

**Original Article** 

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## Health service searched by people with tuberculosis symptoms

Serviço de saúde procurado pelas pessoas com sintomas da tuberculose

Servicio de salud utilizado por las personas con síntomas de la tuberculosis

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Abstract: Objetive: to identify the profile of people with tuberculosis in relation to the behavior of search for care against the first symptoms of the disease. Method: quantitative study developed in four cities of Rio Grande do Sul, between 2013 and 2014, with the application of a structured questionnaire to people with pulmonary tuberculosis who began treatment within the period. Data analysis was performed in Statistica 12 software, using descriptive statistics. Results: the most sought after health service was prompt care (35.7%). Regarding the profile, there was a predominance of males (58.7%), white skin color (59.8%), who lived without a partner (67.4%), education less than 8 years (75.0%), formal employment (41.3%), income from 1 to 2 minimum wages (43.5%). Conclusion: there were differences in the profile according to the behavior of search for care, and it is noted that knowing it is essential for the planning of early diagnosis actions.

Descriptors: Tuberculosis; Access to Health Services; Research on Health Services; Primary Health Care

Resumo: Objetivo: identificar o perfil das pessoas com tuberculose em relação ao comportamento de busca por atendimento diante dos primeiros sintomas da doença. Método: estudo quantitativo desenvolvido em quatro municípios do Rio Grande do Sul entre 2013 e 2014, com aplicação de questionário estruturado às pessoas com

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tuberculose pulmonar que iniciaram o tratamento no período. Análise dos dados realizada no *software Statistica 12*, utilizando-se estatística descritiva. **Resultados:** o serviço de saúde mais procurado foi o pronto atendimento (35,7%). Quanto ao perfil, houve predomínio do sexo masculino (58,7%), cor da pele branca (59,8%), viviam sem companheiro (67,4%), escolaridade inferior a 8 anos (75,0%), emprego formal (41,3%), renda de 1 a 2 salários mínimos (43,5%). **Conclusão:** houve diferenças no perfil de acordo com o comportamento de busca por atendimento, e destaca-se que conhecê-lo é essencial para o planejamento de ações de diagnóstico precoce.

**Descritores:** Tuberculose; Acesso aos Serviços de Saúde; Pesquisa sobre Serviços de Saúde; Atenção Primária à Saúde

**Resumen:** Objetivo: identificar el perfil de las personas con tuberculosis con relación al comportamiento de búsqueda por atención a partir de los primeros síntomas de la enfermedad. Método: estudio cuantitativo, desarrollado en cuatro municipios del Rio Grande do Sul, entre 2013 y 2014, por medio de la aplicación de cuestionario estructurado a las personas con tuberculosis pulmonar, que iniciaron el tratamiento en el período. Análisis de los datos realizada por el software Statistica 12, utilizando estadística descriptiva. **Resultados:** el servicio de salud más buscado fue el de pronta atención (35,7%). Cuanto al perfil hubo predominio del sexo masculino (58,7%), color de piel blanca (59,8%), vivían sin compañero (67,4%), escolaridad inferior a 8 años (75,0%), empleo formal (41,3%), renta de 1 a 2 salarios mínimos (43,5%). **Conclusión:** hubo diferencias en el perfil de acuerdo con el comportamiento de búsqueda por atención, y se destaca que conocerlo es esencial para la planificación de acciones de diagnóstico precoz.

**Descriptores:** Tuberculosis; Acceso a los servicios de salud; Investigación sobre servicios de salud; Atención primaria a la salud

## Introduction

Tuberculosis is an infectious disease, considered by the World Health Organization as a public health emergency. About 10 million new cases are reported annually worldwide and more than a million people die due to the disease.<sup>1</sup> Brazil is among the countries that presents high rates of tuberculosis concentration. In 2015, 63,189 new cases of the disease were recorded, representing an incidence rate of 30.9/100 thousand inhab., The number of deaths recorded was 4,543, with a mortality rate of 2.2/100 thousand inhab.<sup>2-3</sup>

Strategies for tuberculosis control focus primarily on interruption of the chain of transmission, and for that it is essential that early detection of cases occurs, with active and passive search for respiratory symptoms (people with coughing for more than three weeks), early diagnosis and timely treatment.<sup>4</sup> Thus, the first health service sought by people with tuberculosis symptoms needs to demonstrate agility in the case detection process.<sup>5</sup>

In this context, the Primary Health Care units are the attention points considered priority for detection, since tuberculosis is a sensitive condition at this level, that is, they have the capacity to solve the problem, forwarding to other units only when required. Moreover, due to its work process and proximity to the community, it is prepared to ensure the continuity of attention. <sup>4.6-7</sup>

However, studies show that the health units chosen by users for the first care is not the Primary Health Care, but the Emergency Care units.<sup>6-7</sup> This situation compromises the functioning of the health services network, as well as hindering the effectiveness of continuous and comprehensive care.

