

# Smoking control program in Mato Grosso do Sul: offer, adherence and effectiveness

Programa de controle do tabagismo em Mato Grosso do Sul: oferta, adesão e efetividade

*Programa de control del tabaquismo en Mato Grosso do Sul: oferta, adherencia y efectividad*

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## Abstract

**Objective:** The objective of this study was to evaluate the National Tobacco Control Program (PNCT) in Mato Grosso do Sul, coverage rates, dropout, cessation, use of medication, the health services network and the reasons why Family Health Teams in Campo Grande have not yet joined the program. **Methods:** This was a descriptive study with a quantitative approach, based on primary and secondary data on the PNCT in Mato Grosso do Sul. The primary data were obtained by means of a questionnaire administered to Family Health Teams (ESF) in Campo Grande, which did not offer the program and evaluated the frequency and presence of correlation between the variables analyzed using Cramer's V test and the  $\chi^2$  test. The secondary data were obtained from the consolidated records of the José Alencar Gomes da Silva National Cancer Institute with the records produced by the services. **Results:** The rates of adherence, effectiveness and pharmacological support in the capital and interior were: 66.80 and 59.79%; 20.58 and 34.91%; and 32.14 and 99.86%, respectively. The program was offered in 49.37% of the municipalities and 43.85% of the Basic Health Units (UBS) estimated. There were correlations between being trained and implementing the program and entry training and provision in the UBS. The difficulties reported by professionals were the COVID-19 pandemic, overload and/or a small team and/or lack of time and the absence of training. **Conclusions:** The PNCT in Mato Grosso do Sul has low coverage and restricted supply in the health network, in addition to average performance in assisting smokers. There is a clear need to invest in capacitation/training, primarily for the ESF in Campo Grande, enabling them to respond to the needs of health promotion, recognizing the program as more cost-effective.

**Keywords:** Smoking prevention; Primary Health Care; Family health; Smoking cessation; Tobacco control.

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## Resumo

**Objetivo:** O estudo teve por objetivo avaliar o Programa Nacional de Controle do Tabagismo (PNCT) em Mato Grosso do Sul, taxas de cobertura, abandono, cessação, uso de medicamentos, rede de serviços de saúde e as razões pelas quais algumas Equipes de Saúde da Família de Campo Grande ainda não aderiram ao programa. **Métodos:** Trata-se de uma pesquisa descritiva, com abordagem quantitativa, baseada em dados primários e secundários sobre o PNCT em Mato Grosso do Sul. Os dados primários foram obtidos por meio de questionário aplicado aos profissionais das Equipes de Saúde da Família (ESF) de Campo Grande, sem oferta do programa e avaliados quanto à frequência e presença de correlação entre as variáveis analisadas utilizando V de Cramer e teste de  $\chi^2$ . Os dados secundários foram obtidos do consolidado do Instituto Nacional de Câncer José Alencar Gomes da Silva com os registros produzidos pelos serviços. **Resultados:** As taxas de adesão, efetividade e apoio farmacológico na capital e interior foram: 66,80 e 59,79%; 20,58 e 34,91%; 32,14 e 99,86%, respectivamente. A oferta do programa ocorreu em 49,37% municípios e 43,85% das Unidades Básicas de Saúde (UBS) estimadas. Houve correlações entre ser capacitado e implantar o programa; treinamento de ingresso e oferta na UBS. As dificuldades relatadas pelos profissionais foram a pandemia de COVID-19, a sobrecarga e/ou equipe pequena e/ou falta de tempo e a ausência de capacitação/treinamento. **Conclusões:** O PNCT em Mato Grosso do Sul apresenta baixa cobertura e oferta restrita na rede de saúde, além do desempenho mediano de assistência aos tabagistas. Evidencia-se a necessidade de investimento em capacitação/treinamento, prioritariamente para as ESF de Campo Grande, dando-lhes condições de responder às necessidades de promoção da saúde, reconhecendo o programa como de maior custo-efetividade.

**Palavras-chave:** Prevenção do hábito de fumar; Atenção primária à saúde; Saúde da família; Abandono do hábito de fumar; Controle do tabagismo.

