

# Identification of competencies needed by primary health care physicians to deliver palliative care to patients with heart failure

Identificação de competências necessárias aos médicos da Atenção Primária à Saúde para a entrega de cuidados paliativos ao paciente com insuficiência cardíaca

*Identificación de las competencias que necesitan los médicos de atención primaria de salud para brindar cuidados paliativos a pacientes con insuficiencia cardíaca*

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## ABSTRACT

**Introduction:** Heart failure (HF) has an increasing prevalence in the world and there is already a greater proportion of patients with this disease in need of palliative care (PC) in relation to other pathologies, such as cancer. Despite this, there is an inequity in the provision and recognition of the need for PC in individuals with HF. The identification of the necessary competencies for the physician who will offer this care is essential for improving the care provided to these patients.

**Objective:** To identify, through a literature review, the necessary competencies to primary care physicians to provide care to patients with heart failure. **Methods:** The acronym SPIDER was used to construct the question and, based on it, we sought to identify the necessary skills for primary health care physicians to work in PC in HF. The bases searched were PubMed, SciELO, Lilacs, and Medline, using descriptors and their registered variations, guided by the question. In the relevant primary studies identified by the search strategy, more eligible studies were also searched in their cited articles. **Results:** Of 127 identified studies, 8 were selected for data extraction and evaluated by the thematic synthesis methodology. The most prevalent competence in the selected studies was to offer PC to patients with advanced stage HF. Other competencies pointed out were coordinating care and offering multidisciplinary care to patients with HF. **Conclusions:** This review evidenced the knowledge and skills required in the training of the PHC physician to achieve the main competencies in the promotion of PC to patients with HF.

**Keywords:** Palliative care; Heart failure; Medical education; Primary health care.

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### Funding:

No external funding.

### Ethical approval:

Not applicable.

### Informed consent:

Not applicable.

### Provenance:

Not commissioned.

### Peer review:

external.

Received: 08/23/2021.

Approved: 08/04/2022.

### Guest editor:

Maiara Conzatti

**How to cite:** Brito LAR, Abreu M. Identification of competencies needed by primary health care physicians to deliver palliative care to patients with heart failure. Rev Bras Med Fam Comunidade. 2022;17(44):3194. [https://doi.org/10.5712/rbmfc17\(44\)3194](https://doi.org/10.5712/rbmfc17(44)3194)



## RESUMO

**Introdução:** A insuficiência cardíaca (IC) tem prevalência crescente no mundo e já existe maior proporção de pacientes com essa doença necessitando de cuidados paliativos (CP) em relação a outras patologias, como o câncer. Apesar disso, há uma iniquidade na oferta e no reconhecimento da necessidade de CP nos indivíduos com IC. A identificação das competências necessárias para o médico que ofertará esse cuidado é essencial para a melhoria da atenção prestada a esses pacientes. **Objetivo:** Identificar, por meio de revisão da literatura, as competências requeridas aos médicos da atenção primária para oferecer cuidados paliativos aos pacientes com insuficiência cardíaca. **Métodos:** Foi utilizado o acrônimo SPIDER para a construção da pergunta e, com base nela, buscou-se identificar as competências necessárias para médicos da atenção primária à saúde na atuação em CP na IC. As bases buscadas foram *United States National Library of Medicine* (PubMed), *Scientific Electronic Library Online* (SciELO), Literatura Latino-Americana e do Caribe em Ciências da Saúde (Lilacs) e *Medical Literature Analysis and Retrieval System Online* (Medline), usando descritores e suas variações registradas, guiados pela pergunta. Nos estudos primários relevantes localizados pela estratégia de busca também se procurou por mais estudos elegíveis nos artigos citados. **Resultados:** De 127 estudos encontrados, oito foram selecionados para extração de dados e avaliados pela metodologia de síntese temática. A competência mais prevalente nos trabalhos selecionados foi a de ofertar CP ao paciente com IC em estágio avançado. Outras competências apontadas foram coordenar o cuidado e ofertar cuidado multidisciplinar ao paciente com IC. **Conclusão:** Esta revisão revelou conhecimentos e habilidades requeridos na formação do médico da APS para atingir as principais competências na promoção dos CP ao paciente com IC.

