

Diagnosis of tuberculosis in older people: barriers related to access to health services*

DIAGNÓSTICO DA TUBERCULOSE EM PESSOAS IDOSAS: BARREIRAS DE ACESSO RELACIONADAS AOS SERVIÇOS DE SAÚDE

DIAGNÓSTICO DE LA TUBERCULOSIS EN ANCIANOS: BARRERAS DE ACCESO RELACIONADAS A LOS SERVICIOS DE SALUD

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ABSTRACT

This study aims to analyze the barriers to the diagnosis of tuberculosis in the elderly based on the health services available in the city of João Pessoa, Paraíba. A qualitative study was developed involving seven elderly patients with tuberculosis. Interviews were used to collect the information. The empirical material was organized using the Atlas.ti software version 6.0 and analyzed according to the technique of discourse analysis. The access-related barriers that prevented the patients from receiving a confirmed diagnosis were the following: the limited hours of operation of the family health units, the transfer of responsibilities, the signs/symptoms that lead to the patient to pursue health services, the failure of the health service to carry out home visits, home visits without control of the contacts, delays in the provision of health services due to delays in the suspicion of the disease and the need for repeated visits to the health service to obtain the diagnosis. Although these barriers have been found to be common among tuberculosis patients in general, due to the vulnerability of the elderly, control actions should be taken by health care providers to prevent this disease from becoming widespread among this population.

DESCRIPTORS

Tuberculosis
Aged
Diagnosis
Health Services Accessibility
Family health

RESUMO

Este estudo tem como objetivo analisar as barreiras ao diagnóstico da tuberculose em idosos relacionadas aos serviços de saúde no município de João Pessoa-PB. Trata-se de pesquisa qualitativa que envolveu sete pessoas idosas doentes de tuberculose. Entrevistas foram utilizadas para coletar informações. O material empírico foi organizado com o software Atlas.ti versão 6.0 e analisado conforme a técnica de análise de discurso. As barreiras relacionadas ao acesso para confirmação diagnóstica foram: horário de funcionamento das unidades de saúde da família; transferência de responsabilidades; visitas domiciliares sem controle de comunicantes; demora do serviço de saúde em suspeitar da doença e repetidas idas do doente ao serviço de saúde para a obtenção do diagnóstico. Apesar de terem sido identificadas barreiras comuns às encontradas por doentes de tuberculose de um modo geral, em virtude da vulnerabilidade dos idosos, sugerem-se que ações de controle sejam empreendidas pelos serviços de saúde de modo a evitar que a doença torne-se um agravo comum para essa população.

DESCRITORES

Tuberculose
Idoso
Diagnóstico
Acesso aos Serviços de Saúde
Saúde da família

RESUMEN

Se objetiva analizar las barreras al diagnóstico de tuberculosis en ancianos relacionadas a servicios de salud en João Pessoa-Paraíba. Investigación cualitativa involucrando siete ancianos enfermos de tuberculosis. Informaciones recolectadas mediante entrevistas. El material empírico fue organizado con el software Atlas.ti 6.0 y sometido a técnica de análisis de discurso. Las barreras relacionadas al acceso para confirmación diagnóstica fueron: horario de funcionamiento de las unidades de salud de la familia; transferencia de responsabilidades; visitas domiciliarias sin control de comunicantes; demora del servicio sanitario en sospechar la enfermedad y repetidas visitas del enfermo al servicio de salud para obtener el diagnóstico. A pesar de haber sido identificados obstáculos similares a los encontrados por tuberculosos en general, en virtud de su vulnerabilidad, se sugiere que las acciones de control en ancianos sean emprendidas por los servicios de salud intentando evitar que la enfermedad se convierta en una patología común en dicho segmento poblacional.

DESCRIPTORES

Tuberculosis
Anciano
Diagnóstico
Accesibilidad a los Servicios de Salud
Salud de la familia

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INTRODUCTION

Brazil is one of 22 countries that have been prioritized by the World Health Organization (WHO), presenting 80% of the global disease burden⁽¹⁾. In 2007, Brazil reported 72,194 new cases, corresponding to an incidence coefficient of 38/100,000 inhabitants. Based on these indicators, Brazil is ranked 19th in terms of the number of cases and 104th in terms of the incidence coefficient⁽¹⁾.

