not to follow single disease treatment and investigation algorithms. Decisions to add interventions would be driven by the individual's capacity to cope with them, rather than disease-driven potential benefits. This approach in turn provides some bulwark against the influence of pharmaceutical company driven mandates for treatment and the threat of personal litigation that creates perverse incentives for care.

(4) Most importantly, P4 is seated within a doctor-patient relationship that exists over time. This is completely different to the current care models for chronic disease where there is no sense that it matters who provides care as long as it gets done. An ongoing longitudinal relationship makes it more likely that the patient is 'known'. This includes their particular experiences of their illnesses, and their priorities and preferences for care. This longitudinal relationship avoids the 'conspiracy of anonymity' highlighted by Freeman et al. that results in care that attends only to the presenting issues.[29] This longitudinal relationship-based care seems almost essential for the watchful waiting necessary to avoid potentially harmful investigations and treatments. It provides a basis for providing treatment that it is within the patient's capacity to implement as part of May and Montori's 'Minimally Disruptive Medicine'.[13]

Conclusion

Patients experience the burden of illness and their treatments, and the inequity that has led to them. P4 offers a model from which to explore an approach to medical care that tries hard not to add to this burden, and to not waste the most precious commodity of the person with multiple co-morbidities – time. It also offers a framework for policymakers to include these considerations in considering the quality of health care. Rather than looking at care from the position of comparative efficacy that is currently espoused, this takes a different position that has the patient at its heart – a position of comparative safety.

References

1. Mangin D, Heath I, Jamoulle M. Beyond diagnosis: responding to the comorbidity challenge BMJ. 2012;44:e3526. http://dx.doi.org/10.1136/bmj.e3526
2. Salisbury C, Johnson L, Purdy S, Valderas JM, Montgomery AA. Epidemiology and impact of multimorbidity in primary care: a retrospective cohort study. Br J Gen Pract. 2011;61:e12-e21. http://dx.doi.org/10.3399/bjgp11X548929
3. Davidoff F. Heterogeneity is not always noise. JAMA. 2009;302(23):2580-6. http://dx.doi.org/10.1001/jama.2009.1845
4. Starfield B. Diseases, chronic care and primary care. Sommer Memorial Lecture. Portland, Oregon: Johns Hopkins Bloomberg School of Public Health; 2010.
5. Boyd CM, Darer J, Boult C, Fried LP, Boult L, Wu AW. Clinical practice guidelines and quality of care for older patients with multiple comorbid diseases: Implications for pay for performance. JAMA. 2005;294:716-24. http://dx.doi.org/10.1001/jama.294.6.716
6. CIHI. Seniors and the health care system: what is the impact of multiple chronic conditions? [Internet]. Canada: Canadian Institute for Health Information; 2011 [acesso em 2014 Dec 01]. Disponível em: https://secure.cihi.ca/free_products/air-chronic_disease_aib_en.pdf
7. Commission E. Strengthening pharmacovigilance to reduce adverse effects of medicines. Brussels: European Commission; 2008 [acesso em 2014 Dec 01]. Disponível em: http://europa.eu/rapid/press-release_MEMO-08-782_en.htm?locale=en
8. Malvezzi M, Bertuccio P, Levi F, La Vecchia C, Negri E. European cancer mortality predictions for the year 2013. Ann Oncology. 2013;24:792-800. http://dx.doi.org/10.1093/annonc/mdt010
9. Starfield B, Mangin D. An international perspective on the basis of pay-for-performance. In: Gillam S, Siriwardena AN (editors). The quality and outcomes framework (QOF): Transforming general practice. Abingdon, UK: Radcliffe; 2011. p. 147-55.

10. Mangin D, Toop L. The Quality and Outcomes Framework: what have you done to yourselves? Br J Gen Pract. 2007;57:435–7.

11. Baker GR, Norton PG, Flintoft V, et al. The Canadian Adverse Events Study: the incidence of adverse events among hospital patients in Canada. CMAJ. 2004;170:1678-86. http://dx.doi.org/10.1503/cmaj.1040498

12. Field TS, Gilman BH, Subramanian S, Fuller JC, Bates DW, Gurwitz JH. The costs associated with adverse drug events among older adults in the ambulatory setting. Med Care. 2005;43:1171-6. http://dx.doi.org/10.1097/01.mlr.0000185690.10336.70

13. May C, Montori VM, Mair FS. We need minimally disruptive medicine. BMJ. 2009;339:b2803. http://dx.doi.org/10.1136/bmj.b2803

14. WHO. Adherence to long-term therapies: evidence for action. Geneva: World Health Organization; 2003.

15. Cline CMJ, Björck-Linné AK, Israelsson BYA, Willenheimer RB, Erhardt LR. Non-compliance and knowledge of prescribed medication in elderly patients with heart failure. Eur J Heart Fail. 1999;1:145-9. http://dx.doi.org/10.1016/S1388-9842(99)00014-8

16. Vervloet M, Linn AJ, van Weert JCM, de Bakker DH, Bouvy ML, van Dijk L. The effectiveness of interventions using electronic reminders to improve adherence to chronic medication: a systematic review of the literature. J Am Med Inform Assoc. 2012; 696-704. http://dx.doi.org/10.1136/amiajnl-2011-000748

17. O'Donnell JL, Smyth D, Frampton C. Prioritizing health-care funding. Intern Med J. 2005;35:409-12. http://dx.doi.org/10.1111/j.1445-5994.2005.00839.x

18. Public Health England. Disease prevalence model. England; 2013 [acesso em 2014 Dec 01]. Disponível em: http://www.apho.org.uk/DISEASEPREVALENCEMODELS

19. Long AN, Dagogo-Jack S. Comorbidities of diabetes and hypertension: mechanisms and approach to target organ protection. J Clin Hypertens (Greenwich). 2011;13:244-51. http://dx.doi.org/10.1111/j.1751-7176.2011.00434.x

20. Institute of Medicine. Living well with chronic illness: a call for public health action. Washington: Institute of Medicine; 2012.

21. Jørgensen P, Langhammer A, Krokstad S, Forsmo S. Is there an association between disease ignorance and self-rated health? The HUNT Study, a cross-sectional survey. BMJ Open 2014;4: e004962. http://dx.doi.org/10.1136/bmjopen-2014-004962

22. Tinetti ME, Han L, Lee DH, et al. Antihypertensive medications and serious fall injuries in a nationally representative sample of older adults. JAMA Intern Med. 2014;174(4):588-595. http://dx.doi.org/10.1001/jamainternmed.2013.14764

23. The Action to Control Cardiovascular Risk in Diabetes Study Group*. Effects of intensive glucose lowering in type 2 diabetes. N Engl J Med. 2008;358:2545-59. http://dx.doi.org/10.1056/NEJMoa0802743

24. Iyer S, Naganathan V, McLachlan AJ, Le Conteur DG. Medication withdrawal trials in people aged 65 Years and older. Drugs Aging. 2008;25:1021-31. http://dx.doi.org/10.2165/0002512-200825120-00004

25. Nelson MR, Reid CM, Krum H, Muir T, Ryan P, McNeil JJ. Predictors of normotension on withdrawal of antihypertensive drugs in elderly patients: prospective study in second Australian national blood pressure study cohort. BMJ. 2002;325:815-7. http://dx.doi.org/10.1136/bmj.325.7368.815

26. Campbell AJ, Robertson MC, Gardner MM, Norton RN, Buchner DM. Psychotropic medication withdrawal and a home-based exercise program to prevent falls: a randomized, controlled trial. J Am Geriatr Soc. 1999;47:850-3.

27. Garfinkel D, Mangin D. Feasibility study of a systematic approach for discontinuation of multiple medications in older adults: addressing polypharmacy. Arch Intern Med. 2010;170:1648-54. http://dx.doi.org/10.1001/archinternmed.2010.355

28. Garfinkel D, Zur-Gil S, Ben-Israel J. The war against polypharmacy: a new cost-effective geriatric-palliative approach for improving drug therapy in disabled elderly people. Isr Med Assoc J. 2007;9:430-4.

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ESSAYS

Philosophical roots of Quaternary Prevention

Raízes filosóficas da Prevenção Quaternária

Raíces filosóficas de la Prevención Cuaternaria

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Abstract

This article explores two philosophical dimensions of quaternary prevention since it represents the family doctors' response to overmedicalization. The first dimension refers to the theory of knowledge and the second to the theory of action. Despite their interconnectedness, they are addressed separately. Firstly, in the theories of knowledge (Epistemology) we argue that the positivism of Evidence-Based Medicine (EBM), so useful to select good practices, should be balanced against critical vision of the use of EBM coupled with a constructivist view through the narrative-based medicine. Secondly, in the theory of action (Ethics) we argue that the non-maleficence principle (*primum non nocere*) needs to be balanced by the beneficence principle. The latter is the primary medical obligation and doctors should cultivate this practical wisdom. Finally, some aspects of P4's future challenges are discussed such as health inequalities, interprofessional collaboration, responsibility, managerialism, and the integrative medicine, where a philosophical position should be considered.

Keywords:
Quaternary Prevention
Philosophy
Ethics
Evidence-Based Medicine
Epistemology

Resumo

Este artigo explora duas dimensões filosóficas da prevenção quaternária, uma vez que esta representa a resposta dos médicos de família para a sobremedicalização. A primeira dimensão se refere à teoria do conhecimento e a segunda à teoria da ação. Apesar de suas interconexões, elas são abordadas separadamente. Em primeiro lugar, com relação à teoria do conhecimento (Epistemologia) argumenta-se que o positivismo da Medicina Baseada em Evidências (MBE), tão útil para selecionar boas práticas, deve ser equilibrado com uma visão crítica do uso da EBM, juntamente com uma visão construtivista através da medicina baseada em narrativas. Em segundo lugar, com relação à teoria da ação (Ética) argumenta-se que o princípio da não-maleficência (*primum non nocere*) precisa ser equilibrado pelo princípio da beneficência. Este último constitui-se obrigação médica primária e os médicos deveriam cultivar essa sabedoria prática. Finalmente, alguns aspectos dos futuros desafios da P4 são discutidos, tais como as desigualdades na saúde, a colaboração interprofissional, responsabilidade, gerencialismo, e a medicina integrativa, onde suas posições filosóficas deveriam ser consideradas.

Palavras-chave:
Prevenção Quaternária
Filosofia
Ética
Medicina Baseada em Evidências
Epistemologia

Resumen

Este artículo explora dos dimensiones filosóficas de la prevención cuaternaria, ya que esta representa la respuesta de los médicos de familia a la sobremedicalización. La primera dimensión se refiere a la teoría del conocimiento y la segunda a la teoría de la acción. A pesar de sus interconexiones, ellas serán discutidas en separado. En primer lugar, con respecto a las teorías del conocimiento (Epistemología) argumentase que el positivismo de la Medicina Basada en la Evidencia (MBE), tan útil para seleccionar las buenas prácticas, debería ser equilibrada con una visión crítica del uso de la MBE, junto con una visión constructivista por medio de la medicina basada en la narrativa. En segundo lugar, con respecto a la teoría de la acción (Ética) argumentase que el principio de no maleficencia (*primum non nocere*) debe ser equilibrado por el principio de beneficencia. Este último es la obligación médica primaria y los médicos deberían cultivar esta sabiduría en la práctica. Finalmente, se discuten algunos aspectos de los retos futuros de la P4, como las desigualdades en salud, la colaboración interprofesional, la responsabilidad, el gerencialismo, y la medicina integral, donde sus posiciones filosóficas deberían ser consideradas.

Palabras clave:
Prevención Cuaternaria
Filosofía
Ética
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Introduction

Quaternary Prevention (P4), the family doctor's answer to overmedicalization, aims to protect the patient or population against the dangers of medicine. By asking the question: "*Is acting always justified in medicine?*",[1] P4 opens our thinking to a philosophy of action, which belongs to the field of ethics. By questioning its justification, P4 seeks the best way to reduce uncertainty, which is rooted in a philosophy of knowledge, i.e. the field of Epistemology. Both philosophy of action and philosophy of knowledge are analysed in this article as two basic dimensions of P4. Although here they are addressed separately, knowledge and action are strongly intertwined: knowledge is a "regulative guidance", a prerequisite for planning, deciding, justifying or to understanding an action. As stated by John Dewey in his book "The Quest for Certainty":

> *Men will not easily surrender all regulative guidance in action. If they are forbidden to find standards in the course of experience they will seek them somewhere else, if not in revelation, then in the deliverance of a reason that is above experience*.[2] (p. 44)

The history of medicine has witnessed different paradigms of "regulative guidance", from magic-religious medicines (personalistic according Gartoulla),[3] through naturalistic[3] "rational" medicines which involved natural theories such as the Galenic humours theory, to practices based on cumulative observations and experiences (*medical empiricism*). Only recently the ascendancy of the randomized trial has given its importance to *experimentation* in medicine to base our decisions and actions on the best possible evidence. The ability to track down, critically appraise (for its validity and usefulness), and incorporate this rapidly growing body of evidence into one's clinical practice has been named by Sackett *'Evidence-Based-Medicine'* (EBM). Sackett's ideal can be considered as a foundation of P4 as he states: "Might EBM help here by identifying which time - and resource-intensive manoeuvres should be dropped as we work to retain the effective ones and add new, more useful ones?" [4] (p. 16).

In EBM today there are decision helping tools whose usefulness is well established such as NNT (Number Needed to Treat). Despite these tools, professionals can take very different therapeutic options.[5] Hence, it is an important question why and how professionals think in action?[6] In other words, who necessitates further analysis and other epistemological models. Besides that, EBM can be used for purposes other than patient's interests, for example, to promote a new pharmaceutical product. Therefore, it is one of the roles of P4 to develop awareness about the misuses of science.

In order to expand on the subject this article describes the theories of knowledge upon which P4 can base its critical appraisal, followed by a discussion on the sceptical position in facing uncertainty. Then, it addresses the philosophy of action, trying to link the epistemological preconceptions to action as a consequence. Finally it discusses some P4's future challenges.

Theories of knowledge

As noted by Thomas, a number of theories of knowledge and theoretical models can be "weaved together to make sense of everyday experience"[7] (p. 1) in family medicine, and all can be related to P4. For instance, *Positivism* is essential in seeking the best evidence for primary, secondary and tertiary prevention, as well as for treatment. However, in order to structure the search for the best evidence it deliberately simplifies the case, since the evidence comes from a population of individuals, each with its own singularities. When we group the data from these individuals, their singularities are lost and there is less certainty that the population results can be applied to individual patients. For example, is it possible to apply the evidence from men with atrial fibrillation who are otherwise healthy to a particular male patient who is a homeless and diabetic? In a complex scenario like this, *The Systemic Model*,[8,9] which helps the practitioner to understand the patient's context and how it interacts with his condition, can be very useful in putting individual patients' conditions in a wider perspective.

Additionally, the *Critical Theory*[10] takes into account the power relationship between peoples and tends to reduce disparities, constructing its knowledge from different perspectives (triangulation), primarily based on qualitative research. Quaternary Prevention uses such a model when it denounces the influence of pharmaceutical industry on medical knowledge (disease mongering, selling sickness), such as the publication bias favouring positive results or the attitude promoting check-ups in healthy people who do not need them (Table 1).

Table 1. Critical model of power relationships.

Power	Consequences
Pharma industry	Disease mongering
	Selling sickness
Academic competition	Publication bias
	Accent on quantitative over qualitative research
Insurances	Selection of good risk
Financial and social inequalities	Unnecessary check-ups in healthy high class people

Source: elaborated by the author.

Furthermore, there is often a lack of agreement between health professionals and patients, which means that "truth" is a co-constructed phenomenon. By recognising this disagreement, the *Constructivist Model* produces new outcomes from "the interaction between the inquirer and the inquired",[7] which in medical practice could be portrayed by the physician-patient relationship. An example of the application of the constructivist model is the *Narrative-Based Model*[11] adopted in primary care, which considers diagnosis and treatment as a co-construction process, where doctors help patients to develop a "better new story". In Balint's words,[12] the doctor and the patient reach an "accepted compromise", avoiding the "confusion of tongues", when "each party is talking in a language not understood and apparently not understandable by the other". To avoid this confusion, they need to change "the level of diagnoses" from a diagnosis comprehending all physical signs and symptoms to a deeper level of diagnosis which implies an interpretation, more than an explanation. The area of philosophy that deals with interpretation as an iterative, empirically-based process, which takes into account the cultural and historical context leading to a better understanding is called *Hermeneutics*.[10] These models are particularly important in quaternary prevention to avoid unnecessary tests and treatments that do not meet the patient's problems (Figure 1).