**Palavras-chave:** Cuidados paliativos; Insuficiência cardíaca; Educação médica; Atenção primária à saúde.

## RESUMEN

**Introducción:** La insuficiencia cardíaca (IC) tiene una prevalencia creciente en el mundo y ya existe una mayor proporción de pacientes con esta enfermedad que necesitan cuidados paliativos (CP) en relación con otras patologías, como el cáncer. A pesar de eso, existe una inequidad en la provisión y reconocimiento de la necesidad de CP en individuos con IC y la identificación de las habilidades necesarias del médico que ofrecerá esa atención es fundamental para mejorar la atención brindada a esos pacientes. **Objetivo:** Identificar, a través de una revisión de la literatura, las competencias requeridas por los médicos de atención primaria para brindar atención a pacientes con insuficiencia cardíaca. **Métodos:** Se utilizó la sigla SPIDER para construir la pregunta y, con base en ella, se buscó identificar las competencias necesarias para que los médicos de atención primaria de salud actúen en CP en IC. Las bases buscadas fueron PubMed, SciELO, Lilacs y Medline utilizando descriptores y sus variaciones registradas, guiados por la pregunta. En los estudios primarios relevantes identificados por la estrategia de búsqueda, también se buscaron estudios más elegibles en los artículos citados. **Resultados:** De los 127 estudios identificados, 8 fueron seleccionados para la extracción de datos y evaluados por la metodología de síntesis temática. La competencia más prevalente en los estudios seleccionados fue ofrecer CP a pacientes con IC en estadio avanzado. Otras competencias señaladas fueron coordinar la atención y ofrecer atención multidisciplinaria a los pacientes con IC. **Conclusiones:** Esta revisión evidenció los conocimientos y habilidades requeridas en la formación del médico de AP para alcanzar las principales competencias en la promoción de CP a pacientes con IC.

**Palabras clave:** Cuidados paliativos; Insuficiencia cardíaca; Educación médica; Atención primaria de salud.

## INTRODUCTION

Non communicable chronic diseases (NCDs) are among the leading causes of death in poor and developing countries, according to the World Health Organization (WHO) and the Pan American Health Organization (PAHO). The main factors that contribute to this are the aging of the population, rapid and unplanned urbanization, and the globalization of unhealthy lifestyles.<sup>1,2</sup> Among these chronic diseases, heart failure (HF) stands out, which affects over 26 million people worldwide and is the final stage of most chronic diseases of the cardiovascular system.<sup>1-3</sup> Its increasing prevalence is due, among other reasons, to advances in the treatment of cardiovascular conditions, such as acute myocardial infarction, with increased patient survival, and higher prevalence of diseases such as arterial hypertension and diabetes.<sup>2,3</sup> The aging of the population, added to the consequent increase in the prevalence of NCDs, makes palliative care (PC) increasingly incorporated into the medical practice.<sup>4</sup> It is estimated that, of the population that needs PC, patients with cardiovascular diseases correspond to 38.47% of the total, while cancer patients run correspond to 34.01% of the total.<sup>5</sup> In addition to the higher proportion, patients with HF have a high demand for palliative care, often for a longer period than patients with cancer. However, there is still inequity in the supply and recognition of the need for PC in HF.<sup>6</sup>