The control of Tuberculosis (TB) is an area of concern in the state of Paraíba (PB). In 2009, the TB incidence coefficient for all forms corresponded to 27.9/100,000 inhabitants, and the TB mortality coefficient was 2.01⁽²⁾. In addition, the TB cure (62.88%) and treatment abandonment rates (12.43%) in the state of PB fail to meet the WHO recommendations, which recommend a cure percentage of more than 85% of detected cases and a reduction in the abandonment rate to less than 5% of cases⁽³⁾.

In 2009 in João Pessoa, the capital of the state of Paraíba, the rate of TB incidence for all forms of the disease was 56.39/1,000,000, with cure (56%) and abandonment (8.5)⁽²⁾ rates that diverged from the recommendations. This situation reflects the difficulties associated with TB control efforts in the city. These challenges are common among other large urban centers that struggle to control the disease among vulnerable groups, such as the street population, HIV and AIDS patients and elderly people.

In line with the aging trends of the global population, the incidence rate of TB in Brazil has begun to increase among elderly people. In Brazil, in 2007, the total number of tuberculosis (TB) cases was 72,140. Among these cases, 7,862 (9%) affected people aged 60 years or older, a fact that reveals the epidemiological importance of the disease among elderly people in Brazil⁽⁴⁾. Aging has been associated with the increased numbers of TB cases and cases in which the diagnosis is delayed. Diagnosing TB is known to be more difficult in older patients, and this difficulty affects the mortality and hospitalization rates⁽⁵⁾.

A delay in TB diagnosis increases the severity of the disease. Several notable aspects that are related to a delay in the diagnosis of TB include the following: the difficulty of access to health care; inappropriate welcoming of the patient; low priority in the search for respiratory symptoms (RS) and intra-home contacts; and a low level of diagnostic suspicion of TB, resulting in an increased period between the first visit to the health service and the initiation of antituberculosis treatment⁽⁶⁾.

Evaluations by members of the Study and Training Group on Tuberculosis in Paraíba –TB/PB Group identified problems that contribute to patients' lack of access to health services, highlighting difficulties related to geographic, economic and organizational access⁽⁷⁻⁸⁾.

Thus, considering the increased number of TB cases among elderly people and the diagnostic difficulties that are encountered for patients in this age range, the aim of this study was to analyze the barriers to the diagnosis of TB associated with the health services in the city of João Pessoa-PB.

METHODS

This study was conducted using qualitative discourse analysis (SA) in accordance with the French school⁽⁹⁾. To analyze the empirical material, the DA technique⁽⁹⁾ was used. This method of analysis is recommended for qualitative studies due to the need to evaluate materials that involve values and require the investigator to make judgments as a means to reveal the worldview and, hence, the ideological position of the discursive subject.

João Pessoa – PB was selected as the study context. This city is considered a priority city for TB control according to the Brazilian Ministry of Health (MH). In João Pessoa – PB, Family Health (FH) teams, Specialized Centers, referral hospitals and sputum smear laboratories are currently responsible for the tuberculosis control efforts.

The study participants were seven elderly people with TB. The subjects were required to meet the following criteria for inclusion in the study: age over 60 years; receiving or having concluded TB treatment at a family health unit in João Pessoa and officially living in João Pessoa. The coordinator of the Tuberculosis Section in João Pessoa facilitated the identification of the participants by searching the available information on patients who complied with the study inclusion criteria in the National Health Problem Reporting System (SINAN). Ten elderly people were identified. One of them had died, one had moved, and another could not be contacted, resulting in seven patients who participated in the research. Each of these subjects was identified by the letter C and numbered in the order in which they were interviewed, from C1 to C7.

With regard to ethical considerations and in compliance with CNS Resolution 196/96, the research project received approval from the Ethics Committee of the Health Science Center at *Universidade Federal da Paraíba – CCS/ UFPB* on December 17th 2008 under protocol No. 0589.