The question around P4 entails why, how and when to move "appropriately between these different theories".[7] It is certainly possible to overmedicalise with EBM, as well as with hermeneutics. As an example, Michael Balint in his book "The doctor, his patient and the illness"[12] described a case of a "too fast" psychological interpretation. The doctor that was

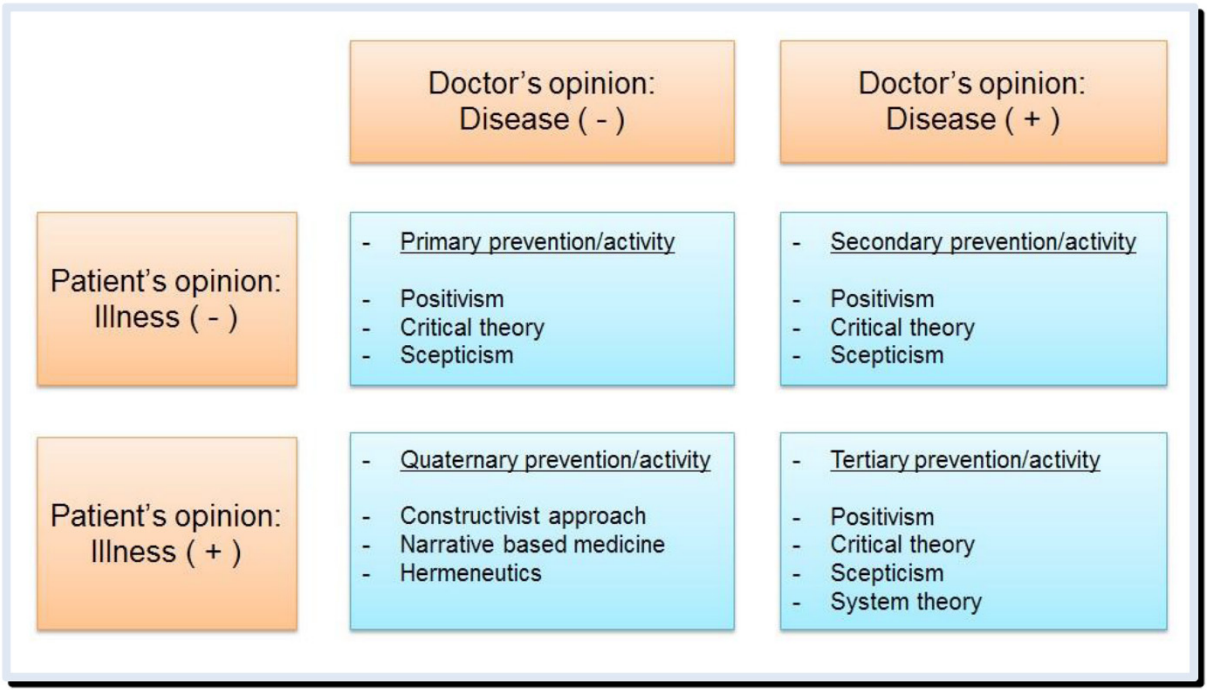

Figure 1. Epistemological models for Quaternary Prevention according to Jamoulle.[13]

reporting the case put emphasis on the psychological implications of the physical symptoms. However his colleagues felt that, although he was perhaps going in the right direction, "his speed was excessive for the patient". This illustrates the difference in pace between the physician and the patient which can be detrimental for therapeutic process. Similarly, an EBM practice based solely on guidelines might forget to create priorities together with the patient, leading to a deleterious practice. Especially in the case of patients with multimorbidity, it is essential to involve the patient in the decision-making process and to develop a patient-centred clinical method understanding the patient as a whole person.[14]

Scepticism

Medical scepticism is an old question (Table 2) which finds its source in the Hippocratic collection and is present until today when physicians profess disillusioned ideas, such as "evident today, wrong tomorrow", "maximal evidence, minimal compliance", or "evidence illuminates only where there is light".[18] Scepticism can be the denial of the foundations of any certainty and can conduct to a widespread doubt, demotivation and professional burn-out.[19] On the other hand, scepticism can manifest a critical spirit prone to examine and solve one's doubts. In this sense, scepticism is an ongoing research by bracketing prior knowledge and theories to concentrate on the lived experience of individuals.[16] This bracketing is called "epochê" according to *Sextus Empiricus,*[17] term also employed by Husserl's phenomenology. This creative kind of scepticism is also one the foundations of P4.

Table 2. Historical medical sceptics.[15- 17]

Hippocrates (460-370 BC): 'The greater complexity (in Greek *poikilotera*) of these ills requires a more exact method of treatment. For it is necessary to aim at some measure. But no measure, neither number nor weight, by reference to which knowledge can be made exact, can be found except bodily feeling'. (Vol.1, p. 27)
Sextus Empiricus (160-210 AD): 'Scepticism is an ability, or mental attitude, which opposes appearances to judgements…with the result that, owing to the equipollence of the objects and reasons thus opposed, we are brought firstly to a state of *mental suspense*…'. (*Epochê* in Greek) (p. 7)
Francisco Sanchez (1550-1623): 'Only individual objects exist: they are the only perceptions that are reached by the senses. From these perceptions alone must be a science...If you are in dispute, show me your famous universals in the nature'. (Original text in Latin, p. 33)

Source: elaborated by the author.

More than EBM

Summing up, EBM is a necessary but simplistic tool and it should be coupled to a critical vision that includes the humanities. The sceptical tradition reminds us that we work with individuals and encourages us to bracket our presuppositions and to centre ourselves on the lived experience. When it is not possible to experiment on so complex individual situations that we face, it is necessary to change the point of view. That can be summarised by the metaphor of Dewey on astronomy:

> *In astronomy we cannot introduce variation into remote heavenly bodies. But we can deliberately alter the conditions under which we observe them, which is the same thing in principle of logical procedure. By special instruments, the use of lens and prism, by telescopes, spectroscopes, interferometers, etc, we modify observed data. Observations are taken from widely different points in space and at successive times. By such means interconnected variations are observed.*[2] (p. 84).

Theory of action

If quaternary prevention promotes the abstinence of any action in presence of doubt (*in dubio abstine*), or in the absence of evidence, then there is the risk of therapeutic nihilism,[20,21] of abandoning the patient without support. Inadequacy or insufficiency of care can be as dangerous as overmedicalization. A purely positivist model can lead physicians to forget the traditional rules of care. Hence, questioning the potential harms of therapeutic nihilism is also the role of P4 (Table 3).

Table 3. Knowledge and action.

Philosophy of knowledge	Philosophy of action
Positivism (EBM)	In *dubio abstine*
Scepticism	Therapeutic nihilism
Critical theory	Non maleficence
Constructivism	Person centeredness
	Beneficence
	Virtues
Reflexivity / insight	Change of personality

Source: elaborated by the author.

The philosopher Gadamer[22] wonders why we had to leave the pre-scientific stage of our experience of life that has long helped us to care and guide in sickness and facing death. Certainly P4 is interested in the hazards of medicine, but P4 should also question the tendency to prioritise the principle of non-maleficence (*primum non nocere*). As Pellegrino has stated "the primary obligation that unifies the theory of medical ethics is beneficence... The primary obligation is not non maleficence, which is a negative obligation required even by law".[23] (p. 53)

In the original Hippocratic text, of Epidemics I, XI, 10-15,[15] there is no matter of priority for the non-maleficence principle: "make a habit of two things – to help, or at least to do no harm (p. 165)".[15] Non-maleficence here is only an aspect of beneficience.[21] Clinical decision making is not simply a statistical and probabilistic reasoning.[23] Therefore, to prevent bad decisions, P4 should also promote the virtues of the physician and particularly "the virtue of prudence (phronesis) to which we turn to tell us how to resolve our understanding (p. 89)"[23] in situations of uncertainty and emergency. In this regard Benaroyo states:

> *Practical wisdom or prudence, inherited from Aristotle, embodies the ability of the caregiver to find the right standard in a unique situation ... This concept of prudence is forgotten under the influence of Kant's philosophy and development of modern scientific thought associated with it.*[24] (p. 85-86)

Prudence is a virtue and not a principle outside the human being. The recognition of virtue requires a personal reflexive insight and certainly, as Balint points out: "a limited, though considerable change in the doctor's personality". (p. 121)[12] Prudence is an important condition of *clinical expertise* and there is a need for cultivating clinical expertise. As Sackett states "Good doctors use both individual clinical expertise and the best available external evidence and neither alone is enough".[4] (p. 2) Thus, bearing in mind both epistemological and ethical position, doctors concerned by the risk of overmedicalization should take into account the general guidance summarised in Table 4.

Table 4. Some recommendations on epistemological and ethical position that doctors should take into account when addressing overmedicalization.

Epistemological position	Ethical position
Be aware of the epistemological models being used.	Be aware that care is the first evidence and that science comes after.
Be aware of the consequences of choosing one epistemological model over others.	Try to link together the principles of beneficence and non-maleficence.
Bracket any theory or model in order to focus on the patient's experience.	Cultivate practical wisdom, centred on the relation of doctor and patient.
Promote research across different areas (active scepticism): positive research, critical, systemic, qualitative research, participatory action research, in order to get different points of view.	Narrative based interest.

Source: elaborated by the author.

Future challenges

Given the future challenges of medicine, the "P4 doctor" will continue to worry about the excesses of medicine as well as about health inequalities.[25,26] Physicians should cultivate ideas about philosophy of justice and be able to distinguish the two faces of justice: the necessary recognition of a patient's suffering and the right redistribution of care when resources are scarce.[27]

In promoting interprofessional collaboration to support multimorbid patients,[28] "P4 doctors" should be aware of the risk of over-organisation of care, that can culminate in a disruptive type of medicine.[29] The existence of different professions, different conceptions, and different apostolic functions,[12] increases the possibility of conflicts among these professionals. In this context, patient's agenda[30] might be forgotten, leading to a situation of split therapeutic networks where the patient, according to his own agenda, divides the caregivers into good and bad ones,[31] potentially generating more conflicts. Balint proposed the definition of the *apostolic function*:

> *It was almost as if every doctor had revealed knowledge of what was right and what was wrong for patients to expect and to endure, and further, as if he had a sacred duty to convert to his faith all the ignorant and unbelieving among his patient.*[12] (p. 216)

It is sometimes necessary to lower the threshold of caregiver's agenda and to choose the optimal minimum.[32] In this regard a reflective self-awareness is required in order to promote a true P4 attitude.

Another change comprises the *shared decision* with other professionals or when the patient brings the question of responsibility in a context of uncertainty.[33] The dilution of responsibility and the collusion of anonymity was described by Balint.[12] For Arendt,[34] (p. 28) the collective responsibility is impossible, since "there is no such thing as collective guilt or collective innocence; guilt and innocence make sense only if applied to individuals". Thus, physicians taking part in a network of carers, the coordination of care is unlikely to happen without the conviction and commitment of all the participants. According to Arendt, the question to *my* responsibility can be: why should I support the organisation and the care coordination? This implies the moral obligation to disobey, to "resist and to refuse to do anything that violates the promise to act in the patient's interests".[23] (p. 39)

The *New Public Management* can also be a future concern for a P4 doctor. Managerialism, defined as the adoption and promotion "of private-sector or business practices as part of an attempt to refashion the welfare state (p. 230)",[35] is a danger for the practice of medicine, as analysed by ethnographic studies[35,36] more deeply than by quantitative (outcomes) studies, centred only on targets.[37]

A further challenge might be the social pressure for the introduction of *Integrative Medicine*. Rakel[38] sees Complementary and Alternative Medicine (CAM) as a continuation of the Engel's biopsychosocial model in the hand of the primary care physician. As Rakel[38] (p. 1108) states "the use of CAM without the direction and continuity of these clinicians will only fragment care further and increase costs". Thus, placing the whole field of medicine - including CAM - in the hands of the family doctor is questionable. This approach might risk transforming family doctor's activity into a Babel tower since some CAM refers to completely different medical models or philosophies such as Indian or Chinese medicine. It is also questionable to think that CAM will be the answer to the relational lack of scientific medicine.

The Balintian response for several of these questionings, as exemplified in various quotations, should certainly be remembered and revisited. In other words, quaternary prevention will have its place in an area that can also lead to overmedicalization. The help of qualitative research, particularly anthropology, should have important role in addressing these topics.

Conclusion

Quaternary prevention, by a critical view on medicine, should demonstrate a philosophical perspective on the profession both in the field of the theory of knowledge (Epistemology) and action (Ethics). Thus, P4 epitomises what Galen has pointed out that "the physician should also be a philosopher".[39] (p.16)

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References

1. Widmer D, Herzig L, Jamoulle M. Quaternary prevention: is acting always justified in family medicine?. *Rev Med Suisse*. 2014;10(430):1052-1056. PMid:24930150.
2. Dewey J. The quest for certainty. A study of the relation of knowledge and action. New York: Minton, Balch & Co; 1929.
3. Gartoulla RP. Textbook of medical sociology and medical anthropology. Kathmandu: Research Centre fir Integrated Development; 2008. 654 p.
4. Sackett DL, Richardson WS, Rosenberg W, Haynes RB. Evidence-based medicine. New York: Churchikk Livingstone; 1997.
5. Steel N. Thresholds for taking antihypertensive drugs in different professional and lay groups: questionnaire survey. *BMJ*. 2000;320(7247):1446-1447. http://dx.doi.org/10.1136/bmj.320.7247.1446. PMid:10827049.
6. Schön DA. The reflective practitioner: how professionals think in action. New York: Basic Books; 1983. 374 p.
7. Thomas P. General medical practitioners need to be aware of the theories on which our work depend. *Ann Fam Med*. 2006;4(5):450-454. http://dx.doi.org/10.1370/afm.581. PMid:17003147.
8. Sturmberg JP, Martin CM, editors. Handbook of systems and complexity in health [Internet]. New York: Springer New York; 2013 [cited 2014 Aug 23]. Available from: http://link.springer.com/10.1007/978-1-4614-4998-0
9. Sturmberg JP, Martin CM, Katerndahl DA. Systems and complexity thinking in the general practice literature: an integrative, historical narrative review. *Ann Fam Med*. 2014;12(1):66-74. http://dx.doi.org/10.1370/afm.1593. PMid:24445105.
10 Kuper A, Reeves S, Levinson W. An introduction to reading and appraising qualitative research. BMJ. 2008;337:a288.
11. Launer J. Narrative-based primary care: a practical guide. Abingdon: Radcliffe Medical Press; 2002.
12. Balint M. The doctor, his patient and the illness. Edinburgh: Churchill Livingstone; 2000.
13. Kuehlein T, Sghedoni D, Visentin G, Gervas J, Jamoulle M. Quaternary prevention: a task of the general practitioner [Internet]. PrimaryCare; 2010. [cited 2010 Nov 18]. Available from: http://www.primary-care.ch/docs/primarycare/archiv/de/2010/2010-18/2010-18-368_ELPS_engl.pdf.
14. Harris MF, Dennis S, Pillay M. Multimorbidity: negotiating priorities and making progress. *Aust Fam Physician*. 2013;42(12):850-854. PMid:24324984.
15. Hippocrates, Jones WHS, Withington ET. [Medical works]. Vol 1: Ancient medicine.Vol 4: Heracleitus on the Universe. Harvard University Press; 1923.
16. Sanchez F. Il n'est science de rien. Paris: Klincksieck; 1984. 178 p. [cited 2015 Jun 18] Available from: http://gallica.bnf.fr/ark:/12148/bpt6k49823t.
17. Sextus Empiricus. Sextus empiricus: outlines of pyrrhonism. Cambridge: Harvard University Press; 1933.
18. Pilet F. Medicine based on proof (evidence based medicine)...or the Ouin-Ouin syndrome. *Rev Med Suisse Romande*. 2001;121(4):329-330. PMid:11400408.
19. Raynaud M. An Address on Scepticism in Medicine. *BMJ*. 1881;2(1076):268-273. http://dx.doi.org/10.1136/bmj.2.1076.268. PMid:20749969.
20. Johnston WM. Vienna, Vienna: the golden age, 1815-1914. New York: C.N. Potter; 1981. 332 p.
21. Gillon R. Philosophical medical ethics. Chichester: Wiley; 1986. 189 p.
22. Gadamer H-G. The enigma of health: the art of healing in a scientific age. Stanford: Stanford University Press; 1996. 180 p.
23. Pellegrino ED. The virtues in medical practice. New York: Oxford University Press; 1993. 205 p.
24 Benaroyo L. Éthique et responsabilité en médecine. Genève: Éditions Médecine & Hygiène; 2006. French ed.
25. Chatelard S, Vaucher P, Wolff H, Bischoff T, Herzig L, Panese F, et al. General practitioners facing social inequalities in health: which power to act?. *Rev Med Suisse*. 2012;8(341):1061-1062, 1064-1066. PMid:22730642.
26. Chatelard S, Bodenmann P, Vaucher P, Herzig L, Bischoff T, Burnand B. General Practitioners Can Evaluate the Material, Social and Health Dimensions of Patient Social Status. PLoS ONE. 2014;9(1):e84828. http://dx.doi.org/10.1371/journal.pone.0084828.
27. Fraser N. Redistribution or recognition?: a political-philosophical exchange. London: Verso; 2003. 276 p.
28. Samuelson M, Herzig L, Widmer D. Future of interprofessional primary care in time of crisis. *Rev Med Suisse*. 2012;8(364):2254, 2256-2259. PMid:23240236.
29 May C, Montori VM, Mair FS. We need minimally disruptive medicine. BMJ. 2009;339:b2803.
30. Rodondi P-Y, Maillefer J, Suardi F, Rodondi N, Cornuz J, Vannotti M. Physician response to "by-the-way" syndrome in primary care. *J Gen Intern Med*. 2009;24(6):739-741. http://dx.doi.org/10.1007/s11606-009-0980-2. PMid:19390902.
31. Kernberg O. Borderline personality organization. *J Am Psychoanal Assoc*. 1967;15(3):641-685. http://dx.doi.org/10.1177/000306516701500309. PMid:4861171.
32. Stigler M, Quinche P, Bonsack C. Following "low threshold": the "optimal minimum" in the therapeutic approach to the difficult patient. *Rev Med Suisse Romande*. 1999;119(5):429-435. PMid:10384777.
33. Dowrick C, Frith L, editors. General practice and ethics: uncertainty and responsibility. London: Routledge; 1999. 196 p.

34. Arendt H, Kohn J. Responsibility and judgment [Electronic version]. New York: Schocken Books; 2003.

35. Grant S, Huby G, Watkins F, Checkland K, McDonald R, Davies H, et al. The impact of pay-for-performance on professional boundaries in UK general practice: an ethnographic study. *Sociol Health Illn.* 2009;31(2):229-245. http://dx.doi.org/10.1111/j.1467-9566.2008.01129.x. PMid:18983422.

36. Checkland K, Harrison S, McDonald R, Grant S, Campbell S, Guthrie B. Biomedicine, holism and general medical practice: responses to the 2004 General Practitioner contract. *Sociol Health Illn.* 2008;30(5):788-803. http://dx.doi.org/10.1111/j.1467-9566.2008.01081.x. PMid:18444956.

37 Harrison MJ, Dusheiko M, Sutton M, Gravelle H, Doran T, Roland M. Effect of a national primary care pay for performance scheme on emergency hospital admissions for ambulatory care sensitive conditions: controlled longitudinal study. BMJ. 2014;349:g6423. http://dx.doi.org/10.1136/bmj.g6423.

38. Rakel D, editor. Integrative medicine. 3rd ed [Electronic version]. Philadelphia, PA: Elsevier Saunders; 2012. 1039 p.

39. Galenus DC. Traités philosophiques et logiques: des sectes pour les débutants, esquisse empirique, de l'expérience médicale, des sophismes verbaux, institution logique. Paris: Flammarion; 1998. 300 p.