The choice of a health unit for care is related to previous experiences, ease of access, signs and symptoms presented, guarantee of care and problem solving. In addition, the culture of the curativist model still influences this process. <sup>7-8</sup>

To identify the first service sought by people with tuberculosis symptoms and to map the relevant sociodemographic characteristics, since it allows us to direct the search and identify tuberculosis in demand quickly and early. This aspect is of great value from the epidemiological and social point of view of the disease. In order to answer the research questions, the following questions were elaborated: what is the profile of people with tuberculosis? What is your behavior seeking care in the first symptoms? Thus, this article aims to identify the profile of people with tuberculosis in relation to the behavior of seeking care in the first symptoms of the disease.

### Method

This is a quantitative cross-sectional study conducted in four priority cities for tuberculosis control in the state of Rio Grande do Sul (Pelotas, Sapucaia do Sul, Canoas and Santa Cruz do Sul). The state of Rio Grande do Sul in 2015 had an incidence rate of 41/100 thousand inhabitants, being higher than the national rate of 33.2/100 thousand inhabitants. The city of Canoas contributed to these indicators with the notification of 269 cases, Pelotas with 287, Santa Cruz do Sul with 57 and Sapucaia do Sul with 146. These cities are among the fifteen priorities for tuberculosis control actions.<sup>9</sup>

Data collection was prospective and occurred in the outpatient clinics of the Municipal Tuberculosis Control Program of the cities studied. The sample was intentional, considering the totality of people who started treatment for tuberculosis from August 2013 to July 2014 were considered. Exclusion criteria were: people under 18 years of age; who could not communicate verbally or with cognitive impairment; and those that were institutionalized. Those who met the criteria for participation in the study were invited by interviewers to answer the structured interview form in a private room.

The structured form had questions directed to the use of health services and actions performed by them. This data collection instrument was evaluated by researchers in the tuberculosis thematic area of three universities in southern Brazil, after which a pilot test was conducted in a priority tuberculosis city in the state of Santa Catarina.

The variables referring to the characteristics of the interviewees were gender, average age, family income (less than 1 minimum wage, between 1 to 2, greater than 2 to 3, greater than 3 to 4 and more than 4 minimum wages), skin color (white and non-white), if the interviewee had a partner, education (less than or equal to eight years of schooling or more than eight years of schooling), source of income (formal employment, unemployed, self-employed, retired, sickness benefits). In addition, variables related to behavioral characteristics and comorbidities were analyzed: other diseases (yes and no), alcohol use (never, almost never, sometimes, almost always) and drugs (yes and no).

To characterize the first health service sought, the variable type of service was stratified and grouped into Primary Health Care, including the Basic Health Units, the Community Health Agents Program, and the Family Health Strategy; Private services including private hospitals and private practices; the referral outpatient clinic for tuberculosis care, emergency care, and other services including public hospitals and specialized clinics.

For data analysis, the questionnaires of participants who had not answered the first type of service they sought were disregarded. Thus, out of 343, it ended with 258 respondents. For the analysis of the variables in *likert* scale (never, almost never, sometimes, almost always and always), in values from one to five, a classification was stipulated in which the value 1 (never) was considered the negative answer and the others values (2, 3 and 4) as positive response.

The analyzes were performed using *Stat Soft's Statistica12* program, by crossing the characteristics of people with tuberculosis and the type of service sought, showing the relative and absolute frequencies and the chi-square test, considering p < 0.05 as statistical significance.

In conducting this study, the ethical precepts of National Health Council Resolution 466/12 were respected.<sup>10</sup> All respondents agreed to participate, signed the two-way Informed Consent. Data collection was only started after the project was submitted and approved by the Research Ethics Committee, with a favorable opinion number 310,801 on July 15, 2013.

