



The user with respiratory symptoms of tuberculosis in the primary care: assessment of actions according to national recommendations

Sintomático respiratório de tuberculose na atenção primária: avaliação das ações segundo as recomendações nacionais

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Objective: to investigate the evaluation of the user with respiratory symptoms of tuberculosis in Primary Health Care services according to the norms of the National Program for Tuberculosis Control. **Methods:** cross-sectional study with application of a form to 99 people with pulmonary tuberculosis. **Results:** a total of 87.9% participants reported cough as the symptom that motivated the search for Primary Care; from these, 27.3% sought Primary Care units, 96.3% received care in this service, of which 46.2% reported that sputum smear was requested by professionals in the units. **Conclusion:** more than half of participants sought secondary or tertiary services due to the symptoms of tuberculosis, and also less than half of patients assisted in Primary Care had diagnostic tests requested by professionals of that service.

Descriptors: Tuberculosis; Primary Health Care; Health Evaluation.

Objetivo: averiguar a avaliação do sintomático respiratório de tuberculose nos serviços de Atenção Primária à Saúde, segundo as normas do Programa Nacional de Controle da Tuberculose. **Métodos:** estudo de corte transversal realizado, por meio de aplicação de formulário a 99 pessoas com tuberculose pulmonar. **Resultados:** 87,9% relataram tosse como um sintoma que motivou a busca pelo primeiro atendimento, destas 27,3% procuraram por unidades de atenção primária, onde 96,3% receberam atendimento nesse serviço, entre as quais 46,2% referiram ter sido solicitada baciloscopia de escarro pelos profissionais das unidades. **Conclusão:** mais da metade dos participantes buscou serviços de nível secundário ou terciário ao apresentar sintomas da tuberculose e, ainda, menos da metade dos indivíduos atendidos na Atenção Primária tiveram exames diagnósticos solicitados por profissionais desse serviço.

Descritores: Tuberculose; Atenção Primária à Saúde; Avaliação em Saúde.

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Introduction

The assessment of health services is carried out to define whether a program produces the expected results or not, and also to enhance a particular intervention or action in health. It is based on theories and concepts from different areas of knowledge, and the relationship between the health needs of the target population and the services offered⁽¹⁾.

In the context of attention to tuberculosis, the evaluation of health services is essential, since, despite the low technological density that the process of attention to the disease requires, professionals of the primary health care services still experience difficulties in carrying out basic actions such as identifying the user with respiratory symptoms of tuberculosis⁽²⁾.

Pulmonary tuberculosis is a disease whose control requires early detection of cases so that the spread of the bacillus (Koch's bacillus) may be minimized.

It is observed that attention to pulmonary tuberculosis in the setting of primary health care has been carried out mainly by spontaneous search of individuals, when they feel sick⁽³⁻⁴⁾, and this directly influences the time and in the process of diagnosis. The respiratory symptoms of tuberculosis are typical also of other diseases. This eventually hinders the suspicion of tuberculosis by health professionals and causes the individual to delay the search for care.

After the user searches for care in the health service, the professionals become important in the identification of users with respiratory symptoms and the overall actions necessary for the diagnosis of tuberculosis. According to the National Program for Tuberculosis Control, primary health care services must be the preferred gateway of users to find out the disease⁽⁵⁾.

The National Program for Tuberculosis Control recommends that the individual who has cough for three weeks or more should be considered a potential case of pulmonary tuberculosis, and the

professional conduct in this case is to welcome the user and order tests (chest radiography and sputum smear) to confirm diagnosis. It is considered that the service is efficient in the diagnosis of tuberculosis when the user visits the health service three times, in average⁽⁵⁾. Studies assessing Primary Care services show inefficiency when it comes to diagnosis of pulmonary tuberculosis⁽²⁻⁴⁾. Study conducted in northeastern Brazil and Ribeirão Preto showed that although individuals with symptoms of tuberculosis seek care in Primary Care, these were referred to receive health care in another units of attention^(6,2). These results imply difficulties of professionals in performing actions to diagnose the disease, as recommended by the National Program for Control of Tuberculosis.

Faced with this evidence and bearing in mind the recommendations of the National Program for Control of Tuberculosis, we sought to ascertain the compliance of services of the Primary Health Care in the evaluation of the user with respiratory symptoms of tuberculosis.

Methods

Cross-sectional survey carried out in the municipality of Pelotas, Rio Grande do Sul, an important regional health pole, with 328,275 inhabitants, organized in five health districts. The health system is composed of 53 units of primary health care, with 34 teams of Family Health Strategy, amounting to an assistance for 35.7% of the population.

The research was developed in one year between 2013 and 2014 through interviews with people who started treatment for pulmonary tuberculosis in that period, in Primary Care, in the Municipal Program for Tuberculosis Control. As inclusion criteria, individuals had to be 18 years old or older, and as exclusion criteria, individuals presenting cognitive difficulties that prevented the application of the form were excluded.