The information was collected between December 2010 and February 2011, using semistructured interviews. In compliance with ethical principles, the interviews only began after the subjects had agreed to participate in the study and signed the informed consent form (ICF). Two researchers were responsible for the interviews, one Master's student and a scientific initiation grantee. The interviews were conducted at each subject's place of resi-

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dence, and they were individually recorded in MP4 format with the help of a portable audio-device.

For the purpose of information analysis, the empirical material resulting from the transcription of the subjects' testimonies was exhaustively read to identify signs, traces and clues. After this process, the *discursive corpus* was generated. Based on the statements included in the *discursive corpus*, the barriers preventing the participant's access to health services were observed.

To code the *discursive corpus*, Atlas.ti software version 6.0 was used. This program is suitable to systematize information obtained during qualitative research. Seven codes were created with the help of this tool: Functioning hours of the Family Health Unit and the work shift of the user; Transfer of responsibilities; Signs/determinant symptoms that lead the participant to visit the health service; Non-realization of home visits; Realization of home visits without communicant control; Delay of the suspicion of the diagnosis and the need for repeated health service visits to obtain the diagnosis. After coding the seven interviews, reports were produced, and the discourse analysis technique was applied to these reports.

In the second phase of the analysis, the researchers attempted to observe the following paraphrasing, polysemy and metaphor processes, which permitted the identification of the following discursive formation: health service-related elements in elderly TB patients' access to the

diagnosis and their implications for the delayed diagnosis. Then, the statements that characterized each subject's discourse were analyzed regarding the subject's ideological position, contradictions, silencing, discursive memory and the opacity of the discourse.

RESULTS

The following discursive fragments show the health service-related elements that affected elderly people's access to a TB diagnosis and TB diagnostic delays.

DISCUSSION

Health service-related elements affecting elderly TB patients' access to their diagnosis and the implications for diagnostic delay.

The first barrier to health service access for TB diagnosis mentioned in the discursive fragment from C6 refers to difficulties related to the Family Health Unit (FHU) functioning hours, revealing weaknesses in the organizational dimension and the availability of health service access. Availability with regard to convenient hours of operation, that is, the days or times when the health service is open for care delivery, may represent a negative and limiting aspect of the diagnosis. In that sense, it is noteworthy that the teams' work times and the health units' functioning hours are not always able to respond to the population's needs⁽¹⁰⁾.

Chart 1 – Codes and discursive fragments of statements from the elderly patients regarding health service-related barriers affected access to a confirmed diagnosis of TB - João Pessoa, 2011

Code	Fragments of statements from the elderly patients
Functioning hours of the FHU and user's work shift	<i>I was working when they came here in the morning. C6</i>
Responsibility transfer	<i>I knew the FHP was here. A doctor from the FHP came when I was like that, and she told me to visit a doctor. She told me of a place where I could solve my problem, then I did that. C6</i>
Sign/determinant Symptoms to visit the health service	<i>A dry cough. C1 A dry cough, sometimes even with sputum. C2 I sought help because I was coughing and started to bleed. C3 It was the cough and the pain in my body. C5 It was the cough and I didn't eat. I had a fever too, without having a flu, without having anything. C6 It was the weakness and the cough. C7</i>
Non-realization of home visits	<i>I didn't receive any visit. C2 No, they just came here after I got really sick. C3 The CHA already came here to visit my daughter in law, she got ill and went to the health unit. She [the CHA] came to visit my son and my daughter in law, but not me. C7</i>
Home visits without communicant control	<i>No [...] yes, I had a visit from the CHA because my daughter was treated there [due to TB] and she came. The nurse came too. C1 The CHA always came when my son was ill [due to TB]. They always came to see my grandson, who has special needs, and my daughter. C6</i>
Health service delay in the suspicion of the disease	<i>I coughed for a while and then discovered. When I went to the doctor, he was the one who discovered the disease; he only discovered it on the tests. The test results took a long time to come in, they didn't arrive within one or two weeks. Tests take a long time, right? C1 I coughed for 8 to 15 days, then I went to the Clementino [referral hospital]. I provided 3 sputum smears and nothing was found. Then I did the X-ray, and they discovered. I think they discovered it the first week that I stayed there. C2 It didn't take long, it was quick. I think it took about 6 or 7 days. I went to the Padre Zé [hospital], and from there they sent me to the Clementino [referral hospital]. That was all. C3 It didn't take long. It took about two months, but I had already had this problem for about five or six years. C6 It didn't take a lot of time, everything was quick. When I got there, the doctor quickly gave me the medication. It took between 15 days and a month. C7</i>
Repeated visits to the health service to obtain the diagnosis	<i>I had been staying at the hospital since January. I was hospitalized I don't know how many times, and I even stayed at the ICU. They only discovered what I had in July, it took about six months. C4</i>