The results of two recent randomized clinical trials (CASA and PAL-HF)<sup>7,8</sup> indicate the importance of PC in HF for improving quality of life, depression, fatigue, spiritual well-being, and reduced anxiety in patients. The Family and Community Physician (*Médico de Família e Comunidade* – MFC) has the essential role, defined by the competency-based curriculum of the Brazilian Society of Family and Community Medicine (*Sociedade Brasileira de Medicina de Família e Comunidade* – SBMFC),<sup>9</sup> to recognize the needs of patients with chronic diseases, including HF, who need PC. Other references also consider that primary care physicians should accompany their patients in the course of the disease, being able to act in the relief of physical and emotional symptoms, as well as to offer early help in the establishment of care plans and advance directives of will together with patients and their families, in addition to managing terminal situations.<sup>10</sup> The family doctor has important skills for the management of chronic diseases and is inserted in a scenario that offers greater accessibility to the patient and is the first contact with the health system. In addition to this professional having as central principles the longitudinality of care and the coordination of the line of care, they have the skills to assess the impacts of the disease on each individual and the experience that the individual has with pain, as well as an in-depth assessment of their family and social network, through tools such as the person-centered clinical method.<sup>11,12</sup> Although some primary health care (PHC) physicians feel unprepared to perform PC in patients with HF, most of them, including Brazilian references, recognize that this care is their responsibility.<sup>13-15</sup> Considering the principle of comprehensive care, the recognition and strengthening of PC in the context of HF in the PHC scenario is of great relevance.<sup>16</sup>

The objective of this review was to identify in the literature the competencies,<sup>17</sup> the set of knowledge, skills and attitudes that will serve as a guide for the practice of MFC in PC, seeking to improve the quality of comprehensive care provided to patients with HF and in a way that can guide the teaching of these skills in the curricula of undergraduate medicine and residency in Family and Community Medicine.

## METHODS

The acronym SPIDER, indicated for qualitative reviews, was used to formulate the study question. The meaning of this acronym is: sample or population evaluated, phenomenon of interest, study design, evaluation and outcome, and research type included. Originally, the methodology for formulating SPIDER questions allows the inclusion of studies of qualitative and mixed methodologies.<sup>18</sup> The population evaluated consisted of physicians working in PHC. The phenomenon of interest was the competences evaluated as necessary to offer PC to the individual living with HF, in the PHC scenario. Criteria for the design of the analyzed study were not established and qualitative and mixed methodology research were included. As an evaluation object, the indication of competences, skills, knowledge, and attitudes recommended in the studies was considered.

The databases searched were United States National Library of Medicine (PubMed), Scientific Electronic Library Online (SciELO), Latin American and Caribbean Literature in Health Sciences (Lilacs), and Medical Literature Analysis and Retrieval System Online (Medline), using descriptors and their registered variations, guided by the question (Appendix 1). In the relevant primary studies identified by the search strategy, we searched for more eligible studies in the cited articles. The languages included were Portuguese, English, and Spanish. No initial date limit was defined and the final limit was January 27<sup>th</sup>, 2022.