Data were collected through a form with

previously encoded numerical and categorical variables. The variables used were: symptoms that motivated the search for health care, first service sought, care in the first service sought, number of visits to health services necessary for diagnosis of pulmonary tuberculosis, which health service requested tests (chest X-ray and sputum smear), which conducted the tests, and which service diagnosed pulmonary tuberculosis.

In order to assess the compliance with the recommendations of diagnostic actions of primary health care, according to the policy of care and control of tuberculosis, the variables were analyzed through the development of a decision tree. Each variable studied corresponded to a branch of the tree, while each information (options for response) was compared with the decision rules (parameters). For construction of this tree, it was considered that individuals were motivated to seek care because they had cough. The ideal parameter according to the criteria described in the Guidelines for Tuberculosis Control is that 100.0% of individuals with respiratory symptoms of tuberculosis that were treated by Primary Care have received a bacilloscopy request and collected the first sample in the unit, what requires up to three visits to service of health.

In order to evaluate the number of visits to the health care service for obtaining diagnostic, we used the average number of times the user visited the unit. In addition, we used the Mann Whitney test for comparing the number of times that the user needed to seek the health service between the diagnosed groups in Primary health Care and the group diagnosed in other health services. One subject was excluded from this analysis because he did not answer the question. The processing and analyses of data were carried out in the statistical package *STATSOFT-Statistica 12*.

The study complied with the formal requirements contained in the national and international regulatory standards for research involving human beings.

Results

The participants were 99 people with tuberculosis, mostly males 59 (59.6%). Among the interviewed, 60 (60.6%) had up to seven years of schooling, 37 (37.4%) had 8 years or more of schooling, and 2 (2.0%) did not report. The average age of respondents was 40 years and the standard deviation was 15.6. The age ranged between 19 and 87 years. The symptoms that motivated the participants to seek the health service were cough (87; 87.9%), weight loss (81; 81.8%) and fever (75; 75.7%).

Among users who reported cough, 27 (27.3%) sought care in units of Primary Care. Among these, 26 (96.3%) received assistance. Diagnostic tests for tuberculosis, sputum smear microscopy and chest X-ray were ordered for 12 (46.2%) patients, but no user collected the sputum sample in the health service. Primary Care services diagnosed 6 (50.0%) of the users who had the diagnostic tests requested in this service.

In the overall sample, users had to visit the service 2.3 (± 1.7) times in average until the diagnosis. Among those diagnosed by primary health care, the average of visits to the unit was 3.3 times (± 2.1), varying between 1 and 8 visits.

When comparing the symptomatic group that was diagnosed in primary health care to those who were diagnosed with other health services, there significant difference according to the Mann Whitney test ($p=0.040$) of the number of times that users had to go to the clinic to obtain the diagnosis of tuberculosis, indicating that users diagnosed by primary health care had to go more often to the unit until they receive the diagnosis of tuberculosis.

Discussion

Tuberculosis remains as a major public health injury and is directly related to social determinants, becoming endemic in areas of higher population

density living in social vulnerability⁽⁷⁾. Studies have shown that the disease mainly affects men in working age, with low income and little education, what is in line with the findings of the present study^(2,3,6).

Weaknesses related to obtaining the diagnosis of tuberculosis in Primary Care services to health are observed, despite the recommendations of the National Program for Tuberculosis Control⁽⁵⁾.

The health care organization advocates that the coordination of tuberculosis treatment must be assumed by the Primary Health Care, which centralizes a range of actions to be developed by teams. These actions include promotion, prevention, rehabilitation, biosecurity and comprehensive care. Such actions have great potential to minimize the transmission of the bacillus that causes tuberculosis.

Scientific evidence suggests that there is ineffectiveness of prevention and control of tuberculosis in the Primary Health Care and this combines with the weakness of the organizational aspects of health services, creating barriers in the therapeutic itinerary of the individual to obtain diagnosis. This may reflect on the low demand for care in Primary Care units, observed in this and other studies⁽⁸⁻⁹⁾.

It should be noted that the search by the population for a quick solution to their health problems generates the use of hard technologies and medicalization in other levels of care, besides low demand and/or solving capacity of Primary Care in the diagnosis of tuberculosis. This reality is reinforced by the media, which when reporting to the public health system, commonly do not do it at the primary level.

Low demand for Primary Health Care is reason for concern, because other services that provide attention do not assume the continuity of care, which is necessary in the case of pulmonary tuberculosis, a delicate condition at this level of health care. The proximity between the community and health teams and the logic of attention at this point are positive aspects in controlling the disease in question.