The limited hours of operation of the FHU were also identified as a bottleneck for effective access to primary health care (PHC) services in a study undertaken in São Paulo⁽¹¹⁾. Collaborator 6's statement that visits to his home always occurred in the morning – when he was at work – signals problems related to the internal organization of the teams' work processes and also supports the conjecture that elderly people contribute to the work force and participate in activities, which health services need to take into account.

The examination of this conflict between the supply and demand for health care revealed the generally rigid structure of activities at health units, which seems to prevent professionals from considering people's singularity and their most concrete needs in care delivery.

A study conducted in five Brazilian cities revealed that the decentralization of TB control efforts to primary care services does not seem to be satisfactory with regard to access to the diagnosis. The organizational form of TB care was not found to be determining factor that could guarantee access to an early diagnosis⁽⁶⁾. As the decentralization of patient care for TB to the FHU was intended to increase patient access to care, the fact that the functioning hours are a limiting factor demonstrates a contradiction in this care model. Patients will need to be made aware of the solution that is adopted so that their actual needs will be taken into account⁽¹¹⁾.

Another health service-related element of elderly TB patients' access to their diagnosis that was identified in the subjects' discourse – and that affects the diagnostic delay – is the transfer of responsibility. Collaborator 6's discursive fragment reveals that health professionals do not take on the role of diagnosing TB, transferring the responsibility to the user, who must seek a service that guarantees the diagnosis.

FHU professionals are responsible for diagnosing TB. In cases of clinical suspicion, FHU professionals must collect a sputum smear sample for testing upon their first contact with the user, which facilitates an early diagnosis⁽³⁾. The lack of clarity that is revealed in this discourse demonstrates that FHU professionals are not held responsible for carrying out their role in providing a TB diagnosis, implying insufficient professional qualification.

Although TB diagnosis and control actions have not been decentralized to the FHU, these actions will not become feasible without the willingness and actual participation of the professionals involved. Professionals who are active in primary health care services need to be qualified for their designated role; a lack of knowledge can lead to errors in the early detection of respiratory symptomatics and in the definition of the diagnosis.

The issue of professional qualification is an aspect that interferes with the implementation of TB control actions in primary health care, and health care professionals' in-

sufficient knowledge of TB risk factors and the diagnostic process, as well as the reduced prescription of sputum smears, contribute to delays in the diagnosis⁽¹²⁾ and the initiation of treatment.

In that sense, professional qualification through continuing education is an important requirement in the primary care context, as it promotes autonomy, technical and interpersonal skills, creativity, quality and the humanization that is needed to enable health teams to plan and manage the delivery of care to TB patients in their activity area⁽¹³⁾. Nevertheless, it is fundamental that the issue of TB in the elderly, as well as in other vulnerable groups, be part of the scope of the continuing education of these professionals.

Another important element identified in the discourse is the inappropriate evaluation of respiratory symptomatic cases in the community. The fragments reveal that coughing associated with some other sign/symptom – mainly the presence of blood and weakness – was the main reason that caused the elderly participants to visit the health service. This finding reveals that the detection of respiratory symptomatic elderly patients occurs passively and demonstrates the clear presence of a care model based on "spontaneous demand", which is affirmed by the expectation that TB patients will visit the health service when they perceive some sign or symptom of the disease. In particular, passive searching describes the investigation of TB in respiratory symptomatics who turned to the health service due to coughing. Active search, then, refers to the search for pulmonary TB in respiratory symptomatics who did not turn to the health service⁽¹⁴⁾.