## Resumen

**Objetivo:** El objetivo de este estudio fue evaluar el Programa Nacional de Control del Tabaco (PNCT) en Mato Grosso do Sul, las tasas de cobertura, el abandono, la cesación, el uso de medicamentos, la red de servicios de salud y las razones por las que los Equipos de Salud de la Familia en Campo Grande aún no se han unido al programa. **Métodos:** Se trata de un estudio descriptivo con abordaje cuantitativo, basado en datos primarios y secundarios sobre el PNCT en Mato Grosso do Sul. Los datos primarios se obtuvieron por medio de un cuestionario aplicado a los Equipos de Salud de la Familia (ESF) de Campo Grande, que no ofrecían el programa y evaluaron la frecuencia y la presencia de correlación entre las variables analizadas utilizando la V de Cramer y la prueba de la  $\chi^2$ . Los datos secundarios se obtuvieron de los registros consolidados del Instituto Nacional del Cáncer José Alencar Gomes da Silva con los registros producidos por los servicios. **Resultados:** Las tasas de adherencia, eficacia y apoyo farmacológico en la capital y en el interior fueron: 66,80 y 59,79%; 20,58 y 34,91%; 32,14 y 99,86%, respectivamente. El programa fue ofrecido en el 49,37% de los municipios y en el 43,85% de las Unidades Básicas de Salud (UBS) estimadas. Hubo correlación entre estar capacitado e implementar el programa; capacitación de entrada y oferta en las UBS. Las dificultades relatadas por los profesionales fueron la pandemia del COVID-19, la sobrecarga y/o un equipo pequeño y/o la falta de tiempo y la ausencia de capacitación. **Conclusiones:** El PNCT en Mato Grosso do Sul tiene baja cobertura y oferta restringida en la red de salud, además de un desempeño medio en la asistencia a los fumadores. Hay una clara necesidad de invertir en la creación de capacidad / formación, principalmente para la ESF en Campo Grande, lo que les permite responder a las necesidades de promoción de la salud, reconociendo el programa como más rentable.

**Palabras clave:** Prevención del hábito de fumar; Atención Primaria de Salud; Salud de la familia; Cese del hábito de fumar; Control del tabaco.

## INTRODUCTION

Smoking is recognized as an epidemic disease resulting from nicotine dependence and is included in the International Classification of Diseases, 10th Revision (ICD-10) in the group of mental and behavioral disorders because of the use of psychoactive substances. Its use causes approximately 50 disabling and fatal diseases.<sup>1,2</sup>

The 2019 National Health Survey (PNS-2019) found a 12.8% prevalence of users of tobacco products in the Brazilian population, over 18 years old, equivalent to 20.4 million people. Mato Grosso do Sul is the leader among the Federative Units in the current use of tobacco products, with a percentage of 16.30%, as well as the capital, Campo Grande, with 16.60%.<sup>3</sup>

Brazil is internationally recognized for its leadership in tobacco control, and the National Tobacco Control Program (PNCT), undertaken in 1989 by the José Alencar Gomes da Silva National Cancer Institute (INCA), has become a global reference.<sup>4,5</sup> Brazilian leadership on the international stage, the solid

structuring of the PNCT and the role of civil society and the media contributed to the success of tobacco control in Brazil.<sup>6</sup>

PNCT provides free treatment through the Unified Health System (SUS), with current guidelines on its organization provided for in Ordinances No. 571/2013 and 10/2020 of the Ministry of Health. The care guidelines for smokers establish that all points of the SUS Care Network must provide adequate treatment for smoking, especially in primary health care (PHC) services.<sup>1,7</sup>

This program represents the way in which the state organizes its actions to guarantee their operationalization and execution, through previously defined goals and strategies.

Thus, the objective of this study was to evaluate the PNCT in Mato Grosso do Sul in relation to supply, adherence and effectiveness and to identify the reasons for the lack of supply in Basic Health Units (UBS) with a Family Health Team (ESF) in the municipality of Campo Grande.

## METHODS

We conducted a cross-sectional, analytical study, with a quantitative approach, based on primary and secondary data on the PNCT in the state of Mato Grosso do Sul and its capital, Campo Grande. Secondary data relating to care in 2019 was obtained through consultation of consolidated spreadsheets available at the State Department of Health, previously fed with the production of the Municipal Health Departments.

Data from the municipality of Campo Grande and other municipalities in Mato Grosso do Sul were analyzed and, for comparison purposes, consolidated into two blocks referred to as “capital” and “interior”, with absolute and percentage values, including the following records:

- patients seen in the first clinical assessment consultation (when smoking history is known, such as age of initiation and attempts to quit smoking), pathological history (presence or not of tobacco-related diseases), assessment of the degree of nicotine dependence (Fagerström test) and stages of motivation to quit smoking. This initial assessment allows the health professional to define whether, in addition to the cognitive-behavioral approach, the patient will need medication and what type;
- patients who participated in the fourth session (adherence) and their condition regarding smoking and the use of any medication standardized by the tobacco treatment program;
- patients who participated in the first session and who were not present in the fourth structured session (dropout);
- patients who stopped smoking: those in the first session who were smoke-free in the fourth session (effectiveness);
- patients who participated in maintenance sessions;
- patients who required medication support: those in the first session who used at least one of the medications offered by the program and were present in the fourth structured session;
- ideal health units to meet the minimum demand for smokers;
- average number of health units that offered the treatment;
- percentage of health units that carry out treatment;
- health units according to classification of type of assistance.