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MEDICAL EDUCATION

Teaching and learning quaternary prevention

O ensino e a aprendizagem da prevenção quaternária

La enseñanza y el aprendizaje de la prevención cuaternaria

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Abstract

This article presents an overview of different techniques and skills necessary for teaching and learning quaternary prevention (P4). It adopts the Expertise Model that defines the competences required in P4 for each level: novice, competent, proficient, and expert. This framework should be used as a step-wise roadmap for teachers in order to achieve high levels of performance. This proposal is complemented by a list of methods applied in teaching and assessment of learners' performance and competence. By covering a range of learning and teaching issues, those who aim to teach quaternary prevention can explore the proposed framework. Quaternary prevention is a research and teaching fertile medical field that entails the integration of different areas such as health service organization, epidemiology, communication skills, and andragogy either at the macro or the micro levels of health related activities.

Keywords:
Quaternary Prevention
Teaching
Education, Medical
Family Practice
Internship and Residency

Resumo

Este artigo apresenta uma visão geral das diferentes técnicas e habilidades necessárias para o ensino e a aprendizagem da prevenção quaternária (P4). Ele adota o Expertise Model que define as competências exigidas na P4 para cada nível: iniciante, competente, proficiente e expert. Essa estrutura pode ser utilizada como um roteiro passo a passo para os professores, a fim de alcançar elevados níveis de desempenho. Esta proposta é complementada por uma lista de métodos usados no ensino e na avaliação de desempenho e competências dos alunos. Ao cobrir uma série de questões de ensino e aprendizagem, aqueles que visam ensinar prevenção quaternária podem explorar a grade proposta. A prevenção quaternária é um campo fértil para a investigação e o ensino da medicina que envolve a integração de diferentes áreas, como a organização de serviços de saúde, epidemiologia, habilidades de comunicação e andragogia, tanto no nível macro como no micro das atividades relacionadas à saúde.

Palavras-chave:
Prevenção Quaternária
Ensino
Educação Médica
Medicina de Família e Comunidade
Internato e Residência

Resumen

Este artículo presenta una visión general de las diferentes técnicas y habilidades necesarias para la enseñanza y el aprendizaje de la prevención cuaternaria (P4). El adopta el Expertise Model que define las competencias requeridas en P4 para cada nivel: principiante, competente, proficiente y experto. Esta estructura puede ser utilizada como un guía paso a paso para los profesores con el fin de alcanzar altos niveles de rendimiento. Esta propuesta se complementa con una lista de métodos utilizados en la enseñanza y la evaluación del desempeño y competencia de los educandos. Al hacer referencia a una serie de cuestiones de enseñanza y aprendizaje, los que tienen como objetivo enseñar prevención cuaternaria pueden explorar el marco propuesto. La prevención cuaternaria es un campo fértil de investigación y enseñanza de la medicina que requiere la integración de diferentes áreas como la organización de servicios de salud, epidemiología, habilidades de comunicación, y la andragogía, ya sea en el nivel macro como micro de las actividades relacionadas con la salud.

Palabras clave:
Prevencion Cuaternaria
Enseñanza
Educación Médica
Medicina Familiar y Comunitaria
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"One of the first duties of the physician is to educate the masses not to take medicine"Sir William Osler (p. 105)[1]

Introduction

Quaternary Prevention (P4) is defined as "the action taken to identify a patient or a population at risk of overmedicalization, to protect them from invasive medical interventions and provide for them care procedures which are both scientifically and ethically acceptable".[2,3] It is considered by many a controversial concept, mainly because it follows a different direction from the other prevention concepts (primary, secondary and tertiary prevention) which lead to more interventions.[4]

The concept of P4 is better integrated by generalists as general practitioners/family physicians (GP/FP) and practice nurses – because these specialists are not committed with specific parts of the body or groups of diseases.[5] Medicine and its interventions are usually driven towards increasing both quality and expectancy of life; but, when in excess, even apparently simple interventions as screening procedures may have opposite effects.[6] The impact of unwanted effects from excess of medical interventions only recently (a few decades ago) became an object of epidemiological studies.[7]

Observing the way "market driven influences" favour and induce overdiagnosis, overscreening, incidentalomas, overtreatment and overmedicalisation, it is necessary to remind all medical professionals of the first basic principle of our activity: *primum non nocere*.[8,9] Disease mongering, disease marketing and branding of conditions are the weapons handled by the bigpharmas, supported by their effective partners in medical associations and classification boards.[10] Instrumental to this is the widespread use of fake publications with the benediction of some medical press and academic centres in a broad picture of institutional corruption and the complicity of public health policies which have long ago forgotten their responsibilities towards the people they should serve.[11,12] To contradict this *status quo*, and to help doctors to be in the best conditions to understand and avoid these "market driven influences", therefore acting in the best interest of their patients and society as a whole, we need to bring up a wide programme of learning and teaching P4.

The learning/teaching process

Quaternary Prevention is a decisive and sensitive concept. It should be learned and taught bearing in mind that together with its strengths there are also threats. The main threat is to transform the research in this field in a *ghetto* or to reduce it into a kind of political militancy. Since health services have undergone a huge transformation, becoming more like an industry, one of the main values of medicine – "*primum non nocere*" – has become a sort of "different" and "strange" concept, almost an "aberration".[13] Teachers in the quaternary prevention field should take these issues into consideration.

The learners

Any learning/teaching process must define the target group.[14] This paper is intended to address the medical students and doctors, at all levels of medical learning process: (1) undergraduate medical programmes such as Basic Medical Education-BME which focus on students; (2) Specialty Training programmes with a focus on GP trainers and GP trainees (ST); and (3) Continuing Medical Education (CME)/Continuing Professional Development (CPD), aiming the health professionals.

The teachers

Over recent years a greater proportion of the teaching at undergraduate level (BME) is being provided by general practice based teachers coming from a practice setting.[15] The same happens with trainers involved in ST, and CME/CPD Tutors. The teaching of P4 requires special knowledge and skills, as well as a close working relationship between teachers and learners. The main competences for a teacher of quaternary prevention addressed in this article are presented below.

Communication skills with the patient

Patients learn since childhood "*what is the purpose of a doctor*": to complain about pain and other physical symptoms, to talk about diseases or health problems, or, in a relatively recent scenario, to ask for medication, screenings or other procedures. When this process happens and patients learn how to communicate with doctors only about their disease this can produce a behavioural pattern or even a vicious cycle (Figure 1). It is often a skilled doctor who usually breaks this behavioural pattern and explores with the patients about their fears or expectations. Many symptoms such as agitation, thoracic pain, or depression often reflect underlying personal issues, which are not easy for patients to express them. Additionally, the media reinforces this disease behavioural and communication pattern by "selling" the idea that doctors save lives and deal only with diseases and physical symptoms.[16] Hence, one of the most crucial tasks for health professionals is to detect when a given intervention is not appropriate for an individual patient. A decoding process becomes necessary in order to deeply access and understand patients' feelings, fears, ideas and expectations, as well as associated signs and symptoms, considering patients' wider context.[17,18]

Communication skills with the learners

Teachers should understand how teachers teach and how adults learn. In teaching P4 we are dealing with adult learners (andragogy).[19] Learning processes should be based in a relevant environment, actively involving teachers and learners at all stages in order to produce a reflective self-educating practitioner. Adult learning process works better when self-directed, experiential, need-based and problem-based directed. P4 teachers should use learner centred models of teaching to improve the communication with learners.[16]

Personal attributes

Teachers should have open minds, good health, and master listening and communication skills. Additionally, they should be keen to share competencies and be skilful in organising their teaching activities.

Figure 1. Vicious cycle identified in doctor-patient communication. Source: elaborated by the authors.

Medical competences

Teachers should also be experienced as medical doctors and master up-to-date clinical knowledge and skills in order to teach P4. They should always aspire to an outstanding professional attitude and work in typical practice profile, as well as be involved in quality of care improvement and keep appropriate records. Finally, teachers should have a firm commitment to teach P4 at all levels.

The working environment

Teaching quaternary prevention can be more of a challenge when the health systems are not rational and well-organised. Rational health systems rely on strong primary health care and skilled generalists working in teams and in a network environment. Additionally, for learners, it might sound contradictory and confusing to practice and learn quaternary prevention in an 'ill-organised' health system, such as systems without a clear regulation, lacking lists of patients per general practitioners (i.e. family doctors being the gatekeepers of hierarchical health systems) and being driven by market. In order to overcome the difficult task of teaching P4, teachers might choose or develop their own strategies, based upon different teaching and learning styles. Hence, quaternary prevention can be practiced and taught at individual level but attains maximum effectivity when aimed towards the population as a whole, which requires a "task force" effort.[20]

The objectives: what we are going to teach?

To organise the different and complex competences needed to perform quaternary prevention, and the steps for mastering those competences through the learning/teaching process, we decided to apply the *Expertise Model*: the Dreyfus brothers 4-stage model, defining the characteristics of functioning at each level: Novice, Competent, Proficient, and Expert.[21]

This model was successfully used as "Framework for Continuing Educational Development of Trainers in General Practice/Family Medicine in Europe" by the European Academy of Teachers in General Practice/Family Medicine (EURACT) and partners (College of Family Physicians in Poland; Health and Management Ltd.; ZiZ Education Centre Ltd.; Danish College of General Practitioners; Institute for Development of Family Medicine; Greek Association of General Practitioners; Portuguese Association of General Practitioners; and Turkish Association of Family Physicians).[22] The objectives of the learning/teaching process are (among others possible) described in Table 1.

Table 1. Domains of Teaching Quaternary Prevention.[21]

	Personal attributes			
Domain	Novice	Competent	Proficient	Expert
Ethics	Familiarity with the concept of professional and personal ethics.	Apply ethical principals in dealing with patients medical needs. Justify/clarify personal ethics.	Deal with complex ethical issues in relation to over-medicalization achieving shared decisions with patients.	Identify ethical aspects of clinical practice. Understand the full context of over-medicalization, finding solutions and applying the principles of P4 to patients while influencing colleagues and learners.
Self-knowledge	Capability of self-assessment.	Self-awareness of own emotional responses in dealing with P4 issues.	Use self-knowledge as a tool in relating to patients and team when dealing with complex situations.	Influence others into self-knowledge, providing adequate methods when needed and establishing the reports with P4.

Source: elaborated by the authors from the professional standards for conservation, Institute of Conservation, London, 2008, based on the Dreyfus model of skill acquisition.[21]

Table 1. Continued...

Person centeredness				
Domain	Novice	Competent	Proficient	Expert
Communication	Ability to communicate with patients.	Easily communicate with patients, using empathy and non-verbal signs.	Apply communication skills for counselling. Use concepts from proxemics. Deal adequately with different emotions.	Expertise in communication and organisation of training in this area, facing the difficulties in achieving ethical and acceptable care procedures.
Patient-doctor relationships	Establish good relations with patients.	Establish relations overtime using patient-centred consultation models, taking decisions and prioritizing problems with respect for the autonomy of the patient.	Develop and maintain a partnership with the patient. Take into account patients feelings, values and preferences when counselling, namely in the complex areas of P4.	Own and expand an anthropological understanding of patient-doctor relationships, being aware of subjectivity in the medical relationship from the doctors' side (self-awareness on values, attitudes and feelings) and using this understanding to facilitate patient's decisions.
Advocate for the patient	Capability to act as advocate for the patient.	Develop and maintain relationships and communication styles actually characterized by partnership with the patient.	Demonstrate active advocacy, eventually against third parties, namely when dealing with over-medicalization.	Master skills in effective leadership, negotiation and compromising skills in order to effectively influence the health environment to protect patients.

Practice environment				
Domain	Novice	Competent	Proficient	Expert
Patient safety	Ensure highest standards of patient safety at all times.	Balance the needs of service delivery with patients' needs. Apply P4 to the practice environment.	Develop P4 in the practice environment to ensure patient safety. Involve patients as P4 partners.	Organise P4 programmes for learners and colleagues. Have responsibility for overseeing the impact of P4 programmes on patient safety.
Management of problems	Awareness of potential impact on patient safety of problems in prevention activities.	Ability to recognise early difficulties experienced by GPs in delivering P4. Respond to concerns raised about difficulties in prevention and seek further help, when necessary.	Manage complex difficulties in prevention and provide support to patients and GPs. Respond to concerns raised, working within available systems of support.	Ensure availability of support systems in the organisation either locally or within external sources. Able to arrange and supervise remediation of problems identified by patients and GPs.
Quality improvement	Understand the processes of quality improvement through the application of P4.	Actively involved in improving the awareness to P4, thus promoting excellent practice.	Identify problems of over-medicalization and improve measures trough P4, assuring appropriate follow-up. Identify problems and undertake remedial action when needed.	Take overall responsibility for the quality and improvement of P4. Ability to deal with complex quality improvement problems and supervise the application of appropriate solutions.

Source: elaborated by the authors from the professional standards for conservation, Institute of Conservation, London, 2008, based on the Dreyfus model of skill acquisition.[21]

Table 1. Continued...

Information				
Domain	Novice	Competent	Proficient	Expert
Guidelines and Protocols	Know guidelines and protocols and carefully study them.	Keep up-to-date about new guidelines and protocols. Compare them and evaluate whether they are adequate in each individual patient. Apply them accordingly in consultation.	Discuss and compare new guidelines and protocols with peers and evaluate the quality of evidence on which they are based, questioning the process of their elaboration. In consultation, favour the use of symptom based protocols.	Understand that guidelines aim to help make clinical decisions, not to replace them. Establish the credibility criteria of each guideline before using or recommending it. Induce learners and colleagues to understand that not all documents denominated as 'guidelines' truly fulfil its task and that the possibility of false-positives or unnecessary interventions grow when applying the wrong protocol.
Patient support and information	Provide information to the patients on basic P4 issues.	Regularly update on problematic issues (screening, medication, procedures) and discuss those issues with their patients in order to obtain the better common decision.	Understand the theoretical frameworks which underlie dealing with P4 in complex situations and use it with patients. Take part in the development of support systems for patients. Capable of responding to special need of patients.	Take responsibility for providing information to patients, both individually and in groups. Organise educational learning/teaching programmes about screening, treatment, procedures, disease-mongering and quaternary prevention. Responds to patient's questions eventually using media.
Educational supervision and support	Self-motivated as potential teacher/tutor/ facilitator.	Supervise a learner (student or trainee) in areas of P4. Able to give helpful and constructive feedback to learners. Provide a role-model.	Supervise the clinical performance and education progress of an individual learner (or groups). Understand the theoretical frameworks which underlie dealing with P4 in complex situations and use it with learners. Capable of responding to trainees' special needs.	Supervise whole programme and individual elements within it. Supervise other teachers/ trainers providing appropriate feedback. Give successful feedback to learners with complex difficulties, using outside agencies where appropriate. Take part in the development of support systems for trainers and trainees (or other learners).

Source: elaborated by the authors from the professional standards for conservation, Institute of Conservation, London, 2008, based on the Dreyfus model of skill acquisition.[21]

Table 1. Continued...

Science				
Domain	Novice	Competent	Proficient	Expert
Research	Aware of the importance and relevance of research.	Participate in independent research on request. Acquainted with research being carried out in their area of interest.	Familiar with the important relevant research findings. Understand the techniques of research relevant to their role. Able to develop and conduct independent research. Awareness of possible flaws in research.	Experienced in conducting or analysing research. Supervise research projects, establishing ground rules for its independence from industry. Translate significant research findings into P4 training programmes. Understand the role of independent research in protecting patients.
EBM	Familiar to the concept of EBM.	Have solid and updated knowledge of scientific developments. Currently make use of the best evidence available when reaching common decisions with their individual patients.	Apply the scientific method consciously, explicitly and judiciously, to medical practice, including long-established existing medical traditions not yet subjected to adequate scientific scrutiny, providing the best possible evidence- based care.	Have a deep knowledge of EBM and tacit understanding of its application across the areas of medical practice. Develop scientific approaches to practice through the active support of initiatives in the area. Proactivity in establishing scientific programmes of learning/teaching.
Critical reading	Have access to published data and regularly read different publications.	Able to judge scientific publications, to prioritize sources of information and critically upraise different options available.	Able to adopt a critical and research based approach to practice and maintain this through continuing learning and quality improvement.	Holistically grasp different publications, moving easily between intuitive and analytical approaches. Able to see overall “picture” and possible alternatives, while maintaining a critical and sceptical approach. Promote critical reading among learners and colleagues.
Epidemiology	Have knowledge of the epidemiology of problems presented by patients.	Master an approach which allows easy accessibility for patients and their problems. Have knowledge of the conditions encountered in consultation and their treatment.	Skilled in acute, chronic, palliative and emergency care. As prescribers, favour approaches based upon pharmaco-epidemiology oriented towards the patient.	Use an organisational approach to manage the full range of health conditions. Skilled in epidemiological assessment and contribute to the demystification of market driven influences.

Source: elaborated by the authors from the professional standards for conservation, Institute of Conservation, London, 2008, based on the Dreyfus model of skill acquisition.[21]

Table 1. Continued...

Science				
Domain	Novice	Competent	Proficient	Expert
Statistics	Have basic knowledge in statistics.	Awareness of the use of surrogate outcomes and relative instead of absolute risk as a way to show apparently favourable conclusions in biased publications.	Familiarity with common misleading statistical errors, such as regression to the mean, the error of the transposed conditional, and the individual response. Attentive to lead-time bias, length bias and over-diagnosis bias.	Show authoritative knowledge of statistics and deep understanding across areas of practice. Ability to take responsibility for going beyond existing standards and creating appropriate opportunities for discussing and correcting health plans or activities based upon biased conclusions.
NNT/NNH	Know NNT and NNH.	On their therapeutic activities always take into account NNT and NNH, and discuss it with their patients.	Have broad access to NNT and NNH discussions, include them in all activities and medical reasoning, and influence others to being aware of the importance of these figures to clinical decision.	Create conditions in order to widen the knowledge of NNT and NNH. Facilitate the access to this kind of information, by means of creating data bases. Collaborate in educational activities towards learners, colleagues and the public.
Prevention				
Domain	Novice	Competent	Proficient	Expert
Underlying philosophy	Awareness of prevention fallacies.	Awareness of the differences between prevention and screening.	Fully understand and apply adequate criteria for screening, sharing them with learners and patients. Critically oppose preventive "crusades".	Understand the ethical dimensions of prevention. Critically discuss with learners, colleagues and patient groups issues related to: positive health, health promotion, the inevitability of death, prolongation and quality of life, moral influences.
Preventive activities	Have knowledge of preventive activities practiced, including P4.	Critical about preventive activities which are not evidence-based and discuss them with their patients.	While counselling, display all information on preventive activities. Aware of the discussions around preventive activities. Familiarity with the practice of P4.	Experienced in P4 approaches. Organise and maintain educational programmes on P4, directed to learners and colleagues. Have an important role in creating and displaying information to the public on P4 issues and collaborate with groups of patients and the communities in these matters.