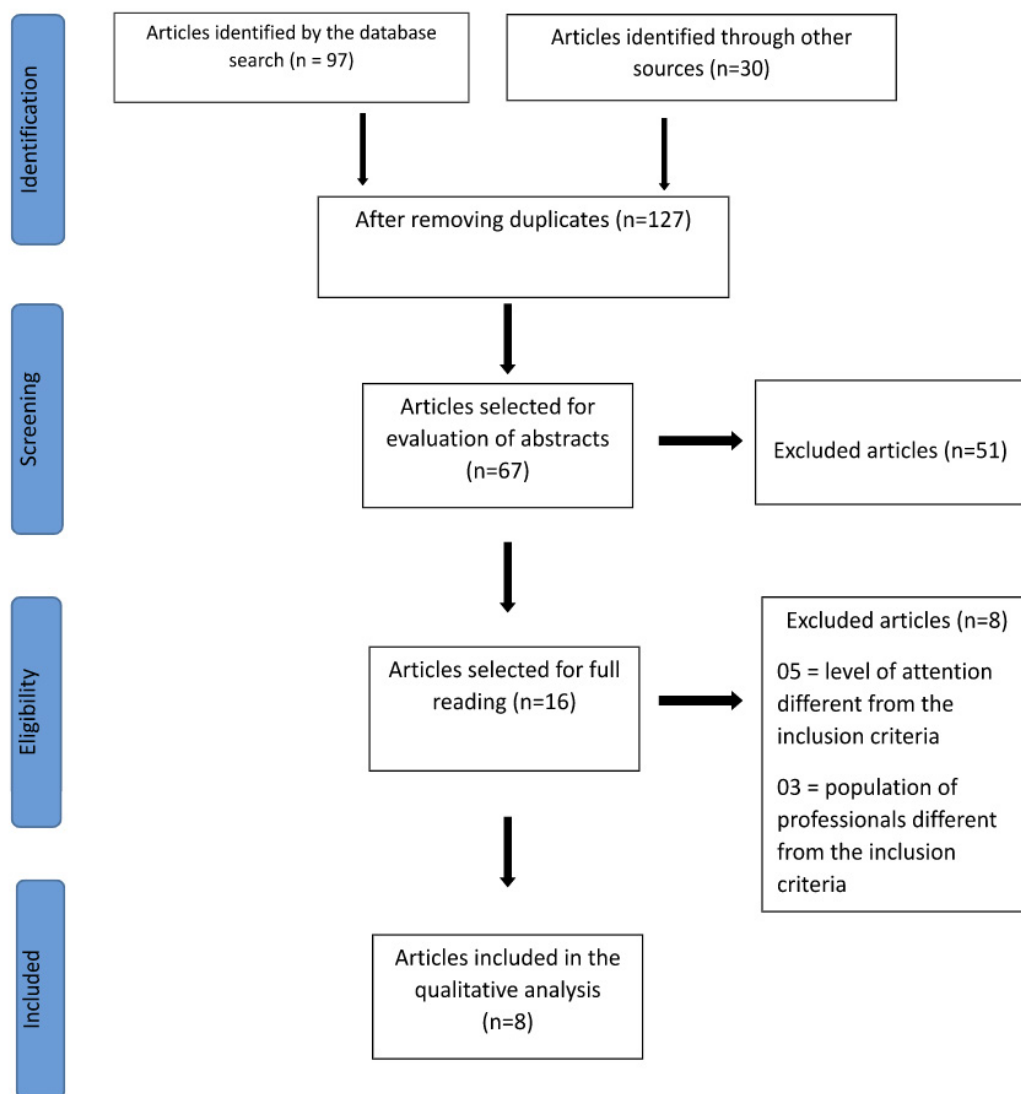
Inclusion criteria were studies that dealt with physicians working in primary care who were not specialists in PC or cardiology. Competency recommendations for offering PC in PHC to patients with HF were considered. To compose the competencies, self-assessment data from physicians included in qualitative studies were also included in relation to weaknesses, potentialities and needs on the subject. In studies that

addressed data from PHC physicians and specialist physicians, a separate analysis was performed and only data from the former were included. Studies carried out in specialized hospitals and outpatient clinics were excluded. The study design or the type of research for inclusion were not discriminated.

The selection was made by two independent reviewers, using the Rayyan® tool for selection in reviews, and those in agreement were included. Data were independently extracted by the reviewers and subsequently discussed. The extracted information was discussed between the two reviewers to carry out the synthesis. The methodology of choice for synthesis in this study was thematic synthesis.

## RESULTS

A total of 127 articles were identified using the search engine, leaving 125 after removing duplicates. Sixty-seven works were selected for reading the abstract and, of them, 16 were selected for full reading. In the end, eight articles were included to compose the review. The selection flowchart of the included texts is illustrated in Figure 1.



**Figure 1.** Flowchart of the selection of studies included in the review.

Of the included studies, two were qualitative clinical trials,<sup>13,16</sup> one was a guideline for recommendations,<sup>19</sup> one was an integrative review,<sup>20</sup> one was a literature review,<sup>21</sup> two were qualitative systematic reviews,<sup>22,24</sup> and one was a course module description.<sup>23</sup> The characteristics of each work included individually, as well as the core information extracted, are reported in Chart 1.<sup>13,16,19-24</sup>