### Results

Of the 258 respondents, 40.3% (104) were from Canoas, 34.5% (89) from Pelotas, 15.5% (40) from Santa Cruz do Sul and 9.7% (25) from Sapucaia do Sul. Regarding the general characteristics of the study population, males predominated with 62.8% (162), white skin color with 60.9% (157), those living without a partner with 62.4%. % (161), those who studied less than eight years with 75.2% (194), and those with an income of 1-2 minimum wages with 38.8% (100). The average age was 44.4 years (SD = 16.3) and ranged from 19 to 87 years.

The first health service sought was the Emergency Room (PA - stands for *Pronto Atendimento*) with 35.7% (92) of respondents, followed by 25.2% (65) seeking primary health care (APS - stands for *Atenção Primária à Saúde*), 15.9% (41) private services, 12.4% (32) sought other services and 10.9% (28) sought direct referral to the tuberculosis outpatient clinic of the cities under study.

In Table 1, when checking the individuals who sought PHC (APS) and the referral outpatient clinic as the first service in the process of diagnosing tuberculosis, we observed, respectively, the predominance of men (64.6% and 75%), regarding color of the skin, there is even distribution between white and non-white (49.2% and 50%). There was a concentration of individuals living without a partner (73.9% and 71.4%), with education less than eight years (84.6% and 82.1%), and family income lower than two minimum wages ( 66.2% and 64.3%). As for the source of income, there were 40% of unemployed who sought PHC (APS), and an equal distribution between formal employment and unemployed among those who sought the reference outpatient clinic, with 35.7%.

	PHC/APS (65)		Amb. Ref. (28)		ER/PA (92)		Private S. (41)		Others (32)		Р
Features											
	n	%	Ν	%	Ν	%	N	%	Ν	%	
Sex											
Female	23	35,4	7	25,0	38	41,3	18	43,9	10	31,2	0 422
Male	42	64,6	21	75,0	54	58,7	23	56,1	22	68,7	0,432
Skin color											
White	33	50,8	14	50,0	55	59,8	32	78,0	23	71,9	0.007
Non White	32	49,2	14	50,0	37	40,2	9	22,0	9	28,1	0,027
Lives with partner											
No	48	73,9	20	71,4	62	67,4	15	36,6	16	50,0	0.004
Yes	17	26,1	8	28,6	30	32,6	26	63,4	16	50,0	0,001
Schooling											
≤ 8 years	55	84,6	23	82,1	69	75,0	20	48,8	27	84,4	0.000
> 8 years	10	15,4	5	17,9	23	25,0	21	51,2	5	15,6	0,000

Table 1 - Sociodemographic characteristics of people with tuberculosis according to the first health service sought, Rio Grande do Sul, Brazil, 2014 (N = 258).

Rev. Enferm. UFSM, Santa Maria, v. 9, ex, p. 1-16, 2019

Source of Income											
Formal	17	26,2	10	35,7	38	41,3	24	58,5	11	34,4	
Employment											
Unemployed	26	40,0	10	35,7	27	29,3	5	12,2	14	43,7	
Self-employment	14	21,5	4	14,3	15	16,3	2	4,9	3	9,4	0,085
Retirement	6	9,2	3	10,7	10	10,9	8	19,5	3	9,4	
Sickness	2	3,1	1	3,6	2	4,9	2	4,9	1	3,1	
Allowance											
Household											
Income (in											
minimum wages)*											
< 1	20	30,8	5	17,9	22	23,9	4	9,8	7	21,9	
1 a 2	23	35,4	13	46,4	40	43,5	8	19,5	16	50,0	
2 a 3	18	27,7	7	25,0	17	18,5	14	34,1	8	25,0	0,001
3 a 4	0	0,0	3	10,7	4	4,3	6	14,6	1	3,1	
4 ou mais	4	6,1	0	0,0	9	9,8	9	21,9	0	0,0	

\* Value of the minimum wage in 2014: R \$ 724,00

PHC/APS: Primary Health Care

Amb. Ref .: Outpatient Reference

ER/PA: Emergency Room

Private S.: Private Services

Among those who sought the services of Emergency Care, Private Services and other services (hospitals and public outpatient clinics), similarities were found in the profile, with the predominance of men (58.7%; 56.1%; 68.7%) and white skin color (59.8%; 78%; 71.9%). As for living with a partner, there are differences and among those who sought the AP 67.4% (62) had no partner, among those who sought the private services there was a predominance of individuals who lived with a partner ( 63.4%), and among the other services there was an equal distribution.