Source: elaborated by the authors from the professional standards for conservation, Institute of Conservation, London, 2008, based on the Dreyfus model of skill acquisition.[21]

Table 1. Continued...

Prevention				
Domain	Novice	Competent	Proficient	Expert
Risk	Understand the difference between risk factors and disease.	Awareness of possible confusion between risk factors and disease, that patient might bring into the consultation, which need clarification.	Use of clear examples to show to patients what are risk factors and reassures them by explaining the probabilities associated with those risk factors.	Have long time experience on demystifying risk factor-based campaigns. Able to organise information in these matters and to disseminate it to learners and patient groups.
Team				
Domain	Novice	Competent	Proficient	Expert
Team building	Self-motivated as a potential group leader.	Capable of teambuilding, namely in peer groups.	Organise health team groups, coordinate teams, facilitate discussions, act as group leaders.	Coordinate groups, teams and institutions, facilitating discussion and harmonizing procedures. Organise learning/teaching processes.
Teamwork	Take part in peer groups.	Show skills in effective teamwork.	Excellent in team working, inspiring other members to achieve objectives.	Organise teamwork, actively participate and trigger key discussions. Show contagious enthusiasm and bring about all the capacities of team members.
Community				
Domain	Novice	Competent	Proficient	Expert
Patient group support	Awareness of patient groups.	Communicate with patient groups, namely through public health conferences.	Responsible for communicating with groups of patients involved in centres' and regions' coordination, and are involved in P4 activities within the community.	Responsible for health coordination's activities. Organise, in collaboration with peers, P4 activities within the communities. Collaborate with media in informing the public about health issues.
Developing partnership	Aware of the importance of developing partnerships.	Develop partnership between health teams.	Develop partnership between health teams and the community.	Facilitate and organise the development of partnerships, assess them regularly and assure the quality of the work produced.

Source: elaborated by the authors from the professional standards for conservation, Institute of Conservation, London, 2008, based on the Dreyfus model of skill acquisition.[21]

Table 1. Continued...

Clinical				
Domain	Novice	Competent	Proficient	Expert
Therapeutics	Have deep theoretical knowledge on therapeutics.	Familiar with the management of therapeutics, including drug and non-drug approaches to treatment.	Practice pharmacovigilance oriented towards the patient. Show special attention to age related and co-morbidity problems inducing polypharmacy, as well as to critical therapeutics.	Have a deep understanding of the problems underlying polypharmacy and drug-related effects on health. Able to carefully and critically assess the use of drugs and their risk/benefit ratio – including critical therapeutics – and to organise information for learners and colleagues. When possible, use low doses of well-known drugs, when needed.
Deprescription	Have basic knowledge of the process of deprescribing.	Consider deprescribing in cases of inappropriate polypharmacy in older patients.	Openly discuss benefit–harm with patients to consider deprescribing. Target patients according to highest risk of adverse events and drugs more likely to be non-beneficial.	Aware of the multiple barriers to deprescribing. Access field-tested discontinuation regimens for specific drugs. Foster shared education and training in deprescribing among all members of the health care team.
Tests	Have deep theoretical knowledge on the use of tests.	Master clinical skills in the use of auxiliary tests, using them only when supported by evidence and discussing them with patients.	Use evidence-based tests when needed to complement diagnosis. Familiarity to sensitivity, specificity, predictive values and likelihood ratios of auxiliary tests.	Able to discuss among peers on the indication for tests. Regularly update lists of useful and non-useful tests. Have experience in explaining to the public the reasons for or against the use of an individual test.
Disease-mongering	Familiarity to disease-mongering processes.	Know about the "Market of Fear" and explain it to their patients.	Explain to their patients and learners how over-medicalization is achieved through the creation or invention of new (false) diseases or the inflation of old ones.	Familiarity with the literature on disease-mongering and well informed on the process. Lobby, with peers, against the medicalization of life and death currently occurring. Influence learners, colleagues and public on the fight against disease-mongering.

Source: elaborated by the authors from the professional standards for conservation, Institute of Conservation, London, 2008, based on the Dreyfus model of skill acquisition.[21]

Table 1. Continued...

Clinical				
Domain	Novice	Competent	Proficient	Expert
Dying well	Understand the limits to how much medicine can achieve.	Attentive to exploitation of fears regarding sickness and death and keen to protect patients from this.	Pay real attention, at an individual level, to the care of the dying, keeping patients safe from inadequate or useless medical interventions.	Understand the existential challenges doctors face of finding meaning in the face of loss, suffering, and the finitude of life, and discuss it with learners. Comprehend that doctors don't show particular aptitude towards mortality of others and self, and find ways to bridge the gaps due to the very little relevant education on these subjects.

Source: elaborated by the authors from the professional standards for conservation, Institute of Conservation, London, 2008, based on the Dreyfus model of skill acquisition.[21]

The methods: how we are going to teach?

All teaching methods (Table 2), from traditional lectures to direct observation, can be useful, depending on the learners' stage and on the aims of the teaching session. Therefore, as learners progress in their learning journey towards expertise in quaternary prevention (as in other medical subjects), the teaching methods used can vary. They can be categorized by context: large/small groups; one-to-one; and self-directed study.

Table 2.Teaching Methods.[22]

Large/Small Group	One-to-one	Self-directed study
Lecture	Direct observation	Reading
Workshop/Seminar	Video	Web based (e-learning)
Brainstorm	Simulated patients	Project based learning
Buzz group	Random/problem case analysis	Reflection
Games and exercises	Records review	Learning log
Group project based learning	Prescribing review	
Small group process work (Balint)	Medical audit	
Medical audit	Topic Tutorial	
Topic Tutorial	Role-play	
Role-play		
Demonstration/practical skills teaching		

Source: The EURACT/Leonardo Level 1. Course for teachers in Family Medicine, Module 3, "Teaching Methods".[22]

Assessment and evaluation: how we will know that learning took place?

There is a range of assessment methods which can be used to evaluate the acquisition of competences in the area of quaternary prevention, and/or to gauge if learning/teaching process has really occurred. The long list could include: (1) Case Based Discussion (CBD); (2) Consultation Observation Tools (COT); (3) Naturally Occurring Evidence (NOE); (4) Supervisor's Reports (CSR); (5) Patient Satisfaction Questionnaires (PSQ); (6) Performance Audit (PA); (7) Review of

patient records (RPR); (8) Simulated patient (SP); (9) Standardized Patient (SP); (10) Role-playing; (11) Essay; (12) Group Discussion; (13) Chart Audit; (14) Written Case Report; (15) Mini-clinical-evaluation exercise (Mini-Cex); (16) Direct Observation of Practice Skills (DOPS); (17) Professionalism Mini-evaluation (P-Mex); (18) Video-observation of clinical encounters; (19) Peer assessment; (20) Multisource or 360° feedback (MSF); (21) Logbook; and (21) Reflective Portfolio.

Performance assessment should be embedded in the curriculum (for students or trainees) or in daily practice (for licensed doctors). Such programmes of assessment cannot be improvised and should be planned, prepared, implemented, evaluated and improved.[23] When assessing the performance of quaternary prevention activities, appraisers are mostly dealing with workplace-based assessment. Therefore, it is advised to use the following methods as they are more effective (Table 3).[24]

Table 3. Overview of methods used to assess medical competence at the "does" level.[25]

Direct performance measures	
Individual encounter methods	
Mini-clinical-evaluation exercise (Mini-Cex)	Assessment is confined to a single concrete situation
Direct observation of practice skills (DOPS)	
Professionalism mini-evaluation (P-Mex)	
Video-observation of clinical encounters	
Long-term methods	
Peer assessment	Performance is assessed over a longer period of time
Multisource or 360° feedback (MSF)	
Aggregation methods	
Logbook	Continuous sampling of performance
Reflective Portfolio	

Source: based on EURACT Performance Agenda of General Practice/Family Medicine. Stefan Wilm, Ed. Düsseldorf University Press, Düsseldorf, 2014.

The learning journey

In order to easily demonstrate the progressive journey towards expertise in quaternary prevention, Figure 2 shows the Dreyfus model of skills acquisition which has a remarkable illustrative capability.[23] The progression from novice to expert through the stages of competent and proficient usually happens in parallel with the evolution inside the profession from the medical student to the experienced doctor.

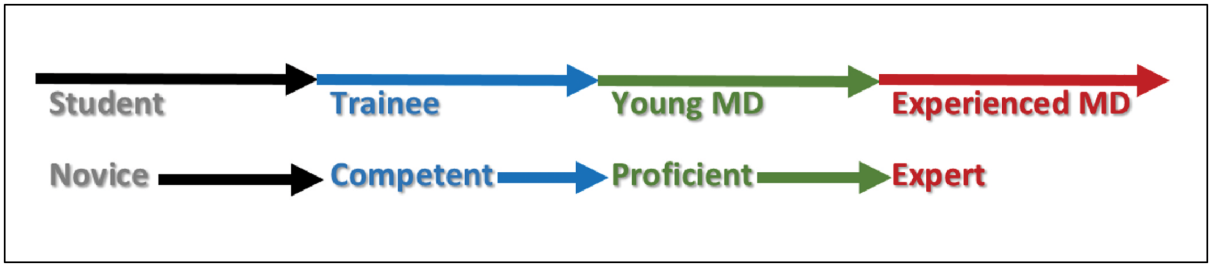

Figure 2. The learning journey. Source: Dreyfus, 1980.[25]

Even if there is not a biunivocal relation between medical student and experienced doctor, it is expectable to find proficiency and expertise more widely expanded in the latter. In fact, students deal mostly with knowledge and its application (KNOWS and KNOWS HOW, in Miller's Pyramid); trainees apply their multiple skills – communication, problem-solving, management – in a (more or less) protected environment (SHOWS); and full trained doctors (young or experienced doctors) fully exert their professional performance (DOES), hence, being able to bring quaternary prevention into the real world of their patients.[24]

Conclusion

The learning/teaching journey in quaternary prevention involves many skills. It is a complex field where epidemiology, communication, doctor-patient relationship, learning-centred approach, along with many others abilities are important topics that must be present in a balanced way. There are, however, 'risks along the road', the main one is the transformation of quaternary prevention in a simple political issue, instead of placing it as a practical and research medical field, which requires to be taught and learned.

Medical students often see "biological science" as separated from political or economic issues.[11] The challenges of teaching quaternary prevention should not only integrate the "bio-psychosocial" or the holistic approach, but should also seek to integrate the macro and micro views of different areas such as economy, health services organisation and technological incorporation policies. The educational process within the field of quaternary prevention requires high level of teaching skills, mainly focused on andragogy. Efforts to enlighten the lay public on P4 subjects are extremely important and the trend is that, sooner or later, this issue will need to be addressed. The same need also applies to health professionals other than doctors.

References

1. Bean RB, Bean WB. Sir William Osler: aphorisms from his bedside teachings and writings. Springfield, IL: Charles C. Thomas; 1961.
2. Bentzen, N. Wonca dictionary of general/family practice wonca international classification committee. Copenhagen: Månedsskrift for Praktisk Lægegerning; 2003.
3. Jamoulle M, Roland M. Quaternary prevention. Hong Kong-Wonca Comitê de Classificação; 1995 july 6-9; Hong Kong, CN. Bruxelas: Research Group Fédération des Maisons Médicales; 1995. p. 6. [cited 2014 Nov 05]. Available from: http://hdl.handle.net/2268/173994
4. Brodersen J, Schwartz LM, Woloshin S. Overdiagnosis: how cancer screening can turn indolent pathology into illness. APMIS. 2014;122(8):683-689. http://dx.doi.org/10.1111/apm.12278. PMid:24862511.
5. Kuehlein T, Sghedoni D, Visentin G, Gérvas J, Jamoule M. Quaternary prevention: a task of the general practitioner. Prim Care. 2010;10(18):350-354.
6. Kopitowski KS. Prevención cuaternaria: se pueden y se deben limitar los daños por la actividad sanitaria. Rev. Hosp. Ital. B.Aires. 2013;33(3):90-95.
7. Welch HG, Black WC. Overdiagnosis in cancer. J Natl Cancer Inst. 2010;102(9):605-613. http://dx.doi.org/10.1093/jnci/djq099. PMid:20413742.
8. Jamoulle M. The four duties of family doctors: quaternary prevention: first, do no harm. Hong Kong Pract. 2014;36:46-49. [cited 2014 Nov 05]. Available from: http://hdl.handle.net/2268/170670
9. Gérvas J, Pérez Fernández M. Uso y abuso del poder médico para definir enfermedad y factor de riesgo, en relación con la prevención cuaternaria. Gac Sanit. 2006;20(3 Suppl):66-71. http://dx.doi.org/10.1157/13101092. PMid:17433203.
10. Moynihan R, Doran E, Henry D. Disease mongering is now part of the global health debate. PLoS Med. 2008;5(5):e106. http://dx.doi.org/10.1371/journal.pmed.0050106. PMid:18507498.

11 Skrabanek P, McCormick J. Follies and fallacies in medicine. 3rd ed. Eastbourne: Tarragon Press; 1998.

12. Gotzsche PG. Deadly medicines and organised crime: how big pharma has corrupted healthcare. London UK: Radcliffe Medical Press; 2013. 13. Scott IA, Anderson K, Freeman CR, Stowasser DA. First do no harm: a real need to deprescribe in older patients. Med J Aust. 2014;201(7):390-392. http://dx.doi.org/10.5694/mja14.00146. PMid:25296059.
14. Heyrman J, editor. Educational Agenda, European Academy of Teachers in General Practice EURACT, Leuven 2004.
15. Başak O, Yaphe J, Spiegel W, Wilm S, Carelli F, Metsemakers JF. Early clinical exposure in medical curricula across Europe: an overview. Eur J Gen Pract. 2009;15(1):4-10. http://dx.doi.org/10.1080/13814780902745930. PMid:19229784.
16. Gaminde I, Hermosilla T. Quality related problems in clinical practice guidelines. Drug Ther Bull. 2012;20(1).
17. Stewart M, Brown JB, Weston WW, McWhinney IR, McWilliam CL, Freeman TR. Patient centered medicine: transforming the clinical method. 2nd rd. Abingdon: Radcliffe Medical Press; 2003.
18. Kleinman A. Patients and healers in the context of culture: an exploration of the borderland between anthropology, medicine and psychiatry. Lewiston, NY: University of California Press; 1981.
19. Knowle MS. The adult learner: a neglected species (1973). Houston: Gulf Publishing Company; 1990.
20. Starfield B, Shi L. Policy relevant determinants of health: an international perspective. Health Policy. 2002;60(3):201-218. http://dx.doi.org/10.1016/S0168-8510(01)00208-1. PMid:11965331.

21. The Institute of Conservation (ICON). Accreditation (PACR) and Professional Standards [Internet]. London: Institute of Conservation; 2008 [cited 2014 Nov 05]. Available from: http://www.icon.org.uk/index.php?option=com_content&view=article&id=5&Itemid=6

22 Europen Academy Of Teachers in General Practice/Family Medicine (EURACT). Framework for continuing educational development of trainers in general practice in Europe (CEDinGP). Kraków, Poland: ZiZ Centrum Edukacji; 2012. 35 p.

23 Dreyfus S, Dreyfus H. A five-Stage model of the mental activities involved in directed skill acquisition. Washington, DC: Storming Media; 1980.

24. Miller GE. The assessment of clinical skills/competence/performance. Acad Med. 1990;65(9 Suppl):S63-S67. http://dx.doi.org/10.1097/00001888-199009000-00045. PMid:2400509.

25. Wilm S, editor. The EURACT performance agenda of general practice/family medicine. Düsseldorf: European Academy of Teachers in General Practice/Family Medicine (EURACT); 2014. 104 p.

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EXPERIENCE REPORTS

Quaternary prevention as a guideline for the editorial team of an evidence-based medicine journal

Prevenção quaternária como diretriz para a equipe editorial de uma revista de medicina baseada em evidência

La prevención cuaternaria como una guía para el equipo editorial de una revista de medicina basada en evidencia

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Abstract

This article aims to analyse the editorial activities of Minerva, a Belgian evidence-based medicine (EBM) journal, according to the guidelines of quaternary prevention. From the editorial production of Minerva, a narrative analysis of its writing activities was carried out in relation to clinical questioning, research, critics and interpretation of relevant clinical information to professional practice. The limits of EBM are clearly detailed, as well as the tools and lines of reflection issued by the editorial team in order to promote the implementation of EBM in clinical practice. In this way, it is intended to prevent unnecessary medical interventions by strengthening the quaternary prevention as a key competence of healthcare staff throughout their professional life to the service of patients, which may be reinforced by the work of the editorial team of an EBM journal.

Keywords:
Quaternary Prevention
Evidence-Based Medicine
Editorial Policies
Practice Guideline
Review Literature as Topic

Resumo

O presente artigo tem como objetivo analisar as atividades de redação da revista Minerva, periódico belga de medicina baseada em evidência (MBE), de acordo com as diretrizes da prevenção quaternária. A partir da produção editorial da revista Minerva foi realizada uma análise narrativa de suas atividades de redação em relação ao questionamento clínico, à pesquisa, à crítica e à interpretação de informações clínicas relevantes à prática profissional. São detalhados os limites da MBE e as ferramentas e linhas de reflexão emitidas pela equipe de redação da revista a fim de favorecer a implementação da MBE na prática clínica. Dessa forma, se pretende prevenir o intervencionismo médico desnecessário, ao se fortalecer a prevenção quaternária como uma competência fundamental dos trabalhadores da saúde ao longo de sua vida profissional a serviço dos pacientes, o que pode ser reforçado pelo trabalho da equipe editorial de uma revista de MBE.