Secondary data were tabulated using Microsoft Excel 2010® and analyzed using descriptive and analytical statistics.

The lack of provision of tobacco treatment in UBS with ESF in the municipality of Campo Grande was identified and, in partnership with the managers of each of the seven Health Districts (Anhanduizinho, Bandeira, Centro, Imbros, Lagoa, Prosa and Segredo), the link to access the questionnaire was sent to the email address of each higher education professional. The link was created on the Google Forms® platform, structured with 12 questions (11 objective and one descriptive) and made available via email or WhatsApp application. Completion was only permitted after reading and signing an informed consent form, thereby agreeing to the research voluntarily; confidentiality of information was guaranteed, and there were no reprisals for those who refused to participate. The variables collected included: education, sex, age group, time working in the ESF, training on the PNCT, knowledge about its offer, interest in implementing it in the UBS where working, as well as history of offer and the reasons for the lack of offer at the time of the study. The questionnaire was administered between June and September 2021.

Responses from professionals from the ESF of the basic health network and the Family Health Support Center (NASF) who did not offer PNCT actions were included, except those who, because of an error in the questionnaire, failed to mention the professional category they belonged to, in view of its functional framework as a medium level. The primary data were analyzed in an exploratory way, checking the frequency and degree of association between two variables, using Cramer's V, since all variables are of the nominal/categorical type, values that vary between 0 and 1 and formulation based on the  $\chi^2$  test.<sup>8</sup> The project was evaluated by the Research Ethics Committee of the Federal University of Mato Grosso do Sul, met all principles of research with human beings and was approved according to Opinion No. 4.761.277.

## RESULTS

In Mato Grosso do Sul, in 2019, the estimated population of smokers over 15 years of age and the estimate of those who sought help in the previous 12 months, according to INCA, were 346,226 and 13,627 people, respectively. The total number of patients seen in the first clinical evaluation was 3,738, distributed as follows: 559 (12.45%) in the municipality of Campo Grande (capital) and 3,179 (34.80%) in the interior municipalities. The total number of patients participating in the first structured session of the program was 476 and 2,870 in the capital and interior, respectively.

In the capital, the first clinical assessment among estimated smokers (559/114,101) represented 0.49%, and among those who participated in the first session of the program (476/114,101), it represented 0.42%.

In the interior, the rate of patient care in the first clinical assessment, the rate of participation in the first structured session, the dropout rate and the rate of use of medication support were higher (34.80, 90.28, 40.21 and 99.86%, respectively) in comparison to the capital. In the capital, adherence and attendance rates at maintenance sessions were higher (66.80 and 74.21%, respectively), as illustrated in Table 1.

In the state, 39/79 (49.37%) municipalities on average offered program actions, among 100/228 (43.85%) health units, with 90.91% of them in PHC, only 10/75 (13.33%) in the capital, in two psychosocial support centers (CAPS), both in the interior, and, in the seven specialized care health units (AE), one of them in the capital.

**Table 1.** Distribution of estimated services provided to smokers and performance of the National Tobacco Control Program in Mato Grosso do Sul, 2019.

Characteristics of services	MS		Capital	
	N	%	N	%
Estimate of patients who sought professional help in the last 12 months*	13,627	100	4,491	100
Patients seen in the 1st clinical evaluation**	3,738	27.43	559	12.45
Patients participating in the 1st session among those seen in the 1st clinical evaluation	3,346	89.51	476	85.15
Patients present in the 4th session among participants in the 1st session ( <b>adherence</b> )	2,034	<b>60.79</b>	318	<b>66.80</b>
Patients absent in the 4th session among those present in the 1st session ( <b>dropout</b> )	1,312	39.21	158	33.19
Abstinent patients in the 4th session ( <b>effectiveness of the 1st phase of treatment</b> )	1,100	<b>32.87</b>	98	<b>20.58</b>
Patients participating in maintenance sessions among those present at the 4th session ( <b>maintenance meetings</b> )	1,426	70.10	236	74.21
Patients who used drugs among participants in the 1st session ( <b>medication support</b> )	2,866	<b>85.65</b>	153	<b>32.14</b>

\*Number of smokers aged 18 years or over who tried to quit smoking in the last 12 months 8,2% (proportion of persons 18 or over, smokers who sought treatment from a health professional to try to quit smoking in the last 12 months (%) according to PNS/2013); \*\*number of patients who were evaluated by a health care professional in 2019.

The research questionnaires were answered between June and September 2021 by 86 professionals who worked in UBS with ESF. In the last quarter of 2019, the PNCT was being offered in 8/125 UBS with ESF (6.4%) among the teams formally registered in the Primary Care e-Manager of the Ministry of Health. The representation of ESF respondents without PNCT actions, based on the number of participating nurses, represented 28/117 (23.93%) of the teams targeted by the survey.