**Chart 1.** Characteristics of the included studies.

Study	Methodology	Number of participants	Information extraction
Dunlay et al. <sup>13</sup>	Multicentric qualitative clinical research	95	Self-report of the participants included on the PC practices in HF, potentialities, weaknesses, and needs in the theme.
Allen et al. <sup>19</sup>	Scientific Positioning of the American Cardiology Association	-	Decision-making process in HF PC; decision sharing; understanding of prognosis.
Crimmins et al. <sup>20</sup>	Integrative literature review	-	Exploration of the main barriers to HF PC in the context of PHC: communication difficulties, inadequate concepts about the disease and PC, difficulty in managing time, unpredictable trajectory of the disease, little support from specialists.
Gelfman et al. <sup>21</sup>	Literature review	-	Discussion of domains necessary for the delivery of primary PC to patients with HF and their families based on case discussions; proposition of training models for primary HF PC.
Oishi e Murtagh <sup>22</sup>	Systematic review	326	Roles of health professionals in primary PC in the context of chronic diseases including HF; barriers and expectations identified by physicians for the implementation of PC in PHC.
Zehm et al. <sup>23</sup>	Course module description	46	Description of important aspects in HF PC (prognosis, adequate communication, advanced care plan).
Schichtel et al. <sup>24</sup>	Systematic review with qualitative synthesis	264	Knowledge, skills, barriers, and facilities perceived by health professionals to offer HF PC.
Schichtel et al. <sup>16</sup>	Qualitative clinical research	24	Qualitative data obtained from interviews that explored the self-assessment of barriers, potentialities, and how to improve the provision of HF PC in PHC.

PC: palliative care; HF: heart failure; PHC: primary health care.

After discussing the data obtained from the selected studies, Chart 2<sup>13,16,19-24</sup> was created with the competencies, in their entirety, that were identified in each study included in the review.

## DISCUSSION

The concept of competencies most used in the medical education literature is that of a set of knowledge, skills, and attitudes that can be measured and evaluated.<sup>17</sup> Part of the medical curricula is currently competency-based, such as the SBMFC, from 2015.<sup>9</sup> This curriculum affirms that an essential competence for the family doctor would be to recognize and manage terminal situations of chronic diseases such as HF. Despite this, there is no definition of which competencies, in their entirety, are expected from the family doctor when dealing with patients with HF who need PC.

**Chart 2.** Competencies identified in the studies selected for the provision of palliative care to patients with heart failure by the Primary Health Care physician.

Reference	Competencies	Skills	Knowledge	Attitudes
Dunlay et al. <sup>13</sup>	Offering PC to patients with advanced HF and poor prognosis.	Discussing care strategies with patients and their family.	Knowing how to assess the prognosis of patients with HF; knowing when to approach patients with HF regarding PC.	-
Allen et al. <sup>19</sup>	Offering palliative care to patients with advanced HF and poor prognosis.	Annual reassessment of functionality and prognosis of patients with annual HF.	Knowing the pathophysiology of HF, treatments and interventions; knowing how to perform the HF prognosis assessment.	-
Crimmins et al. <sup>20</sup>	Offering PC to patients with advanced HF and poor prognosis.	Being able to communicate with patients and family members about the PC proposal; using assessment tools to refer to the PC specialist.	Knowing when to indicate HF PC; knowing the evolution of HF.	-
Gelfman et al. <sup>21</sup>	Offering PC to patients with advanced HF and poor prognosis; offering coordination of care to patients with severe HF.	Carrying out early directives of will with patient and family; being able to properly refer to specialized PC; being able to manage symptoms such as dyspnea, anxiety, depression, and fatigue; being able to assess the need for psychosocial support.	Knowing about the prognosis of HF; understanding what palliative care is.	-
Oishi and Murtagh <sup>22</sup>	Offering coordination of care for patients with severe HF.	Being able to perform multi-professional work.	Knowing the prognosis of HF.	-
Zehm et al. <sup>23</sup>	Offering PC to patients with HF and their families.	Being able to communicate with patients and family members about PC proposals.	Knowing the prognosis of HF.	-
Schichtel et al. <sup>24</sup>	Offering PC to patients with severe HF in a multidisciplinary way.	Being able to identify how much patients want to know about their prognosis; being able to involve patients in shared decision-making.	Knowing about pathophysiology and pharmacotherapy of the disease.	-
Schichtel et al. <sup>16</sup>	Offering PC to patients with advanced HF.	Being able to initiate and lead conversations about prognosis, care planning, and end-of-life; being able to make shared decisions.	Knowing the pathophysiology and prognosis of HF; understanding what PC is.	-

PC: palliative care; HF: heart failure; PHC: primary health care.