Less than eight years of schooling was concentrated among those who sought ER (PA) (75%) and other services (84.4%), while those who sought private services were 51.2% of those individuals with more than eight years of schooling. years. For those who sought PHC (APS), there was a predominance of individuals with formal employment (41.3%), as well as those who sought private services (58.5%). Family income below two minimum wages was predominant

among those who sought ER (PA) (67.4%) and other services (71.9%); Among those who sought private services, 70.6% occurred among individuals with income above two minimum wages.

It was found that the variables living with a partner, education and family income presented a statistically significant distribution in relation to the search behavior for health services.

Table 2 - Behavioral characteristics and comorbidities of people with tuberculosis according to the first health service sought, Rio Grande do Sul, Brazil, 2014 (N = 258).

Features		PHC/APS (65)		Amb. Ref. (28)		ER/PA (92)		Private S. (41)		Others (32)	
	Ν	%	Ν	%	Ν	%	Ν	%	Ν	%	
Comorbidities											
Yes	26	40,0	16	57,1	41	44,6	21	51,2	14	43,7	0,570
No	39	60,0	12	42,9	51	55,4	20	48,8	18	56,3	
Alcohol Use											
No	50	76,9	16	57,1	60	65,2	27	65,9	19	58,4	0,279
Yes	15	23,1	12	42,9	32	34,8	14	34,1	13	40,6	
Tobacco Use											
No	39	60	16	57,1	50	54,3	29	70,7	17	53,1	0,456
Yes	26	40	12	42,9	42	45,7	12	29,3	15	46,9	
Drug Use											
No	58	89,2	24	85,7	83	90,2	38	92,7	29	90,6	0,917
Yes	7	10,8	4	14,3	9	9,8	3	7,3	3	9,4	

PHC/APS: Primary Health Care

Amb. Ref .: Outpatient Reference

ER/PA: Emergency Room

Private S.: Private Services

Table 2 shows the distribution of behavioral characteristics and the existence of comorbidities among the services chosen for the first attendance. The presence of comorbidities occurred primarily in the groups that sought the first care at the referral outpatient clinic (57.1%) and in private services (51.2%). Regarding substance use (alcohol, tobacco and drugs), it was observed that the negative of the interviewees predominated, regardless of the service

sought. However, alcohol consumption was still reported by 33.3% (86), tobacco by 41.5% (107), and drugs by 10.1% (26) of respondents.

## Discussion

The first service sought plays a major role in the detection of tuberculosis and, consequently, the interruption of the transmission chain. This demand for care in health services is influenced by several factors related to aspects of users and health services. Facilities in physical, financial, geographic, structural and procedural access, supported by a municipal health system capable of providing an integrated health services network, have an influence on this process. <sup>5th</sup>

The ER (PA) was highlighted as the main service of choice of users for care, corroborating with other studies conducted in the national scenario.<sup>6-7</sup> Factors associated with this choice were already evidenced in a study conducted in the State of São Paulo in 2014, which interviewed people with tuberculosis. In this study, the previous contact with those affected by the disease was highlighted, alerted to the possibility of the presented symptoms being of tuberculosis, and although previous experiences with the chosen health service was determinant for their search behavior.<sup>11</sup>

The behavior of seeking ER (PA) at the expense of PHC (APS) can be justified by aspects related to cultural issues, such as waiting for the symptoms to worsen to seek first health care, and the predominance of men in the studied sample, who generally have resistance to seek health care at PHC (APS) units, as verified in a study conducted in. Brazil.<sup>6,12</sup> The preference for urgency and emergency services was identified due to the immediacy and resolution of exams, associated with experiences with failures of the primary health care network, such as the lack of professionals and welcoming actions, which contribute to this situation.<sup>13-14</sup>

Regarding skin color, the majority of the population (60.9%) in this study declared themselves white, presenting a statistically significant difference in relation to the type of service sought. However, a study conducted in Piauí showed that most people with tuberculosis (70%) were brown.<sup>15</sup> It is noteworthy that such results may be related to the predominance of skin color in the population of the state/region studied. In Rio Grande do Sul, 83.22% of the population is self-declared white.<sup>16</sup>