The predominant professional category was nurses 28/86 (32.6%), female (76.7%), aged between 31 and 40 years (43.0%), of which 68.6% had specialization /residency and 39.5% had been working in the ESF for less than three years. Half of the respondents (50.0%) said they were aware of the smoking situation in their area of activity and 24.4% said they had received entry training on the program. The majority (53.5%) declared that the program was never offered at the UBS where they work, and 47.6% do not refer smokers or do not know where to refer. Interest in being trained and implementing the program was expressed by 73.3 and 69.8% of professionals, as illustrated in Table 2.

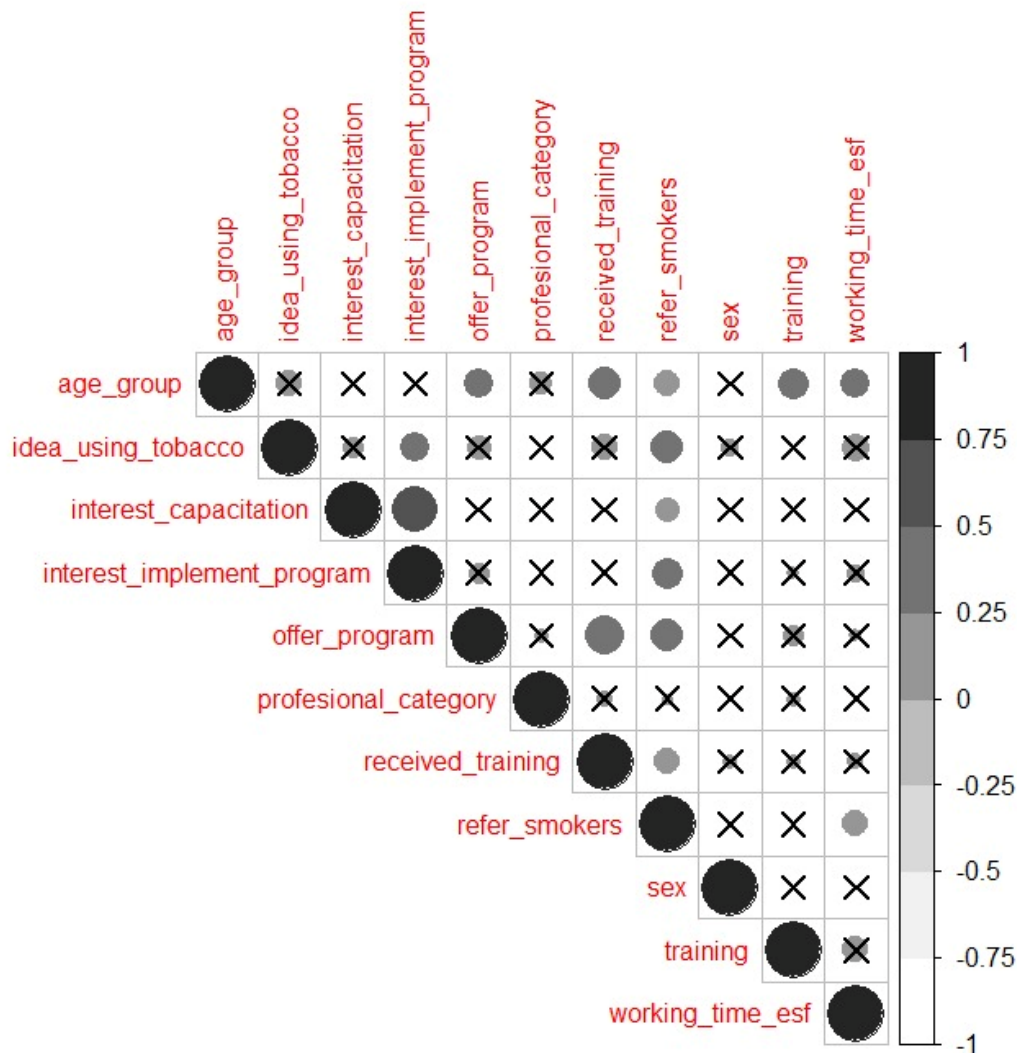
The objective responses collected in the questionnaire were evaluated to identify the degree of association between them using Cramer's V. It should be noted that, as it is a matrix, the values on the diagonal refer to the association of the variable with itself. Non-significant correlations at 5% are marked with an "X". All correlations are presented in Figure 1.