The valuation of specific and regular training for professionals about the problem of pulmonary tuberculosis has a positive effect on the detection of new cases⁽³⁾. The communication among the different sectors of the health system, through the incorporation of an integrated information system based on specific indicators of respiratory symptoms of tuberculosis would help all professionals to feel responsible for the follow-up and would help in meeting the goals.

As regards the request for specific tests by the nurse, its measurement is an important indicator for assessing the incorporation of diagnostic actions of tuberculosis in Primary Health Care. Low request for tests may reflect the culture of using the reference system by professionals in Primary Care units⁽²⁾, a reality that is consistent with the unpreparedness of the staff and non-accountability of TB control actions⁽¹⁰⁾.

The request for the bacilloscopy of the user with respiratory symptoms involves the entire health team. Because tuberculosis has low prevalence in relation to other diseases treated in Primary Care, professionals have less experience in this area. This may cause insecurity in the professional, to request of sputum smear microscopy. The professional may prefer to forward this user for the specialized unit, generating new search for service in the same or another unit, thus delaying the diagnosis. The centralization of the doctor's actions has been identified by other professionals in the Primary Health Care⁽¹¹⁻¹²⁾.

The need of individuals to visit repeatedly the unit because Primary Care services lack the access to diagnostic actions is directly related to the delay in obtaining the diagnosis^(3,9) and may also reflect the disassociation of the individual from the Primary Health Care.

The realization of sputum collection on the original unit favors the completion of the test, as it ensures the obtention of sample at the time of the first visit and it allows the diagnosis even if the user with respiratory symptoms does not return to the health service. However, in this study no one stated

to have collected sputum in the primary health unit that requested the smear, what is finding of other studies^(1,13). Because this is a communicable disease, agility in the collection is critical. In this sense, health services can not give in to delays the diagnosis, and their accountability in this step of the process is essential.

In addition, other factors influence not performing sputum collection in the Primary Care health unit. The inadequacy of the available location for sputum collection in the health service⁽¹⁴⁾, the lack of knowledge of professionals about the measures of biosecurity during the sample collection⁽¹⁵⁾, the deficiency in the structure of services that sometimes do not have a refrigerator or cooler for packaging the biological material collected⁽¹⁶⁾. These aspects bring to the fore the need to ensure a minimum structure in Primary Care units for the diagnosis of tuberculosis.

It should be noted that the scenario under investigation faces problems of decentralization of TB control actions for Primary Health Care, which implies limitations on the agility of diagnosis. The discontinuity of care of users with respiratory symptoms of tuberculosis involves financial expenses to the subjects, due to displacement of the sample to the laboratory and the search for results of the test⁽¹⁵⁾.

Concerning the chest radiography as a diagnostic examination, access to this exam by individuals with symptoms of pulmonary tuberculosis is also necessary in order to obtain the diagnosis in time, and this is the preferred examination to know the extent of the injury⁽¹⁷⁻¹⁸⁾. Therefore, the request and access to the radiographic imaging is important for the individual, his family and also for epidemiological reasons.

It is believed that the low request for chest radiography among the SR is associated with deficiencies in the access to this examination by the public health system, especially in primary health care. Most users mention the delay in getting the

examination, and also of paying for it⁽¹⁸⁾. This does not occur at the secondary level, where many services offer the exam⁽¹⁹⁾.

The small number of users with respiratory symptoms of tuberculosis identified in primary health care services that made up the sample is considered a limitation of this study. This precluded the application of more robust analyses for the problematics of attention to these individuals.

Finally, the main benefit of evaluating the user with respiratory symptoms of tuberculosis, according to the recommendations of the National Program for Tuberculosis Control, is the agility of diagnosis. From the moment there is a suspicion of the disease, laboratory tests are requested. This opens opportunity to the early treatment of patients with tuberculosis, reduces morbidity and mortality and interrupt the transmission chain of the bacillus in the territory, directly contributing, individually and collectively, to the disease control.

Conclusion

Less than half of patients assisted in Primary Health Care had diagnostic tests requested by professionals of that service. No individual received health actions necessary for the diagnosis of the disease, according to the recommendations of the Ministry of Health.

Primary Care units have deficiencies in the identification of users with respiratory symptoms of tuberculosis and in the accountability for collecting sputum. Moreover, individuals diagnosed in Primary Care needed to go more often to this health service to obtain the diagnosis of tuberculosis. Municipality managerial initiatives to raise awareness among professionals on the problem of disease are indispensable, so that they may implement the control policy outlined for Primary Care services.

Collaborations

Antunes LB and Tomberg JO contributed to the design, analysis and interpretation of data and writing of the article. Harter J, Lima LM and Beduhn DAV contributed to design, analysis and interpretation of data, and relevant critical review of the intellectual content. Cardozo-Gonzales RI contributed to relevant critical review of the intellectual content and final approval of the version to be published.

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