The statistical association between the type of health service sought and the variable living with a partner confirms the important role of the family in strengthening tuberculosis control actions.<sup>17</sup> Family support represents an important social support for the TB patient during the search for health care. In addition, with the supervision and encouragement of family members, it is possible for the person with TB to perceive more briefly the health changes promoted by the disease, favoring early diagnosis.<sup>18</sup>

Regarding the level of education, it was found that there was a predominance of respondents with less than 8 years of study, who sought public health services, such as PHC (APS), ER (PA) and referral outpatient. This characteristic is in line with that observed in a population-based study conducted in Natal, Rio Grande do Norte, between 2009 and 2012, as well as in a study conducted in Paraná.<sup>18-19</sup> In both, there was a predominance of individuals with incomplete primary education among those affected by TB. The relationship between educational level and the perception of the presence of changes in health status, as well as for understanding the disease and its consequences, which determines the search behavior for health services and adherence, stands out. to treatment.<sup>19-20</sup> Given this, it is essential that health services take into account the influence of these factors in coping with the disease, enabling their teams to welcome users in a way that empowers them about self-care.<sup>21</sup>

Regarding the source of income, it was observed that people who sought PHC (APS) and other services were predominantly unemployed, while those who opted for ER (PA) and private services were people with formal employment. These results may reflect that people with formal employment usually opt for health care in the opposite of working hours, due to the fear of losing their job due to absences and delays.<sup>19</sup> In addition, unemployed people are looking for public services near their homes, as they have difficulty traveling long distances due to travel expenses with motorized transport.<sup>22</sup> In contrast, those with higher income sought private services, already expected result due to easier access to people with higher incomes to private services and health plans. It is noteworthy that the option for paid services involves a relationship of trust and acceptability, since the user can choose the service or provider that has more security, unlike what happens in public services.<sup>22</sup>

With regard to users with comorbidities, it was identified in the present research that most of those who sought PHC (APS), ER (PA) and other services did not have other comorbidity other than tuberculosis. However, those who sought the referral outpatient clinic and private services were those with other associated diseases.

The consumption of tobacco, drugs and alcohol was present in less than half of the reports of the studied population, which may be related to the stigma on the use of such substances, and the fact that they would admit to the professional, they use substances that causes harm to one's health. However, a study conducted in a university hospital in Piauí has as comorbidities more related to tuberculosis, smoking and alcoholism. <sup>23</sup>

Furthermore, it should be considered that studies state that smoking, besides increasing the risk of tuberculosis infection and disease progression, may also lead to delays in sputum smear negativity. However, smoke can increase the chances of intra-household contacts contracting the disease.<sup>24</sup>

## Conclusions

The results of this study indicate that the most sought after health service was emergency care. Among the characteristics of people with TB there was a predominance of males, white skin color, people who did not live with a partner, with less than 8 years of schooling, developing formal employment activity, with income between 1 and 2. minimum wages. There was a predominance of comorbidities, primarily in the groups that sought the first care at the referral outpatient clinic and in private services. Regarding the consumption of alcohol, tobacco and illicit drugs, it was observed that the negative of the interviewees predominated, regardless of the service sought.

Thus, it is concluded that there were differences between the profile of people with tuberculosis according to the search behavior for health services. It is emphasized that knowing these characteristics is essential for the planning of actions for the early recognition and capture of respiratory symptoms in the territory.

It is noteworthy that the low demand for PHC evidenced in the cities studied demonstrates the insufficiency of this level of attention to tuberculosis care and highlights the importance of mobilizing municipal managers in order to develop strategies that modify this scenario, and favor the access of symptomatic patients. from tuberculosis to PHC.

It is believed that in view of the strengthening of PHC and its reaffirmation as the gateway to the Unified Health System, there will be effective control over sensitive conditions that occur in the community.

The present study had as limitations the number of questionnaires that had to be disregarded because the first service sought in the eminence of symptoms was left blank, and it is believed that this fact is due to the time and number of services sought before they started. the treatment for TB. It is suggested that further research should investigate the reasons that led people with TB to seek the AP and the referral outpatient clinic at the expense of PHC, to investigate and map where the link with the service is broken.

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