Palavras-chave:
Prevenção Quaternária
Medicina Baseada em Evidências
Políticas Editoriais
Guia de Prática Clínica
Literatura de Revisão como Assunto

Resumen

Este artículo tiene como objetivo analizar las actividades editoriales de la revista Minerva, periódico belga de medicina basada en evidencia (MBE), de acuerdo con las directrices de la prevención cuaternaria. A partir de la producción editorial de la revista Minerva, fue realizada un análisis narrativo de sus actividades de redacción en relación con el cuestionamiento clínico, la investigación, la crítica y la interpretación de la información clínica relevante para la práctica profesional. Se detalla los límites de la MBE y las herramientas y líneas de reflexión emitidas por el equipo de redacción de la revista, con el fin de promover la aplicación de la MBE en la práctica clínica. Por tanto, si desea evitar la intervención médica innecesaria, al fortalecer la prevención cuaternaria como competencia clave de los trabajadores de salud durante toda su vida profesional al servicio de los pacientes, lo que puede ser reforzado por el trabajo de la equipo de redacción de una revista de MBE.

Palabras clave:
Prevención Cuaternaria
Medicina Basada en Evidencia
Políticas Editoriales
Guía de Práctica Clínica
Literatura de Revisión como Asunto

Introduction

Minerva is a Belgium journal of Evidence-Based Medicine [EBM] fully subsidized by the public funding, publishing 10 issues per year, and distributed to a little less than 6500 subscribers. In the year 2014 nearly 210,000 visitors accessed its website.[1] Minerva provides a critical analysis of relevant publications in the recent international literature and its mission is the promotion and dissemination of independent scientific information. Its target audiences are doctors, pharmacists and other health professionals working in primary health care. The editorial team systematically monitors the international

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EBM literature in more than 20 scientific journals, selects articles deemed relevant, organises a structured summary of its main findings, as well as provides an explanation and critical recommendations for medical practice in the two Belgium federal languages: French and Dutch.

Quaternary prevention is the prevention of unnecessary medical interventions, and as such, one of the cornerstones of medicine (*primum non nocere*).[2] Two tools emerged to assist the physicians in this task: the Narrative Based Medicine (NBM)[3,4] which aims to listen to the patients in order to better understand their real demands; and the medicine based on levels of evidence (or levels of proof, according to French translation),[5] which aims to support clinical decisions, diagnostic,[6] therapeutic,[7,8] preventive[9] and palliative care,[10] from a critical evaluation of the available medical information in order to support both doctors' competencies and patients' goals.[11]

When working at the editorial team of an EBM journal as Minerva we should take into account the following question: How to help the professional faced with a patient with a health problem, in a particular context, to be attentive about invasive medical interventions? This will be discussed in this article from different perspectives: (a) clinical questioning and finding information; (b) the critical evaluation of information; (c) the application of the elements considered as clinically relevant; (d) the identification of methodological limitations; and finally (e) the transmission of a critical attitude to medical students.

The clinical questioning

We can distinguish two types of questions (general and specific) arising when a clinician is faced with a particular patient. When the question is general, it is called *background question*, which includes two main components: the first encompasses the disease, examination, and treatment, while the second comprises an interrogation question such as: Who? What? How? Why? etc. Generally, the knowledge of doctors and medical students to answer these questions is limited. When the issue is specific, we speak of *a foreground question*: the knowledge of doctors is strong and the demand is accurate.

The foreground question (prominent issue) has 4 elements, in the origin of the famous acronym PICO, basis for the whole critical reflection: a patient or a health problem (P), intervention (I), a comparator or control (C) and an outcome (O). The first remark is: EBM will provide answers to very specific questions. Its purpose is not to present an overview of a health problem (e.g. what to do in case of chest pain), typical of a background question, addressed by a lead course speaker, often identified as a subject expert. When the objective of a publication is a summary of documented facts (or a practice guideline) it is necessary for the authors to develop a well-defined, rigorous and accurate strategy of searching, assessing and writing.

The research of information

The more the experience of a clinician increases, the more the need to move towards foreground questions. Therefore, more specific readings become increasingly relevant. Evidence-based medicine can then respond to their needs in the same way as a specialist. From the perspective of the editorial team, it is necessary to have a target audience in order to seek, select, document, evaluate and explicitly interpret the information (if possible graded on the basis of levels of evidence), and to stay open to readers' criticism. In a nutshell, the information should be clinically useful. It should also be updated, easily accessible, and shareable. Beyond the document writing and inspired by computational world, the terms of corrective, adaptive and evolutionary maintenance make all sense. We can therefore reasonably ask if traditional media such as textbooks are still relevant in view of these requirements?

The critic of information

The critical requirement of the clinician will ultimately lead to the type of researched response. Is a response based on evidence as rich as one answer from a consultant (specialist)? If so, this richness could come from the principle of uncertainty in medicine whose probabilities are currently the best reflection of this characteristic. Nothing is '*black or white*' in medicine: all clinicians work in grey areas. When doctors make patients believe that their medical response is neutral and without flaws, it is reasonable to think that professionals slide towards quackery. When doctors make patients believe in an investigative

hypothesis - for example, that the principle of benefit of screening for a disease, which identifies the disease before its clinical expression, is always and necessarily a relevant fact to the patient - in reality, they show a 'dangerous' naivety. The example in the history of breast cancer screening is probably the strongest evidence available nowadays.[12] The need for evidence-facts forces to set up studies that: (1) have well-documented protocols; (2) avoid maximum bias in data collection; (3) present results in the most correct way; (4) mention the possible sources of conflict of interest; and (5) develop a critical strategy.[13]

However, it is important to note in the example above the importance of the ability of methodological evaluation, the quality of results' interpretation and their external validity to ultimately be able to decide whether or not, the observed results can or should change the practice. The members of Minerva's editorial team learn how to develop skills on methodological considerations as well as result interpretations, including their external validity to the health care system within which their target audience works. The editorial team works to synthesize this criticism in some considerations applicable in clinical practice. The conclusions calling for further research or the impossibility to reach a conclusion might frustrate the doctors, but they result from the complex process described above.

The limitations of EBM

Evidence-based medicine certainly does not bring all the answers since there are still numerous 'grey areas' or not studied subjects. Hence, all work propositions derived from the analysis of conclusive facts graded on the basis of levels of evidence should necessarily be adapted according to the demands, needs, and fears of patients and professional's expertise.[6] Therefore, responses based on more conventional approaches such as pathophysiology, pharmacodynamics and opinions of experts make all sense. Beyond the methodological limitations regularly identified by experts (that we will are not going to develop in this article, although the editorial team must regularly to echo or give understanding keys to their readers)[14] the pragmatic limits related to studies and practice guidelines are also presented. This highlights the important role of the caregiver as an agent of quaternary prevention. The role of the editorial team is also to reveal and to challenge the professionals of health system on the evident limits. We will describe in this article only two, but they properly illustrate this problem.

The problem of multimorbidity[15]

The results of randomized clinical trials (RCT) are one of the foundations of the current state of our knowledge. However, patients with multimorbidity are usually excluded from these studies.[16] This results in clinical practice guides centred and limited to only one health problem. Applied indiscriminately to patients with multimorbidity,[17] this recommendations lead to fragmented care and a proliferation of medications[18] and non-drug therapeutic approaches, sometimes even contradictory.[19] It is appropriate to want to overcome the limits of specific pathology favouring a comprehensive and integral approach. The management of multimorbidities thus requires a paradigm shift in order to transcend from a "problem-oriented treatment" to a "goal-oriented treatment" that is defined by the patients themselves, as well as discussed, negotiated and evaluated with the therapist. In addition, the particular contextualization of this treatment needs to be studied in multiple pragmatic approaches. We might postulate that RCTs could still continue to be the first line 'gold standard', but the results in terms of morbimortality can be different. New methodological approaches are required to meet such needs and questionings.

The problem of the definition and evaluation of care goals[20]

In a study in United States, patients report that even for common problems in primary care - such as the introduction of a medication for high blood pressure or high cholesterol, or to undergo a mammography for breast cancer screening - decisions related to their own health are made by health professionals and often paternalistic.[21] A Canadian study showed that even in palliative care, while the vast majority of patients admitted for emergency hospitalization had thought about their goals of care, only 30% of patients had dared to present them to their GP and only 17% to their specialist,[22] and that the desire to limit themselves to 'comfort care' was documented in only 5% of cases.

Furthermore, in terms of defining and evaluating the care goals, or more broadly, in terms of defining the patient's life goals, there is a gap between the medical world and the legal/judicial world. Indeed, issues such as financial problems, opportunities to recreation and leisure, improving chances of personal or professional project success,[23] significantly expand

the usual objectives of therapeutic treatment such as morbidity, mortality and quality of life. As such questions are not being taken into account in studies, they cannot be evaluated and no recommendations can be made. Also, as they are not being integrated in the practices or health policies, they are not documented. Unfortunately to our knowledge, no internationally validated tool is ready to achieve this objective.

Tools to the implementation of EBM

To ask a question, to find relevant clinical information and take a critical look at the results observed are three essential steps. However, despite the multitude of available practice guidelines, many wonder if the investments in the creation of this tertiary literature really worth it as the gap between clinical practice and the recommendations can be very important. Therefore, what to do to change practice? Members of the Minerva editorial team are sensitive enough to inform their readers about the tools available to improve the practical implementation of these proposals in practice.

The IT system

Providing each patient with the appropriate information is a duty of health professionals in order to negotiate together an optimal plan of care. To the best of our knowledge, only computer systems, which facilitate decision-making process based on automatic alerts (not on demands) improve significantly medical performance regarding evaluation of process, not outcomes, such as high morbidity or mortality.[24] The organisation of so called preventive activities is an area in which IT systems are particularly useful. It has showed significantly positive results for adherence to the recommendations in practice,[25] especially for calculating cardiovascular risk or treatment of dyslipidaemia.

This goal, however, requires that editorial teams comply with data structuring rules and terminological rigour that are not, *a priori*, their area of expertise. Moreover, the goal of such systems will never tell the clinicians what to do. Integrating the specificities of patients, their worries, their life goals, both personal and professional, in order to make a coordinated individual care plan, will always emphasize the quality of the exchanges experienced in the doctor-patient relationship.[24]

Favouring a multifaceted approach

The Cochrane group "Effective Practice and Organisation of Care" (EPOC)[26] grasped this issue by favouring a comprehensive approach demonstrating that the problem cannot be reduced to only ONE miracle solution.[27] Organisational, financial, professional and legal interventions are also analysed. Target audiences are varied: professionals, teachers, students, low-income regions, etc. A multifaceted strategy combining several approaches and several modes of communication are thus currently recommended.[28] Adapting funding from the health system to research could also be experienced. For instance, in Belgium, we are sceptical when new drugs are reimbursed in full, an agreement of 'vital importance for consultants/specialists',[29] when the only evidence of their effectiveness focuses on intermediate outcomes such as a (moderate) reduction in glycated haemoglobin (HbA1-c) in type 2 diabetes. Again, the central role of the caregiver in preventing unnecessary medical interventions proves essential and the role of Minerva editorial team is to challenge the professionals on the limits of the new marketed drugs or, conversely, to provide information on effective interventions, but which might not be available or accessible to patients.

Transmission to the students

The Barrows model illustrates that the learning process of clinical approach can be supported by EBM in each of its stages[30] and it is important that students become aware of it during their professional training. We also insist on what some authors call attitude or relation to medical knowledge[31,32] and that others call "*evidence mindness*"[33] that enables students to develop a questioning reflex about their achievements, their beliefs, and their knowledge. So, it is to teach them to manage uncertainty in a changing context and probabilistic environment and also to reassure them about the relevance of this approach. All teachers should be aware of this approach, as well as tutors/trainers. The *Best Evidence Medical Education*

(BEME)[34] which proposes to use the best available 'evidence' in medical education, provides useful documents available to trainers. For instance, colleagues, supervisors, mentors, and tutors,[35] play an important role in the development of doctors in training. Hence, helping and supporting trainers can also be part of the duties of an editorial team of an EBM journal.

The principle of precaution[36]

Is there a tool for the implementation of the Hippocratic recommendation: As to diseases, make a habit of two things - to help, or at least do no harm[37] whose quaternary prevention would be the worthy successor? It was at the Rio Summit, in 1992, that the principle of precaution, inherited from philosopher Jonas, was stated as a theme now recognized as a general principle of action by national, European and international laws related to the topic of sustainable development.[38]

The principle of precaution requires a context of uncertainty and incompleteness that demands sequential decisions based on the evolution of knowledge and on economic evaluation allowing adequate arbitration according to the context. To take action and vigilance measures after attempting to assess the best possible risk and uncertainty is to apply the principle of precaution. So, neither "do nothing" nor "prepare the heavy weapons." Rather, it is to adapt the means and vigilance on the risk assessment and to be prepared to modify the former in function of the latter. According to Winne[39] precaution:

> *…Allows confronting uncertainty rigorously by debating social values and needs, rather than defining generally inadequate safety margins. This gives room for uncertainty by calling to a debate among citizens on the type of human relations we want to promote and the content of legal relationships that we want to have with nature and others.*[39] (165-176)

Applied to medicine, the principle of precaution provides, in our view, a possible working method to quaternary prevention and the reading of an EBM literature should allow clinicians to have the necessary tools to try to achieve it.

Conclusion

We have gone through some path of useful information for clinicians and health professionals and its related challenges. Quaternary prevention found in the original studies and published reviews in recent years great number of working hypotheses and an inexhaustible ground of development. One of the most publicized and discussed issue in recent months is deprescription,[40] joining an early concern of Philippe Pinel (1745-1826): This is not an art of little importance as correctly prescribe medications, but it is a much more difficult art to know when to stop or not to prescribe them.

This collective enthusiasm is certainly justified and reveals a real concern for patients, though remains a fear of emerging a new paternalism: in name of patients' safety (based on observations) a number of more and more clinicians decide not to prescribe anymore, or stopping prescribe, or not even discuss with their patients the relevance or not of a prescription. Prospective randomized studies (conducted in double or triple blind) based on strong judgment criteria should be carried out to establish the harm/benefit ratio balance to patients before they can be fully validated as an approach in clinical practice.

Critical thinking should be applicable to all work assumptions, regardless as attractive as they are *a priori*, and this is the price that backs the definition of EBM. This makes all sense, as Sackett himself in 2000 stated: *"*[EBM is the] integration of best research evidence to clinical competence of the caregiver and patient values*".*[41]The objective of the quaternary prevention to prevent against unnecessary medical interventions becomes an essential competency of all health care providers throughout their professional lives to the service of patients[42] and can be enhanced by the work of an editorial team of an evidence-based medicine journal.

References

1. Minerva: Revue d'Evidence-Based Medicine [Internet]. Bruxelles: Minerva, c2014 [cited 2014 Oct. 10]. Available from: http://www.minerva-ebm.be/fr/Pages/default.aspx
2. Jamoulle M. Quaternary prevention, an answer of family doctors to overmedicalization. Int J Heal Policy Manag. 2015;4(2):61-64.
3. Greenhalgh T, Hurwitz B, editors. Narrative based medicine – dialogue and discourse in clinical practice. London: BMJ Books; 1998.