According to the recommendations in the *III Diretrizes para Tuberculose da Sociedade Brasileira de Pneumologia e Tisiologia*⁽¹⁴⁾, delays in the identification of pulmonary TB cases occur due to the inappropriate evaluation of respiratory symptomatics or the late pursuit of health services, making active search a multiprofessional activity with the aim of diagnosing TB early, especially in groups who are at a greater risk of illness, which is the case of the elderly.

Case detection among respiratory symptomatics and contacts is one function of the Community Health Agents' (CHA) home visits⁽³⁾, but the fragments from collaborators C2, C3 and C7 reveal that these visits do not focus on the elderly. This oversight not only goes against the guidelines of the TB control program of the primary care services, but it is also against the National Elderly Health Policy, which recommends holistic care delivery to this part of the population⁽¹⁵⁾. Hence, it appears that health professionals do not value the elderly as a group that is vulnerable to TB. Therefore, the planning of TB control actions fundamentally needs to consider diversity among the patient population, including different ethnic origins, the street population, people deprived of freedom and different age groups.

To achieve earlier detection of TB cases, health team members need to incorporate the active search for respi-

ratory symptomatics and their contacts⁽³⁾ into the health service routine. That is, any person, whether they are a family member or not, who lives with a TB patient should be screened for TB⁽³⁾. Home visits without contact screening, as expressed in the fragments from collaborator C1 and C6, are problematic.

Although elderly health is a strategic area of primary health care, the discourse units reveal that actions aimed at communicant control, in this case elderly people living with relatives who have TB, are no longer undertaken.

When a TB case is confirmed, an epidemiological investigation is necessary, including the examination of the people who live with the patient. This investigation is aimed at identifying possible sources of infection and should involve all the contacts of new TB cases with an emphasis on the people who live with smear-positive patients, as these intra-home contacts present a greater probability of infection and illness⁽³⁾.

According to the Brazilian Ministry of Health, investigation of the contacts of a confirmed case is one of the most appropriate surveillance strategies to interrupt the transmission and subsequent development of TB. In that sense, only the active search for respiratory symptomatics is more effective⁽³⁾. Contact examination procedures, defined by the National Tuberculosis Control Program (PNCT) as epidemiological surveillance activities, are standardized in official Ministry of Health publications. However, primary health care services have not prioritized this examination.

As the elderly who participated in this study are part of an age group that is considered more vulnerable to TB, it is important to reflect on the care that is delivered to these contacts, particularly considering health surveillance, knowing that health service organizations face some operational challenges. In terms of epidemiological surveillance monitoring and actions, there is a lack of systematization for the examination of the contacts of an individual with a confirmed case of TB⁽¹⁶⁾.

The discourse fragments clearly show that professionals do not invest in the search for TB cases, going against the Health Surveillance concept, as the active search for respiratory symptomatics should be a permanent goal that is incorporated into the routine activities of all health team members⁽³⁾. It is evident that teams have been unable to incorporate an active search for respiratory symptoms. Although such a search is simple to perform, it is characterized in practice as a complex activity that demands knowledge that goes beyond the execution of technical procedures.

The search for respiratory symptomatics demands an understanding of the family that goes beyond biological knowledge. This search is characterized by a sequence of activities intended to investigate a range of factors, from contact at home to the individual's orientations about the disease, signs and symptoms, transmission mode, iden-

tification of respiratory symptomatics, orientation about sputum collection, forwarding and receipt of the material by the FHU, flow from the test to the analysis laboratory and receipt of the result by the unit and the user until referral for the outpatient follow-up of diagnosed cases⁽³⁾.