The highest degree of association was found between the variables "Interest in being trained to work in the PNCT" and "Interest in implementing the PNCT in their health unit" (correlation coefficient=0.636). There was also an association between these two variables in the  $\chi^2$  association test ( $p < 0.001$ ), with a percentage of (89.5% —  $n=68$ ). In Cramer's V analysis, a significant correlation was also observed between the variables "Received training on the PNCT" and "The PNCT was offered to the user" (correlation coefficient=0.480). Likewise, there was also an association between these two variables in the  $\chi^2$  association test ( $p < 0.001$ ), with a percentage of 76.7% ( $n=23$ ), as shown in Table 3.

**Table 2.** Distribution of variables identified in Basic Health Units that do not offer the National Tobacco Control Program (PNCT), separated by professional category. Campo Grande, MS, 2021.

Variables	Nur. (n=28)		Phar. (n=14)		SW (n=11)		Doc. (n=11)		Den. (n=11)		PhT. (n=8)		Nut. (n=3)		p-value	Total (n=86)	
	n	%	n	%	n	%	N	%	n	%	n	%	n	%		N	%
Sex																	
Female	23	85.2	11	78.6	11	100.0	7	63.6	8	72.7	4	50.0	2	66.7	0,163	66	76,7
Male	4	14.8	3	21.4	0	0.0	4	36.4	3	27.3	4	50.0	1	33.3		19	22,1
Ignored	1															1	1,2
Age group																	
18 to 30 years	8	28.6	1	7.1	0	0.0	3	27.3	1	9.1	0	0.0	0	0.0	0,121	13	15,1
31 to 40 years	10	35.7	7	50.0	6	54.5	4	36.4	7	63.6	1	12.5	2	66.7		37	43,0
41 to 50 years	10	35.7	5	35.7	3	27.3	4	36.4	3	27.3	5	62.5	1	33.3		31	36,1
51 to 60 years	0	0.0	0	0.0	2	18.2	0	0.0	0	0.0	1	12.5	0	0.0		3	3,5
61 or older	0	0.0	1	7.1	0	0.0	0	0.0	0	0.0	1	12.5	0	0.0		2	2,3
Education																	
Graduation	4	14.3	4	28.6	4	36.4	1	9.1	3	27.3	1	12.5	1	33.3	0,367	18	20,9
Spec./Resid.	22	78.6	9	64.3	6	54.5	8	72.7	8	72.7	4	50.0	2	66.7		59	68,6
Master's	2	7.1	1	7.1	1	9.1	2	18.2	0	0.0	3	37.5	0	0.0		9	10,5
Time working																	
<1 year	5	17.9	2	14.3	1	9.1	1	9.1	2	18.2	1	12.5	1	33.3	0,642	13	15,1
1 to 3 years	6	21.4	3	21.4	4	36.4	2	18.2	4	36.4	1	12.5	1	33.3		21	24,4
4 to 5 years	9	32.1	5	35.7	4	36.4	4	36.4	4	36.4	2	25.0	1	33.3		29	33,7
6 to 10 years	3	10.7	4	28.6	0	0.0	2	18.2	0	0.0	4	50.0	0	0.0		13	15,1
>10 years	5	17.9	0	0.0	2	18.2	2	18.2	1	9.1	0	0.0	0	0.0		10	11,6
Know the smoking situation in región where working																	
No	10	35.7	8	57.1	7	63.6	6	54.5	6	54.5	4	50.0	2	66.7	0,690	43	50,0
Yes	18	64.3	6	42.9	4	36.4	5	45.5	5	45.5	4	50.0	1	33.3		43	50,0
Entrance training for PNCT																	
No	15	53.6	5	35.7	3	27.3	8	72.7	8	72.7	2	25.0	2	66.7	0,331	43	50,0
Yes	7	25.0	3	21.4	5	45.5	1	9.1	2	18.2	3	37.5	0	0.0		21	24,4
Don't remember	6	21.4	6	42.9	3	27.3	2	18.2	1	9.1	3	37.5	1	33.3		22	25,6
PNCT offered at UBS where you work																	
No	14	50.0	10	71.4	5	45.5	6	54.5	8	72.7	2	25.0	1	33.3	0,364	46	53,5
Yes	8	28.6	1	7.1	2	18.2	3	27.3	1	9.1	4	50.0	0	0.0		19	22,1
Don't know	6	21.4	3	21.4	4	36.4	2	18.2	2	18.2	2	25.0	2	66.7		21	24,4
Referring smokers																	
No	2	7.1	4	28.6	1	9.1	1	9.1	1	9.1	1	12.5	0	0.0	0,414	10	11,6
Yes	15	53.6	7	50.0	8	72.7	3	27.3	7	63.6	4	50.0	1	33.3		45	52,3
Unknown	11	39.3	3	21.4	2	18.2	7	63.6	3	27.3	3	37.5	2	66.7		31	36,0
Have interest in capacitation																	
No	1	3.6	1	7.1	0	0.0	1	9.1	2	18.2	1	12.5	0	0.0	0,436	6	7,0
Yes	23	82.1	11	78.6	10	90.9	5	45.5	6	54.5	6	75.0	2	66.7		63	73,3
Maybe	4	14.3	2	14.3	1	9.1	5	45.5	3	27.3	1	12.5	1	33.3		17	19,8
Have interest in implementing PNCT																	
No	2	7.1	1	7.1	1	9.1	0	0.0	1	9.1	1	12.5	1	33.3	0,655	7	8,1
Yes	21	75.0	11	78.6	9	81.8	6	54.5	7	63.6	5	62.5	1	33.3		60	69,8
Maybe	5	17.9	2	14.3	1	9.1	5	45.5	3	27.3	2	25.0	1	33.3		19	22,1