4. Greenhalgh T. Narrative based medicine: narrative based medicine in an evidence based world. *BMJ*. 1999;318(7179):323-325. http://dx.doi.org/10.1136/bmj.318.7179.323. PMid:9924065.
5. Sackett DL, Haynes BR, Guyatt GH, Tugwell P. Clinical epidemiology. A basic science for clinical medicine. 2nd ed. Boston: Little, Brown and Company; 1991.
6. Chevalier P, De Jonghe M. Preuves diagnostiques: vécu, MBE et exigences de terrain. *Minerva*. 2009;8(3):25.
7. Laekeman G, De Cort P. Editorial: Le pharmacien et les soins dispensés au patient. *Minerva*. 2007;6(2):17.
8. Staessen JA, Den Hond E, Celis H, Fagard R, Keary L, Vandenhoven G, et al, Antihypertensive treatment based on blood pressure measurement at home or in the physician's office: a randomized controlled trial. *JAMA*. 2004;291(8):955-964. http://dx.doi.org/10.1001/jama.291.8.955. PMid:14982911.
9. Poelman T. Le programme actuel de dépistage du cancer du sein a-t-il encore un avenir? *Minerva*. 2014;13(6):66.
10. Chevalier P, Soenen K, Sturtewagen J-P, Van Halewyn M. Soins de fin de vie: besoin de preuves aussi? *Minerva*. 2008;7(10):145.
11. Straus SE, Richardson WS, Glasziou P, Haynes RB. Médecine fondée sur les faits: evidence-based medicine. 3th ed. Saran: Elsevier Masson; 2007.
12. Michiels B. Dépistage du cancer du sein par mammographie. Analyses en ligne [Internet]. 2014 Mar. 15 [cited 2014 Oct. 10]. Available from: http://www.minerva-ebm.be/fr/analyses-en-ligne/221.
13. Chevalier P. Le biais de l'industrie. *Minerva*. 2014;13(1):1.
14. Minerva: Revue d'Evidence-Based Medicine [Internet]. [cited 2014 Oct. 10]. Available from: http://www.minerva-ebm.be/fr/search/results.aspx?k=m%C3%A9thodologie&r=%22owstaxIdKeywords%22%3D%23fd3215ec-1a17-4da0-a8c6-93f16d58e5e0%3A%22m%C3%A9thodologie%22
15. De Maeseneer J, Boeckxstaens P, De Sutter A. Multimorbidité : d'une « prise en charge axée sur les problèmes » à une « prise en charge orientée vers des objectifs. *Minerva*. 2013;12(4):40.
16. Van Spall HG, Toren A, Kiss A, Fowler RA. Eligibility criteria of randomized controlled trials published in high-impact general medical journals: a systematic sampling review. *JAMA*. 2007;297(11):1233-1240. http://dx.doi.org/10.1001/jama.297.11.1233. PMid:17374817.
17. Le Reste JY, Nabbe P, Manceau B, Lygidakis C, Doerr C, Lingner H, et al. The European General Practice Research Network presents a comprehensive definition of multimorbidity in family medicine and long term care, following a systematic review of relevant literature. *J Am Med Dir Assoc*. 2013;14(5):319-325. http://dx.doi.org/10.1016/j.jamda.2013.01.001. PMid:23411065.
18. De Meyere M, Christiaens T, Bogaert M. Une polymédication inéluctable en MBE? *Minerva*. 2005;4(8):115-116.
19. Boyd CM, Darer J, Boult C, Fried LP, Boult L, Wu AW. Clinical practice guidelines and quality of care for older patients with multiple comorbid diseases: implications for pay for performance. *JAMA*. 2005;294(6):716-724. http://dx.doi.org/10.1001/jama.294.6.716. PMid:16091574.
20. De Jonghe M. Vers une individualisation des soins ou une prise en compte des objectifs de soins? *Minerva*. 2013; 12(7):79.
21. Fowler FJ Jr, Gerstein BS, Barry MJ. How patient centered are medical decisions?: Results of a national survey. *JAMA Intern Med*. 2013;173(13):1215-1221. http://dx.doi.org/10.1001/jamainternmed.2013.6172. PMid:23712194.
22. Van De Vijver E. Programmation des soins en fonction de l'évolution pour les patients hospitalisés: la grande inconnue. Minerva. 2013. [cited 2014 Oct. 10]. Available at: http://www.minerva-ebm.be/fr/analyses-en-ligne/181
23. Dintilhac JP. Rapport du groupe de travail chargé d'élaborer une nomenclature des préjudices corporels. Minerva. 2005. [cited 2014 Oct. 10]. Available from: http://www.minerva-ebm.be/fr/article/84
24. De Jonghe M. Aide électronique à la décision médicale. *Minerva*. 2009;8(2):14-15.
25. Chaudhry B, Wang J, Wu S, Maglione M, Mojica W, Roth E, et al. Systematic review: impact of health information technology on quality, efficiency, and costs of medical care. *Ann Intern Med*. 2006;144(10):742-752. http://dx.doi.org/10.7326/0003-4819-144-10-200605160-00125. PMid:16702590.
26. Cochrane Effective Practice and Organisation of Care Group [Internet]. [cited 2014 Oct. 10]. Available from: http://epoc.cochrane.org/our-scope.
27. De Jonghe M. Comment transmettre l'MBE? *Minerva*. 2011;10(3):27.
28. Desomer A, Dilles T, Steckel S, Duchesnes C, Vanmeerbeek M, Peremans L, et al. Dissémination et mise en oeuvre des guides de pratique clinique en Belgique – Synthèse. Bruxelles: Centre Fédéral d'Expertise des Soins de Santé (KCE); 2013. (KCE Reports 212Bs).
29. Institut National d'assurance Maladie-Invalidité (INAMI) [Internet]. [cited 2014 Oct. 10]. Avalilable from: http://www.inami.fgov.be/fr/Pages/default.aspx.
30. Barrows HS, Pickell GC. Developing clinical solving skills. A guide to more effective diagnosis and treatment. New York: Norton Medical Books; 1991. 226 p.
31. Gay B, Beaulieu M-D. La médecine basée sur les données probantes ou médecine fondée sur des niveaux de preuve: de la pratique à l'enseignement. *Pédagogie Médicale.* 2004;5(3):171-183. http://dx.doi.org/10.1051/pmed:2004025.
32. Junod AF. Décision médicale ou la quête de l'explicite. Genève: Médecine et Hygiène; 2003.

33. Putnam W, Twohig PL, Burge FI, Jackson LA, Cox JL. A qualitative study of evidence in primary care: what the practitioners are saying. *CMAJ*. 2002;166(12):1525-1530. PMid:12074118.

34. Best Evidence Medical and Health Professional Education (BEME) [Internet]. [cited 2014 Oct. 10]. Available from: http://www.bemecollaboration.org/Home/

35. Guide pedagogique a l'usage des maitres de stage en medecine generale [Internet]. 2002. [cited 2014 Oct. 10]. Available from: https://www.uclouvain.be/cps/ucl/doc/camg/documents/guide_pedagogique.pdf

36. De Jonghe M, Dagneau I. Le principe de précaution et l'MBE. Minerva, 2012;11(5):53-53.

37. Ecrit par Hippocrate dans *les* épidémies*,* Bk. I, Sect. XI (tr. par WHS Jones).

38. Lecourt D. Précaution. In Lecourt D. *Dictionnaire d'histoire et de philosophie des sciences*. Paris: P.U.F.; 1999.

39. Winne B. In Godart O. editor, Le Principe de précaution dans la conduite des affaires humaines, Paris, Maison des Sciences de l'homme/INRA, 1997, cité par Dominique Lecourt. Paris: P.U.F; 1999. p. 165-176.

40. Gavilán-Moral E, Villafaina-Barroso A, Jiménez-de Gracia L, Gómez Santana MC. Ancianos frágiles polimedicados: ¿es la deprescripción de medicamentos la salida? *Rev Esp Geriatr Gerontol*. 2012;47(4):162-167. http://dx.doi.org/10.1016/j.regg.2012.01.003. PMid:22683145.

41. Sackett DL, Straus SE, Richardson WS, Rosenberg W, Haynes RB. Evidence based medicine: how to practice and teach MBE. 2nd ed. Edinburgh: Churchill Livingston; 2000.

42. Prescrire Rédaction. Mettre l'enseignement de la lecture critique au service des soins. *Rev Prescrire.* 2012;32(346):636-637.

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REVISTA BRASILEIRA DE MEDICINA DE FAMÍLIA E COMUNIDADE
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RELATOS DE EXPERIÊNCIA

Prevenção quaternária como diretriz para a equipe editorial de uma revista de medicina baseada em evidência

Quaternary prevention as a guideline for the editorial team of an evidence-based medicine journal

La prevención cuaternaria como una guía para el equipo editorial de una revista de medicina basada en evidencia

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Resumo

O presente artigo tem como objetivo analisar as atividades de redação da revista Minerva, periódico belga de medicina baseada em evidência (MBE), de acordo com as diretrizes da prevenção quaternária. A partir da produção editorial da revista Minerva foi realizada uma análise narrativa de suas atividades de redação em relação ao questionamento clínico, à pesquisa, à crítica e à interpretação de informações clínicas relevantes à prática profissional. São detalhados os limites da MBE e as ferramentas e linhas de reflexão emitidas pela equipe de redação da revista a fim de favorecer a implementação da MBE na prática clínica. Dessa forma, se pretende prevenir o intervencionismo médico desnecessário, ao se fortalecer a prevenção quaternária como uma competência fundamental dos trabalhadores da saúde ao longo de sua vida profissional a serviço dos pacientes, o que pode ser reforçado pelo trabalho da equipe editorial de uma revista de MBE.

Palavras-chave:
Prevenção Quaternária
Medicina Baseada em Evidências
Políticas Editoriais
Guia de Prática Clínica
Literatura de Revisão como Assunto

Abstract

This article aims to analyse the editorial activities of Minerva, a Belgian evidence-based medicine (EBM) journal, according to the guidelines of quaternary prevention. From the editorial production of Minerva, a narrative analysis of its writing activities was carried out in relation to clinical questioning, research, critics and interpretation of relevant clinical information to professional practice. The limits of EBM are clearly detailed, as well as the tools and lines of reflection issued by the editorial team in order to promote the implementation of EBM in clinical practice. In this way, it is intended to prevent unnecessary medical interventions by strengthening the quaternary prevention as a key competence of healthcare staff throughout their professional life to the service of patients, which may be reinforced by the work of the editorial team of an EBM journal.

Keywords:
Quaternary Prevention
Evidence-Based Medicine
Editorial Policies
Practice Guideline
Review Literature as Topic

Resumen

Este artículo tiene como objetivo analizar las actividades editoriales de la revista Minerva, periódico belga de medicina basada en evidencia (MBE), de acuerdo con las directrices de la prevención cuaternaria. A partir de la producción editorial de la revista Minerva, fue realizado un análisis narrativo de sus actividades de redacción en relación con el cuestionamiento clínico, la investigación, la crítica y la interpretación de la información clínica relevante para la práctica profesional. Se detalla los límites de la MBE y las herramientas y líneas de reflexión emitidas por el equipo de redacción de la revista, con el fin de promover la aplicación de la MBE en la práctica clínica. Por tanto, si desea evitar la intervención médica innecesaria, al fortalecer la prevención cuaternaria como competencia clave de los trabajadores de salud durante toda su vida profesional al servicio de los pacientes, lo que puede ser reforzado por el trabajo de la equipo de redacción de una revista de MBE.

Palabras clave:
Prevención Cuaternaria
Medicina Basada en Evidencia
Políticas Editoriales
Guía de Práctica Clínica
Literatura de Revisión como Asunto

Introdução

Minerva é uma revista belga de Medicina Baseada em Evidência (MBE), com publicação média de 10 números por ano, subsidiada integralmente pelos poderes públicos, distribuída a pouco menos de 6500 assinantes, cujo website contava, em 2014, com quase 210000 visitantes.[1] A revista Minerva traz uma análise crítica das publicações relevantes na literatura internacional recente e seu objetivo é a promoção e a difusão de uma informação científica independente. Seu público-alvo é composto por

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médicos, farmacêuticos e outros profissionais que atuam na da atenção primária à saúde. A equipe de redação acompanha sistematicamente a literatura internacional sobre MBE em mais de 20 periódicos científicos, seleciona os artigos considerados pertinentes, organiza um resumo estruturado dos principais achados, assim como fornece uma explicação e recomendações críticas para a prática médica nas duas línguas oficiais da Bélgica: o francês e o neerlandês.

A prevenção quaternária é a prevenção do intervencionismo médico desnecessário e, como tal, uma das pedras angulares da medicina (*primum non nocere*).[2] Duas ferramentas surgiram para ajudar os médicos nessa tarefa: a medicina baseada em narrativas (*Narrative Based Medicine – NBM*)[3,4] cujo objetivo é escutar o paciente para melhor compreender sua real demanda, e a medicina baseada em fatos comprobatórios (ou nos níveis de provas, segundo a tradução em francês),[5] cujo objetivo é o de sustentar as decisões clínicas, de diagnóstico,[6] terapêuticas,[7,8] preventivas[9] e paliativas[10] a partir de uma avaliação crítica das informações médicas disponíveis a fim de subsidiar as competências do médico e os objetivos do paciente.[11]

Quando se trabalha na redação de um periódico de MBE como a Minerva, deve-se ter em conta o seguinte questionamento: Como ajudar o profissional - diante de um paciente que apresenta um problema de saúde em um contexto específico - a estar atento a um intervencionismo médico invasivo? O presente artigo abordará essa questão sob diferentes ângulos, a saber: (a) o questionamento clínico e a pesquisa de informação; (b) a avaliação crítica da informação; (c) a aplicação dos elementos considerados clinicamente relevantes; (d) a identificação dos limites metodológicos; e, por fim, (e) a transmissão de uma atitude crítica aos estudantes de medicina.

O questionamento clínico

É possível distinguir dois tipos de perguntas (gerais e específicas) que surgem quando um médico está diante de um paciente em particular. Quando a pergunta é geral, se trata de uma pergunta de plano de fundo que inclui dois componentes essenciais: o primeiro compreende a doença, o exame e o tratamento –, enquanto que a segundo inclui uma interrogação do tipo "Quem", "O quê", "Como", "Por que", etc. Geralmente, o conhecimento tanto dos médicos como dos estudantes para responder a essas indagações é limitado. Quando a questão é específica, trata-se de uma questão de primeiro plano: o conhecimento dos médicos é consistente e a demanda é precisa.

A pergunta de primeiro plano comporta quatro elementos, na origem do célebre acróstico PICO, base de toda a reflexão crítica: um paciente ou um problema de saúde (P - *Problem*), uma intervenção (I - *Intervention*), um comparador ou controle (C - *Control*), e um resultado (O - *Outcome*). A primeira constatação é de que a MBE trará respostas sobre perguntas bem específicas. Seu objetivo não é o de apresentar uma visão do conjunto de um problema de saúde (por exemplo, o que fazer em caso de dor torácica?) típica de uma pergunta de plano de fundo, abordada por um conferencista, frequentemente identificado como sendo um especialista no assunto. Quando o objetivo de uma publicação é um resumo de fatos documentados (ou guia de prática) é necessário que os autores desenvolvam uma estratégia de pesquisa, de avaliação e de redação bem definida, rigorosa e precisa.

A pesquisa de informação

Quanto mais a experiência de um médico aumenta, mais suas necessidades orientam-se na direção de perguntas de primeiro plano. É por isso que leituras mais específicas tornam-se cada vez mais relevantes. A MBE pode então responder às suas necessidades, da mesma forma que um especialista. Do ponto de vista da equipe editorial, é preciso haver um público-alvo para que a informação seja pesquisada, selecionada, documentada, avaliada e interpretada de maneira explícita (se possível classificada com base em níveis de prova ou evidência) e permanecer suscetível a críticas por parte dos leitores. Em uma palavra, é preciso que a informação seja clinicamente útil. Ela deve igualmente ser atualizada, facilmente acessível e compartilhável. Deve ir além da redação do documento, e, inspirando-se no mundo da informática, os termos das manutenções corretiva, adaptativa e evolutiva fazem todo sentido. Pode-se então razoavelmente perguntar se os meios tradicionais, tais como os livros-texto, ainda são atuais tendo-se em vista tais exigências?

A crítica da informação

A exigência crítica do médico orientará de forma definitiva o tipo de resposta pesquisada. Uma resposta baseada em fatos comprobatórios (ou evidências) é mais rica do que uma resposta de um especialista-focal? Em caso afirmativo, essa pesquisa poderia ser fruto do respeito ao princípio da incerteza na medicina cujas probabilidades são, atualmente, a melhor característica disso. Nada é branco ou preto na medicina: todos os médicos atuam em zonas de cinza. Quando fazem com que seus pacientes acreditem que a resposta médica é neutra e sem falhas, pode-se de forma razoável pensar que os profissionais caem no charlatanismo. Quando levam seus pacientes a acreditar em uma hipótese investigativa – por exemplo, o princípio do benefício do rastreamento de uma doença segundo o qual identificar uma doença antes de sua manifestação clínica é sempre e necessariamente um fato útil para o paciente, na realidade, eles revelam uma ingenuidade 'perigosa'. O exemplo da história do câncer de mama é certamente a prova mais flagrante disso atualmente.[12] A exigência de fatos comprobatórios obriga que se promovam estudos que: (1) disponibilizem protocolos bem documentados; (2) evitem ao máximo os vieses na coleta de dados; (3) apresentem os resultados da maneira mais correta possível; (4) mencionem as possíveis fontes de conflitos de interesse; e (5) desenvolvam uma estratégia crítica.[13]

Entretanto, é preciso notar no exemplo anterior a importância da capacidade de avaliação metodológica, da qualidade de interpretação dos resultados e de sua extrapolabilidade para, de forma definitiva, poder decidir se é ou não o caso de os resultados observados poderem ou deverem modificar a prática. Os membros da equipe editorial da revista Minerva aprendem a desenvolver competências tanto sobre as considerações metodológicas como sobre as interpretações dos resultados, incluindo sua extrapolabilidade para o sistema de saúde no qual atua o público-alvo. O trabalho da equipe de redação consiste em sistematizar essa crítica em algumas considerações aplicáveis na prática clínica. As conclusões que indicam a necessidade de mais pesquisas na área ou que significam a impossibilidade de se chegar a uma conclusão podem frustrar os médicos, mas são apenas o resultado do processo complexo descrito anteriormente.

Os limites da MBE

A MBE certamente não traz todas as respostas visto que ainda persistem várias zonas turvas ou temas ainda não estudados. Consequentemente, todas as proposições de trabalho derivadas da análise de fatos comprobatórios, classificados com base nos níveis de prova (ou evidência), deveriam necessariamente ser adaptadas em função das demandas, das necessidades e medos dos pacientes e expertise do profissional.[6] Assim, respostas baseadas em abordagens mais convencionais, tais como a fisiopatologia, a farmacodinâmica e as opiniões de especialistas, fazem todo sentido. Para além dos limites metodológicos regularmente apresentados pelos especialistas (que não desenvolveremos neste artigo, mesmo que a equipe editorial deva fazer ecoar regularmente ou fornecer pontos de compreensão a seus leitores),[14] os limites pragmáticos ligados aos estudos e as diretrizes práticas são igualmente apresentados. Esses destacam a importância do papel do cuidador como ator da prevenção quaternária. O papel da equipe editorial é também o de revelar e interpelar os profissionais do sistema de saúde sobre os limites evidentes. Descreveremos somente dois dos mesmos, mas eles ilustram bem essa problemática.

O problema da multimorbidade[15]

Os resultados dos ensaios clínicos randomizados (RCTs) são um dos fundamentos do atual estado do nosso conhecimento. Porém, os pacientes acometidos por multimorbidades geralmente são excluídos desses estudos.[16] Isso resulta em diretrizes de práticas clínicas centradas e limitadas a um único problema de saúde. Aplicadas sem discernimento aos pacientes acometidos por multimorbidades,[17] essas recomendações conduzem a um tratamento fragmentado, a uma multiplicidade de medicações[18] e de abordagens terapêuticas não medicamentosas, por vezes até contraditórias.[19] É apropriado querer superar os limites das patologias particulares, privilegiando-se uma abordagem global e integral. O tratamento da multimorbidade necessita, portanto, de uma mudança de paradigma para transcender um 'tratamento baseado em problemas' em direção a um 'tratamento orientado por objetivos' definidos pelo próprio paciente, discutido, negociado e avaliado com seu terapeuta. Além disso, deve-se estudar a contextualização particular desse tratamento a partir de múltiplas abordagens pragmáticas. Poderíamos postular assim que os RCTs seriam o '*gold standard*' de primeira linha, mas que os resultados em termos de morbimortalidade podem ser diferentes. Novas abordagens metodológicas são necessárias para se responder a tais necessidades e questionamentos.

O problema da definição e da avaliação dos objetivos dos cuidados[20]

Em um estudo norte-americano, os pacientes relatam que mesmo estando sob cuidados médicos, para problemas comuns na atenção primária - tais como a introdução de uma medicação em caso de hipertensão arterial ou de hipercolesterolemia, ou a realização de uma mamografia para rastreamento do câncer de mama - as decisões que lhes dizem respeito são tomadas pelos profissionais de saúde e são frequentemente repletas de paternalismo.[21] Um estudo canadense demonstrou que mesmo em caso de cuidados paliativos, embora a grande maioria dos pacientes admitidos para hospitalização na emergência tenha refletido sobre seus objetivos de cuidado, apenas 30% ousaram apresentá-los a seu médico de família e somente 17% ao especialista envolvido,[22] e que o desejo de se limitar a 'cuidados de conforto' foi documentado em apenas 5% dos casos.