The articles evaluated in this study point to a common competence, which is the ability to offer PC to patients with advanced stage HF.<sup>13,16,19-24</sup> To compose this competence, different knowledge and skills are listed. Among the necessary knowledge, the following were identified: knowing how to properly assess the prognosis of the patient with HF,<sup>13,19,21-23</sup> knowing how to approach the PC issue early with the



patient with HF,<sup>13,20</sup> knowing the pathophysiology, evolution of the disease, treatments and symptomatic interventions in HF,<sup>16,19,20,24</sup> and understanding what PC is.<sup>16,21</sup> Among the necessary skills, one may mention the ability to access how much patients want to know about their prognosis and to know how to communicate effectively with the patients and their families about the initiation of PC, about advance directives of will, and about plans and goals in care, based on shared decisions.<sup>16,20,21,24</sup> In addition, other skills identified were being able to manage symptoms such as dyspnea, anxiety, depression, and fatigue in primary care<sup>21</sup> and knowing how to use tools to assess the need for referral to a PC specialist, as well as how to make these referrals in an appropriate and timely manner.<sup>20,21</sup> The ability to assess the psychosocial and family support of patients was also considered important to achieve the competence to offer PC to patients with HF.<sup>21</sup>

Other skills were identified, such as the ability to coordinate the care of patients with severe HF<sup>21,22</sup> and to provide care in a multidisciplinary way.<sup>24</sup> Based on these different skills, other skills were also listed, such as knowing how to communicate and work with the multidisciplinary team and being able to be updated on patient care through contact with different levels of care in which professionals are inserted.<sup>21,22,24</sup> It was noted that, among the evaluated studies, there was no reference to attitudes, which concern values and beliefs that can be learned and that influence the behavior and reactions of the professional,<sup>25</sup> also composing, along with knowledge and skills, the formation of a competence. In most medical curricula, there is, in general, a greater appreciation of the knowledge to be transmitted and learned and little emphasis on competences in their complete form and, mainly, little emphasis on attitudes. This flaw can be justified by the mistaken belief that attitudes cannot be taught.<sup>26</sup>

The authors propose, based on the analysis and discussion of the articles included in the review, competencies to be incorporated into the Family and Community Medicine curriculum regarding the offer of PC to patients with HF. This proposal is illustrated in Chart 3. The SBMFC<sup>9</sup> curriculum has as an essential competence, in a broad way, knowing how to manage terminal situations of chronic diseases. The authors suggest more specific contributions to compose the curriculum, giving greater clarity to the PC that should be provided to patients with HF. The authors believe that these competencies should be incorporated as essential, according to the SBMFC curriculum model,<sup>9</sup> considering that this disease has a high prevalence and great demand for PC in the PHC context.

## Limitations

This research has limitations, including the inclusion only of international studies that do not necessarily reflect the reality of primary care and the care network for patients with HF in Brazil. In addition, many of the studies evaluated did not explicitly bring the competencies expected of the primary care physician to meet the PC needs of patients with HF, and the identification of what these competencies, skills, and knowledge would be was carried out by the authors' assessment and may be subject to bias.

## CONCLUSION

The main competencies identified in this study are: offering PC to patients with advanced HF, coordinating their care, and offering multidisciplinary care. It was noted that, among the studies, attitudes were not reported, which, added to knowledge and skills, form a competence, which points to a possible deficit in the integral teaching of the competences highlighted in this review.