Nur.: nurse; Phar.: pharmacist; SW.: social worker; Doc.: doctor; Den.: dentist; PhT.: physiotherapist; Nut.: nutritionist; p-value in  $\chi^2$  test.



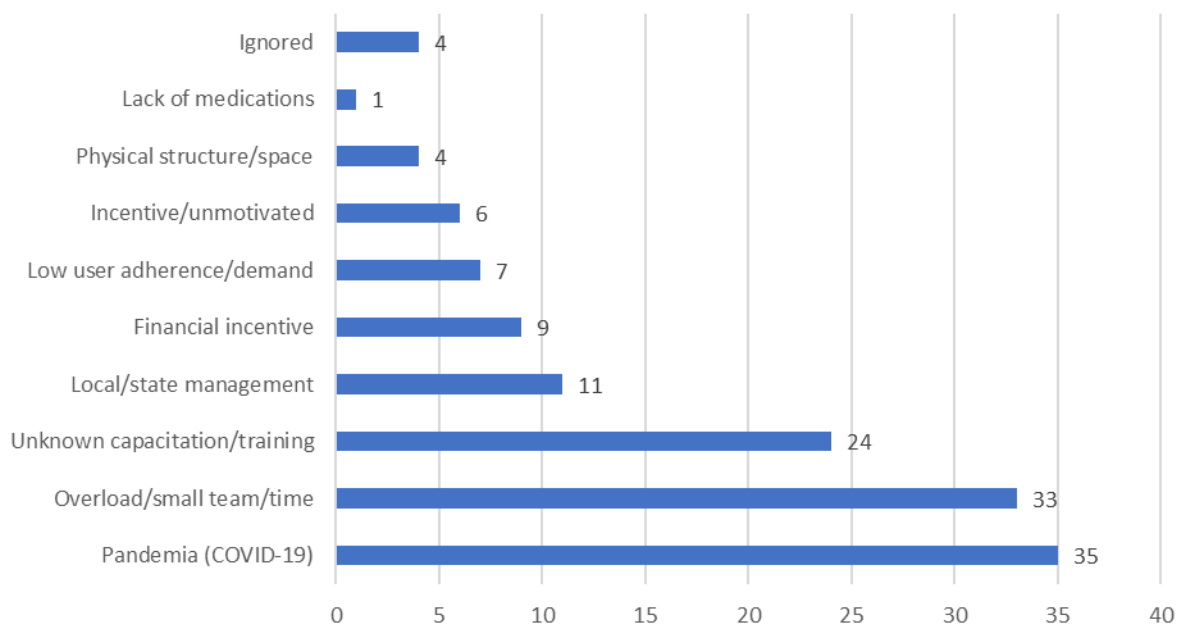
\*Values on the diagonal refer to the association of the variable with itself. The correlations between the two variables are highlighted with circles in sizes that vary according to the extent of the association. Non-significant correlations at 5% are marked with an "X".  
**Figure 1.** Degree of association between the answers to the questionnaire questions\*.

**Table 3.** Results of the evaluation of the association between the variables "Interest in being trained to work in the National Tobacco Control Program (PNCT)" and "Interest in implementing PNCT in the Family Health Team where you work"; "Previously offered PNCT to a user"\*.

Interest in implementing PNCT in your UBS	Interest in being trained to work in PNCT			p-value
	No	Maybe	Yes	
No	55.6 (5)a	11.8 (2)a	2.6 (2)b	<0.001
Maybe	22.2 (2)b	76.5 (13)a	7.9 (6)b	
Yes	22.2 (2)b	11.8 (2)b	89.5 (68)a	
Previously offered PNCT to a user	Received some training on PNCT			p-value
	No	Yes	Don't remember	
No	62.0 (31)a	20.0 (6)b	45.5 (10)ab	<0.001
Yes	22.0 (11)b	76.7 (23)a	0.0 (0)b	
Don't know	16.0 (8)b	3.3 (1)b	54.5 (12)a	

\*The results are presented in relative frequency (absolute frequency). p-value in  $\chi^2$  test. Different letters on the line indicate difference between the responses regarding interest in being trained ( $\chi^2$  test with Bonferroni correction,  $p < 0.05$ ).