Além disso, em termos de definição e de avaliação dos objetivos de cuidados, ou mais amplamente, em termos de definição dos objetivos de vida do paciente, existe uma defasagem entre o mundo médico e o mundo jurídico. De fato, questões como dificuldades financeiras, oportunidade de lazer ou de diversão, a melhoria das chances de sucesso de projetos profissionais ou pessoais,[23] ampliam significativamente os objetivos habituais do tratamento terapêutico tais como morbidade, mortalidade e qualidade de vida. Não sendo tais questões consideradas nos estudos, não podem ser avaliadas e nenhuma recomendação pode ser feita nesse sentido. Não sendo estas integradas nas práticas ou nas políticas de saúde, não são documentadas. Infelizmente, ao que se sabe, nenhuma ferramenta validada internacionalmente está disponível para atingir esse objetivo.

Ferramentas para a implementação da MBE

Questionar-se, pesquisar a informação clínica relevante e ter um olhar crítico sobre os resultados observados, são três etapas essenciais. Entretanto, apesar da variedade de diretrizes de prática disponíveis, muitos se perguntam se o investimento na criação dessa literatura terciária valeria verdadeiramente a pena, pois o hiato entre a prática clínica e as recomendações pode ser muito relevante. Por conseguinte, o que fazer para modificar as práticas? Os membros da equipe editorial da revista Minerva estão sensíveis para informar seus leitores sobre as ferramentas disponíveis para melhorar a implementação dessas proposições na prática.

O sistema de informação

Oferecer a cada paciente a informação mais adequada é uma obrigação dos profissionais de saúde com o objetivo de negociar em conjunto um plano de cuidados otimizado. Conforme o que sabemos, somente os sistemas informatizados, que facilitam a tomada de decisão, baseados em alertas automáticos (e não por demandas) melhoram significativamente a performance médica no que concerne a avaliação de processos e não de desfechos finais (critérios maiores) como morbidade ou mortalidade.[24] A organização da atividade dita preventiva é uma área para a qual os sistemas informatizados se revelam úteis, tendo mostrado resultados significativamente positivos para a adesão às recomendações na prática,[25] especialmente para se calcular o risco cardiovascular ou para o tratamento das dislipidemias.

Esse objetivo necessita, porém, que a equipe editorial respeite as regras de estruturação dos dados e um rigor terminológico que não são, *a priori*, seu campo de competência. Além disso, o objetivo de tais sistemas não será jamais o de dizer ao médico o que ele deve fazer. Integrar as especificidades dos pacientes, suas inquietações, seus objetivos de vida, tanto pessoais quanto profissionais, enfim, realizar um plano de cuidados individual coordenado, sempre salientará a qualidade das trocas vividas na relação paciente-cuidador.[24]

Privilegiar uma abordagem multifacetada

O grupo Cochrane *Effective Practice and Organisation of Care* (*EPOC*)[26] conseguiu captar essa questão privilegiando uma abordagem global que demonstra assim que o problema não poderá se resumir à UMA solução miraculosa.[27] Intervenções organizacionais, financeiras, profissionais e legais também são analisadas. Os públicos-alvos são variados: profissionais, educadores, estudantes, regiões com baixa renda, etc. Assim, preconiza-se uma estratégia multifacetada que combine várias abordagens e diversos modos atuais de comunicação.[28] Uma adaptação de financiamentos do sistema de saúde para

pesquisas poderia também ser experimentada. Na Bélgica, por exemplo, somos céticos quanto à adoção de novas formulações medicamentosas. Estas são reembolsadas em sua totalidade, concessão de vital importância para os 'especialistas focais',[29] ao passo que as únicas provas de sua eficácia se fundamentam em desfechos intermediários como, por exemplo, a diminuição (moderada) da hemoglobina glicosilada (HbA1-c) no âmbito da diabetes do tipo 2. Aqui ainda, o papel central do cuidador na prevenção de um intervencionismo médico desnecessário revela-se essencial e o papel da equipe de redação da revista Minerva é o de interpelar o profissional sobre os limites das novas formulações medicamentosas disponibilizadas no mercado ou, ao contrário, informar sobre intervenções eficazes, mas que não estão disponíveis ou acessíveis.

A transmissão aos estudantes

O modelo de Barrows permite ilustrar que o processo de aprendizagem da abordagem clínica pode ser sustentado pela MBE em cada uma de suas etapas[30] e é importante que os estudantes tomem consciência disso ao longo de sua formação profissional. Insistiremos também naquilo que certos autores nomeiam como sendo atitude ou relação com os conhecimentos médicos[31,32] e que outros chamam de *evidence mindness*.[33] Trata-se de permitir que os estudantes desenvolvam um reflexo de questionamento de suas aquisições, de suas crenças, e de seus conhecimentos. Trata-se, portanto, de ensiná-los a administrar a incerteza em um ambiente de probabilidades evolutivo e contextual e de tranquilizá-los quanto à relevância dessa abordagem. Os educadores deveriam ser sensibilizados a essa abordagem assim como os orientadores de estágio. O *Best Evidence Medical Education* (BEME),[34] que propõe a utilização da melhor 'evidência' disponível em educação médica, coloca documentos úteis à disposição dos formadores. Tanto colegas, supervisores, tutores,[35] como preceptores de estágio desempenham importante papel no desenvolvimento dos médicos em formação. Assim, auxiliar e acompanhar os formadores também deveria fazer parte das tarefas da equipe editorial de uma revista de MBE.

O princípio de precaução[36]

Existe atualmente uma ferramenta que permitiria a aplicação da recomendação Hipocrática: *quanto aos doentes, adquira dois hábitos – o de ajudar ou, ao menos, o de não prejudicar*[37] – da qual a prevenção quaternária seria a herdeira legítima? Na cúpula do Rio de Janeiro, em 1992, o princípio de precaução, herdado do filósofo Jonas, foi enunciado como tema, hoje reconhecido como um princípio geral de ação pelas leis nacionais, europeias e internacionais, ligado ao tema do desenvolvimento sustentável.[38]

O princípio de precaução requer um contexto de incerteza e incompletude que demanda decisões sequenciais em função da evolução dos conhecimentos e a avaliação econômica que permita uma arbitragem adequada em função do contexto. Tomar medidas de ação e de vigilância, depois de ter buscado avaliar o melhor possível os riscos e as incertezas, é aplicar o princípio de precaução. Portanto, nem 'fazer nada', nem 'preparar a artilharia pesada'. Trata-se, sobretudo, de adaptar os meios e a vigilância à avaliação do risco e estar pronto para modificar os primeiros em função da segunda. De acordo com Winne[39] a precaução:

> *Permite afrontar a incerteza com rigor, debatendo valores sociais e necessidades ao invés de definir margens de segurança geralmente inadaptadas. Trata-se de dar lugar às incertezas que conclamam o debate entre os cidadãos sobre o tipo de relações humanas que queremos promover e sobre o conteúdo das relações morais que queremos manter com a natureza e com os demais.*[39] (165-176)

Aplicado à medicina, esse princípio de precaução oferece, a nosso ver, um possível método de trabalho para a prevenção quaternária e a leitura de uma literatura de MBE deveria permitir aos médicos disporem das ferramentas necessárias para tentar alcançá-la.

Conclusão

Percorremos algumas linhas no itinerário de uma informação útil para médicos e profissionais de saúde e os desafios a ela relacionados. A prevenção quaternária encontrou nos estudos originais e nas sínteses publicadas nos últimos anos um número cada vez maior e um terreno inesgotável para a elaboração de hipóteses de trabalho. Uma das mais midiatizadas e discutidas nesses últimos meses diz respeito à desprescrição,[40] que vai na mesma linha de uma preocupação já antiga de Philippe Pinel (1745-1826): Não é uma arte de importância menor como a de prescrever corretamente os medicamentos, mas é uma arte de uma dificuldade muito maior que é a de saber quando interrompê-los ou não os prescrever. Esse entusiasmo coletivo é certamente justificado e revelador de uma preocupação pronunciada do paciente, mas permanece o medo de se ver nascer um novo paternalismo: em nome da segurança do paciente (baseado em observações) um número cada vez maior de médicos decide não mais prescrever, ou parar de prescrever, ou mesmo de sequer discutir com seu paciente o interesse ou não de uma prescrição. Estudos prospectivos, randomizados (conduzidos em cegamento duplo ou triplo) com critérios rigorosos devem ser utilizados para estabelecer a razão dano/benefício para os pacientes antes que possam ser totalmente validados como abordagem na prática clínica.

O pensamento crítico deveria ser aplicado a todas as hipóteses de trabalho, por mais atrativas que estas pareçam ser *a priori,* e esse é o preço que apoia a definição da MBE. Isso faz todo sentido como o próprio Sackett, em 2000 afirmou que: [A MBE é a] Integração dos melhores dados da pesquisa à competência clínica do cuidador e aos valores do paciente.[41] O objetivo da prevenção quaternária de prevenir intervenções médicas desnecessárias torna-se uma competência essencial a todos os prestadores de cuidados de saúde ao longo da sua vida profissional a serviço dos pacientes[42] e pode ser reforçado pelo trabalho de uma equipe editorial de uma revista de medicina baseada em evidência.

Referências

1. Minerva: Revue d'Evidence-Based Medicine [Internet]. Bruxelles: Minerva, c2014 [cited 2014 Oct. 10]. Available from: http://www.minerva-ebm.be/fr/Pages/default.aspx
2. Jamoulle M. Quaternary prevention, an answer of family doctors to overmedicalization. Int J Heal policy Manag. 2015;4(2):61-64.
3. Greenhalgh T, Hurwitz B, editors. Narrative based medicine – dialogue and discourse in clinical practice. London: BMJ Books; 1998.
4. Greenhalgh T. Narrative based medicine: narrative based medicine in an evidence based world. *BMJ*. 1999;318(7179):323-325. http://dx.doi.org/10.1136/bmj.318.7179.323. PMid:9924065.
5. Sackett DL, Haynes BR, Guyatt GH, Tugwell P. Clinical epidemiology. A basic science for clinical medicine. 2nd ed. Boston: Little, Brown and Company; 1991.
6. Chevalier P, De Jonghe M. Preuves diagnostiques: vécu, MBE et exigences de terrain. *Minerva*. 2009;8(3):25.
7. Laekeman G, De Cort P. Editorial: Le pharmacien et les soins dispensés au patient. *Minerva*. 2007;6(2):17.
8. Staessen JA, Den Hond E, Celis H, Fagard R, Keary L, Vandenhoven G, et al, Antihypertensive treatment based on blood pressure measurement at home or in the physician's office: a randomized controlled trial. *JAMA*. 2004;291(8):955-964. http://dx.doi.org/10.1001/jama.291.8.955. PMid:14982911.
9. Poelman T. Le programme actuel de dépistage du cancer du sein a-t-il encore un avenir? *Minerva*. 2014;13(6):66.
10. Chevalier P, Soenen K, Sturtewagen J-P, Van Halewyn M. Soins de fin de vie: besoin de preuves aussi? *Minerva*. 2008;7(10):145.
11. Straus SE, Richardson WS, Glasziou P, Haynes RB. Médecine fondée sur les faits: evidence-based medicine. 3th ed. Saran: Elsevier Masson; 2007.
12. Michiels B. Dépistage du cancer du sein par mammographie. Analyses en ligne [Internet]. 2014 Mar. 15 [cited 2014 Oct. 10]. Available from: http://www.minerva-ebm.be/fr/analyses-en-ligne/221.
13. Chevalier P. Le biais de l'industrie. *Minerva*. 2014;13(1):1.
14. Minerva: Revue d'Evidence-Based Medicine [Internet]. [cited 2014 Oct. 10]. Available from: http://www.minerva-ebm.be/fr/search/results.aspx?k=m%C3%A9thodologie&r=%22owstaxIdKeywords%22%3D%23fd3215ec-1a17-4da0-a8c6-93f16d58e5e0%3A%22m%C3%A9thodologie%22
15. De Maeseneer J, Boeckxstaens P, De Sutter A. Multimorbidité : d'une « prise en charge axée sur les problèmes » à une « prise en charge orientée vers des objectifs. *Minerva*. 2013;12(4):40.
16. Van Spall HG, Toren A, Kiss A, Fowler RA. Eligibility criteria of randomized controlled trials published in high-impact general medical journals: a systematic sampling review. *JAMA*. 2007;297(11):1233-1240. http://dx.doi.org/10.1001/jama.297.11.1233. PMid:17374817.

17. Le Reste JY, Nabbe P, Manceau B, Lygidakis C, Doerr C, Lingner H, et al. The European General Practice Research Network presents a comprehensive definition of multimorbidity in family medicine and long term care, following a systematic review of relevant literature. *J Am Med Dir Assoc*. 2013;14(5):319-325. http://dx.doi.org/10.1016/j.jamda.2013.01.001. PMid:23411065.

18. De Meyere M, Christiaens T, Bogaert M. Une polymédication inéluctable en MBE? *Minerva*. 2005;4(8):115-116.

19. Boyd CM, Darer J, Boult C, Fried LP, Boult L, Wu AW. Clinical practice guidelines and quality of care for older patients with multiple comorbid diseases: implications for pay for performance. *JAMA*. 2005;294(6):716-724. http://dx.doi.org/10.1001/jama.294.6.716. PMid:16091574.

20. De Jonghe M. Vers une individualisation des soins ou une prise en compte des objectifs de soins? *Minerva*. 2013;12(7):79.

21. Fowler FJ Jr, Gerstein BS, Barry MJ. How patient centered are medical decisions?: Results of a national survey. *JAMA Intern Med*. 2013;173(13):1215-1221. http://dx.doi.org/10.1001/jamainternmed.2013.6172. PMid:23712194.

22. Van De Vijver E. Programmation des soins en fonction de l'évolution pour les patients hospitalisés: la grande inconnue. Minerva. 2013. [cited 2014 Oct. 10]. Available at: http://www.minerva-ebm.be/fr/analyses-en-ligne/181

23. Dintilhac JP. Rapport du groupe de travail chargé d'élaborer une nomenclature des préjudices corporels. Minerva. 2005. [cited 2014 Oct. 10]. Available from: http://www.minerva-ebm.be/fr/article/84.

24. De Jonghe M. Aide électronique à la décision médicale. *Minerva*. 2009;8(2):14-15.

25. Chaudhry B, Wang J, Wu S, Maglione M, Mojica W, Roth E, et al. Systematic review: impact of health information technology on quality, efficiency, and costs of medical care. *Ann Intern Med*. 2006;144(10):742-752. http://dx.doi.org/10.7326/0003-4819-144-10-200605160-00125. PMid:16702590.

26. Cochrane Effective Practice and Organisation of Care Group [Internet]. [cited 2014 Oct. 10]. Available from: http://epoc.cochrane.org/our-scope.

27. De Jonghe M. Comment transmettre l'MBE? *Minerva*. 2011;10(3):27.

28. Desomer A, Dilles T, Steckel S, Duchesnes C, Vanmeerbeek M, Peremans L, et al. Dissémination et mise en oeuvre des guides de pratique clinique en Belgique – Synthèse. Bruxelles: Centre Fédéral d'Expertise des Soins de Santé (KCE); 2013. (KCE Reports 212Bs).

29. Institut National d'assurance Maladie-Invalidité (INAMI) [Internet]. [cited 2014 Oct. 10]. Avalilable from: http://www.inami.fgov.be/fr/Pages/default.aspx.

30. Barrows HS, Pickell GC. Developing clinical solving skills. A guide to more effective diagnosis and treatment. New York: Norton Medical Books; 1991. 226 p.

31. Gay B, Beaulieu M-D. La médecine basée sur les données probantes ou médecine fondée sur des niveaux de preuve: de la pratique à l'enseignement. *Pédagogie Médicale.* 2004;5(3):171-183. http://dx.doi.org/10.1051/pmed:2004025.

32. Junod AF. Décision médicale ou la quête de l'explicite. Genève: Médecine et Hygiène; 2003.

33. Putnam W, Twohig PL, Burge FI, Jackson LA, Cox JL. A qualitative study of evidence in primary care: what the practitioners are saying. *CMAJ*. 2002;166(12):1525-1530. PMid:12074118.

34. Best Evidence Medical and Health Professional Education (BEME) [Internet]. [cited 2014 Oct. 10]. Available from: http://www.bemecollaboration.org/Home/

35. Guide pedagogique a l'usage des maitres de stage en medecine generale [Internet]. 2002. [cited 2014 Oct. 10]. Available from: https://www.uclouvain.be/cps/ucl/doc/camg/documents/guide_pedagogique.pdf

36. De Jonghe M, Dagneau I. Le principe de précaution et l'MBE. Minerva, 2012;11(5):53-53.

37. Ecrit par Hippocrate dans *les épidémies,* Bk. I, Sect. XI (tr. par WHS Jones)

38. Lecourt D. Précaution. In Lecourt D. *Dictionnaire d'histoire et de philosophie des sciences*. Paris: P.U.F.; 1999.

39. Winne B. In Godart O. editor, Le Principe de précaution dans la conduite des affaires humaines, Paris, Maison des Sciences de l'homme/INRA, 1997, cité par Dominique Lecourt. Paris: P.U.F; 1999. p. 165-176.

40. Gavilán-Moral E, Villafaina-Barroso A, Jiménez-de Gracia L, Gómez Santana MC. Ancianos frágiles polimedicados: ¿es la deprescripción de medicamentos la salida? *Rev Esp Geriatr Gerontol*. 2012;47(4):162-167. http://dx.doi.org/10.1016/j.regg.2012.01.003. PMid:22683145.

41. Sackett DL, Straus SE, Richardson WS, Rosenberg W, Haynes RB. Evidence based medicine: how to practice and teach MBE. 2nd ed. Edinburgh: Churchill Livingston; 2000.