**Chart 3.** Essential competences in palliative care in patients with heart failure.

Competencies	Knowledge	Skills	Attitudes
Offer palliative care to patients with advanced heart failure.	<ul style="list-style-type: none"> <li>- Properly assessing the prognosis of patients with HF.</li> <li>- Knowing how to early approach the topic of palliative care with patients with HF.</li> <li>- Knowing the pathophysiology, disease evolution, treatments, and symptomatic interventions in HF.</li> <li>- Understanding what palliative care is.</li> </ul>	<ul style="list-style-type: none"> <li>- Assessing how much patients want to know about their prognosis.</li> <li>- Knowing how to communicate effectively with patients and their families about the beginning of palliative care, about advance directives of will and about plans and goals in care, based on shared decisions.</li> <li>- Managing symptoms such as dyspnea, anxiety, depression, and fatigue in primary care.</li> <li>- Knowing how to use tools to assess the need for referral to a specialist in palliative care and carrying out these referrals in an appropriate and timely manner.</li> </ul>	<ul style="list-style-type: none"> <li>- Being available for empathically listening to patients and family members.</li> <li>- Respecting and not judging the decisions of patients and family members.</li> <li>- Being open to dialogue, respecting the beliefs and values of patients and family members.</li> <li>- Use accessible language according to the sociocultural context.</li> <li>- Knowing how to deal emotionally with the death of others.</li> </ul>
Coordinating the care of patients with heart failure.	<ul style="list-style-type: none"> <li>- Knowing the equipment of the health care network in which it is inserted in order to properly offer them to patients.</li> <li>- Knowing the role of specialists in palliative care and cardiology in patient care.</li> </ul>	<ul style="list-style-type: none"> <li>- Being able to update on patient care through contact with different levels of care in which they are inserted.</li> <li>- Being able to centralize patient care.</li> </ul>	<ul style="list-style-type: none"> <li>- Being open to dialogue with experts from other areas, maintaining respect, and promoting constructive exchanges.</li> <li>- Communicating clearly with other health professionals.</li> <li>- Being open to dialogue with other professionals, maintaining respect and promoting exchanges.</li> </ul>
Offer multidisciplinary care to patients with heart failure.	<ul style="list-style-type: none"> <li>- Understanding the role of health professionals who will participate in patient care.</li> </ul>	<ul style="list-style-type: none"> <li>- Knowing how to communicate and work with the multidisciplinary team.</li> </ul>	<ul style="list-style-type: none"> <li>- Having interest and respect for the work of the multidisciplinary team.</li> </ul>

HF: heart failure.

This work revealed knowledge and skills required in the training of PHC physicians to achieve the main competencies in the promotion of PC to patients with HF and suggested attitudes to compose these competencies.

## CONFLICT OF INTERESTS

Nothing to declare.

## AUTHORS' CONTRIBUTIONS

**LARB:** Project administration, Formal analysis, Conceptualization, Data curation, Writing – original draft, Writing – review & editing, Investigation, Methodology, Resources, Software, Validation, Visualization.  
**MA:** Formal analysis, Conceptualization, Writing – original draft, Writing – review & editing, Investigation, Methodology, Validation.



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## **Annex 1 - Search engine**

### **PUBMED:**

#1 “Physicians, Primary Care”[Mesh] OR “Primary Health Care”[Mesh] OR “General Practice”[Mesh]  
OR “General Practitioners”[Mesh]

#2 “Palliative Care”[Mesh] OR “Palliative Medicine”[Mesh]

#3 “Heart Failure”[Mesh]

#1 AND #2 AND #3

### **BVS:**

#1 MH Primary health care N04.590.233.727 or SP2.001.002 or SP2.122.107 or SP4.002.130;  
MH Physician Primary care: M01.526.485.810.800 or N02.360.810.795; MH General Practitioners:  
M01.526.485.810.485 or N02.360.810.485; MH General Practice: H02.403.340

#2 MH Palliative care: E02.760.666 or N02.421.585.666; MH Palliative medicina: H02.403.645

#3: MH Heart Failure: C14.280.434; MH heart failure diastolic: C14.280.434.611; MH Heart Failure  
systolic: C14.280.434.676

#1 AND #2 AND #3