The discursive responses about “reasons why UBS does not develop PNCT actions” were consolidated by similarity and grouped as illustrated in Figure 2. The four main reasons cited in order were: COVID-19 pandemic (35 citations); overload and/or small team and/or lack of time (33 citations); lack of knowledge of the program and/or lack of qualifications and/or training to carry out the actions (24 citations) and difficulties with local and state management (11 citations).



**Figure 2.** Reasons given by the Campo Grande Family Health Teams for non-adherence to the National Tobacco Control Program (n=86).

## DISCUSSION

The goal of expanding smoking prevention and cessation actions is compromised in Mato Grosso do Sul, because of the low supply of services to serve the population, as established in the Strategic Action Plan for Coping with Chronic Diseases and Non-Communicable Diseases in Brazil (2021–2030).<sup>9</sup>

The levels of care offered for treatment state that most of it was carried out in PHC, following what is recommended by Ordinance No. 908/2022.<sup>7</sup> However, the Clinical Protocol and Therapeutic Guidelines for Smoking (2019) defines that treatment for smokers, in addition to occurring primarily in PHC because of its degree of decentralization and capillarity, it must be offered at medium and high complexity, comprising Polyclinics, Emergency Care Units (UPA), CAPS and general hospitals, among others.<sup>1,10</sup>

In our study, the treatment adherence rate (subjects present in the fourth group session compared to those present in the first) was better in the capital, while the effectiveness rate (without smoking in the fourth group session compared to those present in the first) was better in the interior. Meier, Vannuchi and Secco found a program adherence rate of 76.2%, while Mesquita found adherence of 66.9%.<sup>11,12</sup>

Analyzing the effectiveness of the program, the National Institute for Health and Care Excellence (NICE) defines as a “success rate” at least 35% of patients abstaining after four weeks of treatment, which demonstrates the insufficiency of this indicator in Mato Grosso do Sul, influenced by the low performance seen in the capital.<sup>13</sup> It is worth mentioning that the patient must be monitored in the medium and long term, as treatment is recommended for one year, and the patient is susceptible to relapses over time. It is



worth highlighting the role of PHC in the active search for the missing population linked to ESF programs, especially the PNCT.<sup>10</sup>

In a descriptive study carried out in the state of Goiás, it was observed that at the end of the fourth week of treatment, 43.78% of patients had stopped smoking.<sup>14</sup> Other studies, such as the one carried out in Curitiba/PR by Wittkowski and Dias, found an average effectiveness rate of 52.8% among eight groups analyzed; in Alfenas/MG, Paiva et al. identified an average cessation rate of 56.8%.<sup>15,16</sup>

Regarding “medication support”, there are no reports in the literature of an expected standard for the use of the medication. However, the proposal formulated by the Ministry of Health is that the smoking cessation program has cognitive-behavioral therapy as its main strategy, with pharmacological support being an auxiliary tool and, therefore, not extending its use to all users, but only to those who have a higher degree of nicotine dependence or when the need for a medical consultation is identified. Medication support in almost all cases in Mato Grosso do Sul highlights the care model based on medicalization, relegating psychosocial intervention to the background and reducing the smoker’s chances of success. It is worth considering that the use associated with medication can increase the success rate by 15 to 30%.<sup>4,9</sup>

Analyzing the responses about the lack of training of professionals who did not offer the program, we emphasize that training is the responsibility of the state and municipal levels, as well as the organization of the service network, the accreditation of health units, in addition to monitoring and evaluating the treatment. To reorganize health care practices, investments in training policy and a permanent process of training professionals are necessary.<sup>17</sup>

In Continuing Health Education, learning occurs at work, in which learning and teaching are constructed in the daily lives of people and organizations. This learning takes place on the basis of problems encountered in everyday life and must take into account previous knowledge and personal experiences. Thus, as these are professionals who work in the ESF, in Permanent Health Education, the method becomes mandatory to develop a critical reflection on care practices.<sup>17</sup>

In our study, an association between training and program offering was observed, which leads to the conclusion that the trained professional is more sensitive to implementing the program and offering it to the public. However, the study by Carvalho<sup>18</sup> highlights that the number of trained health professionals, when compared to the number of health units that provided care in the same period, did not imply the implementation of smoking treatment in the service network.