42. Prescrire Rédaction. Mettre l'enseignement de la lecture critique au service des soins. *Rev Prescrire.* 2012;32(346):636-637.

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REVISTA BRASILEIRA DE MEDICINA DE FAMÍLIA E COMUNIDADE
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COMMENTS

Unnecessary Overtreatment Index: a useful tool in family practice

Índice de Sobretratamento Desnecessário: uma ferramenta útil para a medicina de família

Índice de Sobretratamiento Innecesario: una herramienta útil para la medicina familiar

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Análise Estatística
Medicalização
Prevenção Quaternária

Palabras clave:
Índices
Evaluación de Eficacia-Efectividad de Intervenciones
Análisis Estadístico
Medicalización
Prevención Cuaternaria

One of the most important aspects of quaternary prevention is avoiding the exposure of the patients to unnecessary overtreatment. In this commentary we explain how a valid and reliable double blinded randomized controlled clinical trial (RCT) with a good external validity may help a physician to estimate the magnitude of unnecessary overtreatment.

Unnecessary Overtreatment Index

Based on RCTs, two groups of patients may receive unnecessary overtreatments. The first group consists of patients who will not respond to medication or surgery. The second group consists of patients who respond to placebo interventions (either a medication or a sham surgery). Here we define an index to cover these two groups: Unnecessary Overtreatment Index (UOI). RCTs compare a medication with placebo intervention. Based on the finding of RCTs, the UOI is defined as summation of two proportions: the proportion of patients who do not respond to medication/surgery and the proportion of patients who are improved by the placebo intervention as well.

Calculating the UOI

Assuming that a RCT has a very good external validity, a physician wants to use its findings in his practice for treating his patients. Moreover, the RCT shows that 30/100 of patients who received medication/surgery have improved and for the placebo intervention group only 20/100 patients have also improved. In this example, UOI is summation of (1-30/100) and 20/100. It means if a physician prescribes the medication/surgery to 100 patients then 90 of these patients will be treated unnecessarily. Seventy out of 90 are patients who will not be improved and 20 out of 90 are patients who would be improved even if they received placebo intervention. The 95% Confidence Interval can be calculated for UOI, if necessary.

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Relationship between UOI and Efficacy

An interesting point is the relation of UOI with Efficacy of medication/surgery. Efficacy in a RCT is defined as the difference between improvement in the medication/surgery group and the placebo intervention control group. In the previous example, the efficacy consists of 10/100 (30/100 minus 20/100). As efficacy shows the proportion of patients that are treated necessarily and the UOI shows the proportion of the patients that are treated unnecessarily, then it is clear that efficacy could be defined as "1-UOI". Then, it can be stated that UOI=1-Efficacy. When in a RCT the improvement in medication/surgery arm is equal to the improvement in placebo intervention arm, then the efficacy is zero, and consequently, the UOI is 100%. This means that if physicians do not take into account the findings of RCT and prescribe the RCT medication to all their patients, then all of them will be overtreated unnecessarily.

However, there are two remaining questions that need to be addressed: (1) what are the percentages of those patients who may be treated by placebo? And (2) what are the percentages of those patients who will not respond either to medication or placebo interventions? By determining the two components of UOI it is possible to answer these questions. Unfortunately, in the majority of the cases the efficacy of drug in a RCT is small, thus usually the UOI is very high. When the medication/surgery is recommended for a life-threatening condition, a large UOI is commonly acceptable for both physicians and patients. Nevertheless, when a medication is recommended for long duration, which offers partial improvements to mild chronic mental or physical conditions, a large UOI may not be acceptable either by physicians or patients.

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PERSPECTIVAS

Literatura médica e a ética em pesquisa: desafios para a prevenção quaternária

Medical literature and ethics in research: challenges for the quaternary prevention

La literatura médica y la ética en pesquisa: retos para la prevención cuaternaria

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Resumo

Este artigo discute a qualidade das evidências científicas publicadas no campo da medicina. Atualmente, existe uma dificuldade em avaliar a qualidade dessas publicações, visto que grandes ensaios clínicos são patrocinados pela indústria da saúde, em especial a indústria farmacêutica, a qual exige cláusula de confidencialidade dos dados brutos obtidos nas pesquisas. Isso gera importantes repercussões tanto para a prática dos profissionais de saúde como para a produção de diretrizes de atenção à saúde. Diante dessa incerteza de informações em saúde, a prevenção quaternária surge como uma proposta para fortalecer a relação médico-paciente como espaço para atividades preventivas e outras ações em saúde.

Palavras-chave:
Prevenção Quaternária
Pesquisa Biomédica
Ética
Conflito de Interesses

Abstract

This article discusses the quality of scientific evidence published in the medical field. Currently, there is a difficulty in assessing the quality of these publications, since large clinical trials are sponsored by the health industry, particularly the pharmaceutical industry, which requires confidentiality clause of the raw data obtained in the research. This creates significant implications for both the practice of health professionals and the production of health care guidelines. Given these uncertainties of health information, quaternary prevention emerges as a proposal to strengthen doctor-patient relationship as space for preventive activities and other health actions.

Keywords:
Quaternary Prevention
Biomedical Research
Ethics
Conflict of Interest

Resumen

En este artículo se discute la calidad de la evidencia científica publicada en el campo de la medicina. En la actualidad, hay una dificultad en la evaluación de la calidad de estas publicaciones, ya que los grandes ensayos clínicos son patrocinados por la industria de la salud, en particular la industria farmacéutica, que requiere cláusula de confidencialidad de los datos brutos obtenidos en la investigación. Esto crea importantes implicaciones tanto para la práctica de los profesionales de la salud y como para la producción de guías de atención de salud. Dada esta incertidumbre de la información en la salud, la prevención cuaternaria surge como una propuesta para fortalecer la relación médico-paciente como espacio para actividades preventivas y otras acciones de salud.

Palabras clave:
Prevención Cuaternaria
Investigación Biomédica
Ética
Conflicto de Intereses

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A qualidade da literatura científica tem estado na pauta das discussões no campo da medicina, havendo questionamentos sobre a qualidade e segurança dos textos. Em 1993, quando Sackett et al.[1] lançam os fundamentos da Medicina Baseada em Evidências (MBE) aparentemente estavam fornecendo o caminho para a definição de como deveria ser produzida uma informação de qualidade.

No entanto, os instrumentos desenhados para melhorar a qualidade das pesquisas foram apropriados pela indústria da saúde, particularmente pela indústria farmacêutica, sendo que muitas das informações disponíveis atualmente nas várias publicações utilizam inadequadamente os conceitos inicialmente propostos.[2,3] Isso tem repercussões para as diretrizes fundamentadas em estudos que podem ser questionados, seja pela ocultação de dados, seja pela adoção de orientações e metas que desconsideram o bem estar dos pacientes.[4-6]

Há anos os vieses de interesse da indústria farmacêutica vêm impactando a literatura médica e desde 1950 existem documentos mostrando distorções graves na conduta da indústria da saúde, na busca do lucro a qualquer custo. Um exemplo clássico é o escândalo da talidomida, droga desenvolvida na Alemanha, cujos trabalhos científicos que mostravam as malformações decorrentes de seu uso foram ignorados na época pelo seu fabricante. Este negou o problema e criou empecilhos na justiça durante anos para que, finalmente, fossem reconhecidos os danos causados pela droga indicada para tratamento de enjoos na gestação.[7]

Outro importante exemplo a ser mencionado é a metanálise das pesquisas feitas pelos fabricantes dos medicamentos risperidona, olanzapina e quetiapina[8] no qual as três companhias indicavam em ensaios clínicos que suas drogas eram melhores que as demais. Tal fato sugere que boa parte dos estudos publicados apresentam problemas metodológicos, porém isso não impede o marketing extensivo sobre a eficiência desses medicamentos e a comparação benéfica que a pesquisa do laboratório demonstrou.

Conhecer o desenho e o objetivo de uma pesquisa facilita ao leitor o entendimento dos resultados esperados. Esta informação, contudo, é geralmente ocultada, permitindo que os autores trabalhem e manipulem os dados de acordo com os seus interesses e descrevam resultados inesperados como sendo o foco da pesquisa.[3] Tal situação conduz a profundas distorções e talvez explique por que muitas vezes os profissionais de saúde se deparam na prática com resultados inesperados e efeitos adversos não previstos.[9]

Uma pesquisa bem feita deve ter um desenho tal que permita ao pesquisador provar que a sua teoria está errada, pois o objetivo real da pesquisa científica é afastar a hipótese. Em outras palavras, deve levar à busca das imperfeições e não de resultados favoráveis, pois ao se procurar apenas a confirmação da hipótese existe a probabilidade de, involuntariamente, se distorcer os dados.[9]

Ioannidis[10] e Senn[11] demonstram em seus artigos como a estatística pode ser utilizada para confirmar resultados que, quando analisados de forma adequada, não seriam verdadeiros. Além disto, expressar o nível de significância de uma pesquisa como probabilidade de erro menor que 5% (ou $p<0,05$) é de pouco auxílio para a tomada de decisão compartilhada.

Um conceito central, que muitas vezes leva o estudante da área da saúde a confundir-se neste emaranhado de fórmulas e indicações, é a regressão à média. Este se fundamenta no princípio da homeostase que caracteriza todos os sistemas vivos que tendem a se equilibrar e a trabalhar ativamente para que isto aconteça; em outras palavras, voltar à média. As pesquisas que não consideram o princípio da regressão à média têm dentro de seu desenho um erro inato que tira muito de sua credibilidade, gerando resultados que podem ser fruto do trabalho interno do organismo,[10] que impedem uma compreensão apropriada dos efeitos do protocolo em estudo.

A presença de pessoas ligadas à indústria e à atividades políticas, tanto nos comitês de pesquisa como nas coordenações de proposição de diretrizes, gera uma combinação de informações problemáticas, dificultando aos profissionais vinculados diretamente a assistência à saúde uma tomada de decisão adequada.[3] Parte da responsabilidade acaba recaindo sobre os profissionais de saúde, que por falta de uma maior apropriação de epidemiologia, dos desenhos de pesquisa ou de como os estudos são publicados, acabam aceitando informações com muitos vieses, o que pode expor pacientes a um risco elevado. Por exemplo, pesquisas informam que a medicina é a terceira causa de morte nos Estados Unidos, onde o rigor estatístico é melhor, perdendo apenas para as doenças cardiovasculares e as neoplasias.[3]

Por outro lado, a indústria da saúde não se concentra apenas na indicação de medicamentos, mas também interfere na definição de critérios de saúde.[11,12] Muitas pesquisas são realizadas para modificar parâmetros de normalidade, sem que haja significativa melhora da qualidade/quantidade de vida das pessoas.[13] St-Onge[14] questiona em seu livro se "Estamos

todos loucos?", pois tal é a quantidade de novos diagnósticos surgidos em psiquiatria e o percentual de pessoas em uso de medicamentos para a saúde mental no Canadá e nos Estados Unidos.

Cada vez mais são almejados marcadores de saúde "rigorosos", sem a preocupação com o impacto na qualidade de vida das pessoas. Por exemplo, nos anos 1970 o critério para o diagnóstico de diabetes mellitus era duas glicemias de jejum acima de 140 mg/dl; nos anos 1990 este número foi reduzido para duas glicemias acima de 126 mg/dl; e atualmente há grandes defensores de que a normalidade é abaixo de 100 mg/dl.[15,16] Ainda em relação à diabetes, existe a tendência de se tratá-la pelos níveis de hemoglobina glicada, havendo a recomendação de alcançar valores abaixo de 7 mg/dl para todos os pacientes diabéticos, sendo considerados como desejáveis valores próximos de 6 mg/dl.[17] Recente artigo publicado no JAMA[18] mostrou que para pacientes com diabetes tipo 2 acima de 60 anos há um ganho apenas limítrofe para os que buscam estes níveis, em comparação com os que tem uma hemoglobina glicada abaixo de 9 mg/dl em uso de metformina. Tal informação implica em uma mudança drástica na qualidade de vida destas pessoas, em um uso menor de medicamentos e em uma relação mais tranquila entre a equipe de saúde e os pacientes diabéticos. O exemplo da diabetes discutido acima traz reflexões sobre os pontos de corte que definem doenças, até onde se deve tratar ou não as pessoas (metas), assim como, o impacto das intervenções sobre a qualidade de vida e a autonomia das pessoas.

Em verdade, muitas situações de vida normais passaram a ser tratadas como patologias (i.e. a gestação, a puericultura, a menopausa, a osteoporose, entre outros) gerando grandes gastos e investimentos em diagnóstico e tratamentos. Estas deveriam ser consideradas dentro de um estilo de vida saudável e abordadas em orientações, tanto individuais como coletivas, sobre como lidar com as diferentes fases da vida, e não serem tratadas como doença.[10,13] Ainda mais relevante é a transformação de fatores de risco em patologias e o tratamento desses fatores de risco como doenças, situação que tende a produzir ansiedade e perda da qualidade de vida.[13]

Conceitos como sobrediagnóstico, sobretratamento e invenção de diagnósticos devem entrar na pauta de discussão dos pesquisadores médicos, da comunidade científica e dos profissionais de saúde para que se possa fortalecer a prática de uma medicina mais ética e centrada nas pessoas.[2] Nesse sentido, congressos internacionais tem sido organizados com o intuito de minimizar os abusos na literatura e na pesquisa médica, sugerindo a necessidade de se repensar o modo de cuidado aos pacientes.

Em 1986, Jamoulle[19] apontava a necessidade de se evitar os excessos da medicina e oferecer uma melhor atenção à saúde aos pacientes e comunidades, que definiu como prevenção quaternária (P4). Este tema se expandiu e atualmente ocupa espaço nas atividades da medicina de família e comunidade (MFC).[20] Deste debate surgiu a necessidade de mudança de paradigma, de incorporar na atenção à saúde não apenas as evidências científicas, mas também a decisão compartilhada.

Para tanto, é necessário que o desenho das pesquisas científicas seja disponibilizado para uma avaliação adequada e independente. Isso permitiria que os dados brutos das pesquisas pudessem ser analisados, o que facilitaria o cálculo dos números necessários de pacientes a tratar (NNT) e dos números necessários de pacientes sob risco de sofrer danos decorrentes do tratamento (NND). Esse contexto de maior transparência com os dados das pesquisas facilitaria uma honesta e tranquila decisão compartilhada com os pacientes, por meio de uma linguagem mais clara e compreensível.

Referências

1. Sackett DL, Straus SE, Richardson WS, Rosenberg W, Haynes RB. Evidence-based medicine. New York: Churchill Livingstone; 1997.
2. Moynihan R, Doran E, Henry D. Disease mongering is now part of the global health debate. *PLoS Med*. 2008;5(5):e106. http://dx.doi.org/10.1371/journal.pmed.0050106. PMid:18507498.
3. Gøtzsche PC. Deadly medicines and organised crime: how big pharma has corrupted healthcare. Cornwall: Radcliffe Publishing; 2013.
4. Every-Palmer S, Howick J. How evidence-based medicine is failing due to biased trial and selective publication. J Eval Clin Pract. 2014; 20:908–914.
5. Greenhalgh T, Howick J, Maskrey N. Evidence based medicine: a movement in crisis? *BMJ*. 2014; 348:g3725. http://dx.doi.org/10.1136/bmj.g3725. PMid:24927763.
6. Akst J. Dealing with irreproducibility. The Scientist: Exploring Life, Inspiring Innovation [Internet]. 2014. [acesso em 2015 Oct 18] Disponível em: http://www.the-scientist.com/?articles.view/articleNo/39654/title/Dealing-with-Irreproducibility/
7. Brynner R, Stephens T. Dark remedy: the impact of thalidomide and its revival as a vital medicine. New York: Perseus Publishing; 2001.

8. Heres S, Davis J, Maino K, Jetzinger E, Kissling W, Leucht S. Why olanzapine beats risperidone, risperidone beats quetiapine, and quetiapine beats olanzapine: an exploratory analysis of head-to-head comparison studies of second-generation antipsychotics. Amer J of Psychiatry. 2006(163):185-194.

9. Fletcher RH, Fletcher S. Epidemiologia clínica. Porto Alegre: Artmed; 2006.

10. Ioannidis JPA. Why most published research findings are false. *PLoS Med*. 2005;2(8):e124. http://dx.doi.org/10.1371/journal.pmed.0020124.

11. Senn S. Three things that every medical writer should know about statistics. The Write Stuff. 2009; 18(3):159-162. [acesso em 2015 June 18] Disponível em: http://eprints.gla.ac.uk/8107/1/id8107.pdf

12. Dear JW, Webb DJ. Disease mongering -- a challenge for everyone involved in healthcare. *Br J Clin Pharmacol*. 2007;64(2):122-124. http://dx.doi.org/10.1111/j.1365-2125.2006.02830.x. PMid:17214830.

13. Gérvas J, Pérez-Fernández MP. Sano y Salvo y libre de intervenciones médicas innecesarias. Barcelona; Los Libros del Lince; 2013.

14. St-Onge JC. Tous fous? Montreal: Écosociété; 2013.

15. Goroll AH, May LA, Mulley AG, editores. Prymare care medicine. Philadelphia: JB Lippincott; 1995.

16. Weiss BD, editor. 20 commom problems in primary care. San Antonio: McGraw-Hill; 1999. p. 79-120.

17.Oliveira JEP, Vencio S, editors Diretrizes da sociedade brasileira de diabetes. São Paulo: AC Farmacêutica; 2015. 116 p.

18. Vijan S, Sussman JB, Yudkin JS, Hayward RA. Effect of patients' risks and preferences on health gains with plasma glucose level lowering in type 2 diabetes mellitus. JAMA Intern Med. 2014;174(8):1227-1234. http://dx.doi.org/10.1001/jamainternmed.2014.2894. PMid:24979148.

19. Jamoulle M, Berstein J, Pizzanelli Baez M, Silva A, Wagner H. Prévention quaternaire: un concept fondé sur le temps et la relation. Deuxième partie. L'étonnante diffusion internationale du concept. Médecine. 2014(10)2:75-77. http://dx.doi.org/10.1684/med.2014.1066.

20. Jamoulle M. Quaternary prevention, an answer of family doctors to overmedicalization. Intern J Health Policy Manag. 2015;4(2).61-64. http://dx.doi.org/10.15171/ijhpm.2015.24.