Analyzing the difficulties presented by professionals at the time of the study, it is worth noting that, on March 11, 2020, the World Health Organization declared the pandemic situation with COVID-19, a disease caused by the new viral strain of the family Coronaviridae (SARS-CoV-2), which has become an unprecedented challenge for science and society. Rapid responses were required from health systems, which needed to be reorganized in all its components, including PHC.<sup>19</sup>

Depending on the context, it was necessary to readapt PHC activities, including new forms of remote care, thus avoiding the risk of profound exclusion from access and social inequalities. The use of technologies, such as WhatsApp and telephone, guaranteed the offer of actions and continuity of treatments.<sup>20</sup>

The pandemic became a challenge for tobacco treatment actions in SUS, as it was no longer possible to bring people together in person, it was necessary to develop new strategies. Thus, videos to support treatment were developed in partnership between INCA, the Pan-American Health Organization, the Brazilian Medical Association and health professionals specializing in smoking, aiming to minimize the effects of social distancing. The videos were based on structured treatment sessions and the target

audience comprised patients treated at the health unit, keeping the theme of the group sessions in evidence and generating greater reflection on the smoker's health conditions.<sup>21</sup>

Another difficulty cited in our study pointed to work overload and/or a small team and/or lack of time, probably due to the great demand for care in health units. Corroborating our finding, the Trindade study showed that the excessive number of supported families, the unsatisfactory monthly income, the extensive workload and other employment relationships to improve income were also considered difficulties for professionals.<sup>22</sup>

Lack of knowledge about the program and lack of qualifications/training were also cited as barriers to adhering to it. PNCT includes multidisciplinary participation and has the prerogative of training professionals to approach smokers. Due to the recognized health consequences, treatment for smoking cessation must be valued and prioritized in UBS, considering that its cost-effectiveness is the gold standard compared to the treatment of tobacco-related diseases. The training is aimed at higher-level professionals, who will be able to train mid-level technicians, aiming to provide the knowledge and technical skills necessary to support users in the treatment process.<sup>9</sup>

Difficulties with local management due to the lack of multidisciplinary support also represented obstacles, as did the lack of financial incentive to implement PNCT. In this sense, it is worth noting that the program has no costs for the municipality, since the supply of inputs comes from federal management. Furthermore, the duties of the tobacco group coordinator are not outside the scope of their professional duties at UBS.

According to Carvalho<sup>18</sup>, the difficulties in implementing PNCT in health units, according to state coordination were: insufficient financial resources; low adherence by health professionals; the difficulty in municipal management of the strategy; insufficient support from other spheres of government in the implementation phase; the work overload of professionals; the lack of financial incentive; the professional unpreparedness of the medical category to use a methodology based on the cognitive-behavioral approach; and the resistance and/or difficulty of health professionals in dealing with smokers' cessation of smoking. The difficulties encountered in our study are similar, highlighting the need for training/improvement of health professionals on the methodology proposed by INCA for the treatment of smokers.

Some limitations of this study must be considered, such as the difficulty related to the use of secondary data, the low adherence of ESF professionals in responding to the questionnaire and also their exhaustion during the COVID-19 pandemic, a fact that may have influenced the responses.

## CONCLUSION

We concluded that the PNCT in Mato Grosso de Sul had low population coverage due to the restricted supply in the basic health network, in addition to the average performance in assisting smokers served.

The effectiveness of the treatment of clients served in the interior of the state was better compared to that served in the municipality of Campo Grande, but both were hostage to the poor performance of the services, which was reflected in the high dropout rate, especially in the interior of Mato Grosso do Sul .

The main statistical correlation found in the responses of participants in the Campo Grande ESF without offering the program was between the interest in being trained and the interest in implementing PNCT, a situation conducive to the implementation of the PNCT after the training. Likewise, there was a significant correlation between entry training on PNCT and the previous offer at the UBS, making it possible to infer that the trained professionals are inserted in UBS that, in some way, have already offered

actions related to smoking. We can also conclude that other programs may have been prioritized to the detriment of PNCT due to the greater difficulty in measuring the impact of the actions.

The main difficulties to be overcome by the ESF of Campo Grande for the provision of the PNCT to occur are the overload of activities and/or small team and/or lack of time and the lack of qualification/training, given that the COVID-19 pandemic emerged from this context. It is necessary to raise awareness among managers and the technical team regarding Mato Grosso do Sul's leadership in the ranking of smokers and, certainly, in the records of diseases and injuries related to smoking.

Despite the difficulties related to the use of secondary data and the low adherence of ESF professionals to the research, our results highlight the need for more in-depth and expanded research related to the topic. Furthermore, the need for greater investment in the expansion of PNCT in Mato Grosso do Sul is clear, with a focus on training health professionals upon entry and during their work, giving them the conditions to promote health promotion actions, listing and recognizing the program as a priority and more cost-effective.

## CONFLICT OF INTERESTS

Nothing to declare.

## AUTHORS' CONTRIBUTIONS

NCSC: Conceptualization, Data curation, Formal analysis, Writing – original draft, Writing – review & editing. MM: Conceptualization, Data curation, Formal analysis, Supervision, Writing – original draft. ASS: Methodology, Writing – original draft. JHP: Writing – original draft.

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