To detect TB cases earlier, health team members need to incorporate the search for new TB cases into the health service routine. The incorporation of active searching for respiratory symptomatics into the TB control procedures of the FHS fundamentally demands a set of actions, externally (approach of the families at home, identification of the suspected case) as well as internally to health services (receipt of the material, forwarding to the laboratory, diagnosis) to guarantee longitudinal care and bonding⁽¹⁷⁾. The importance of more effective epidemiological surveillance is also highlighted, including routine home visits⁽¹⁶⁾, mainly to the known residences of elderly people in the coverage area of the Family Health Unit.

The elderly participants' discourse on how long it took to obtain a diagnosis reveals that this interval varied from one week to six months. Interestingly, the remarks of collaborators C1, C2, C3, C6 and C7 indicated that, to some of them, this duration does not seem long. The discourse reveals that the delay reported here was related to the health service. This part of the discourse not only underlines the patients' resignation with regard to the diagnosis time but also reveals the delay in the diagnosis of TB in elderly patients in the hospital context.

The delay of the health system is defined as the time interval between the first consultation at any health unit and the date of the diagnosis, with an interval of more than 3 days considered to represent a late diagnosis⁽¹⁸⁾. Our finding that the diagnosis was delayed according to this definition for all subjects is alarming. The lack of clarity revealed in the discourse suggests that besides the fact that health professionals do not pay attention to the identification of elderly respiratory symptomatics, relatives, caregivers and other contacts who were not mentioned, they are also likely to ignore signs and symptoms that are suggestive of the disease. Family members and caregivers are advised to attend training to shorten the time to diagnostic confirmation of the disease.

The diagnostic delay clearly reflects the weak points in the health system⁽¹⁸⁾. Studies that investigated the health service's delay in diagnosis found periods ranging between 2 and 60 days, with a longer interval for elderly patients than for non-elderly patients⁽¹⁸⁻¹⁹⁾. From the perspective of the health system, this delay can be attributed to delay in the suspicion of the disease⁽¹⁹⁾. Beyond reflecting the weak points of the health system, however, the delay in the detection of TB cases can be considered a sign of the ability to diagnose the disease and initiate treatment. This aspect of TB control requires a systematic assessment, mainly because of its negative consequences, which include the worsening of the patient's clinical condition, higher

mortality rates and sustained dissemination of the disease in the community, as untreated patients continue transmitting the infection to other people⁽¹⁹⁾.

In addition, the fact that the elderly indicated that the diagnosis did not take a long time – although the observed interval ranged between one week and two months – represents a contradiction and shows that the patients will passively accept the health services' decisions. Health service users are expected to act as active subjects and protagonists of health actions,⁽²⁰⁾. Hence, the importance of actions to transform passive and silent users into health care participants is highlighted. In this regard, health teams need to encourage community participation in health promotion activities.

Additionally, health professionals do not act to promote patients' autonomy, nor do they consider patients' unique characteristics in the search for comprehensive care. Therefore, it is fundamental for health professionals who deliver care to elderly TB patients to take into account their singularities, which will permit efficacious health management and effective bonding between professionals and patients⁽²¹⁾.

Furthermore, regarding the delay of the receipt of health services, collaborator 4's comment reveals that patients may be required to visit the health service several times to obtain a diagnosis. In that comment, the need is highlighted for users to visit the health service repeatedly while seeking a diagnosis, which ends up delaying the confirmation of the diagnosis.

Collaborator 4's lack of clarity revealed in the discourse also demonstrates the patients' dissatisfaction with the health service. When patients visit health services and their needs are attended to, they establish a relationship of trust with the professionals and the service. On the other hand, if patients turn to the service but do not receive a satisfactory answer, this situation creates a lack of trust⁽²²⁾, which can interfere with patients' pursuit

of health services. These services should be restricted in an attempt to offer comprehensive and problem-solving care to TB patients, in this case elderly TB patients who are extremely vulnerable to diagnostic delays, considering the access barriers discussed in this study.

CONCLUSION

The discourse fragments analyzed permitted the identification of access barriers related to health services, which include difficulties related to the hours of operation of the FHU; the transfer of responsibilities from the professional to the patient; the inappropriate evaluation of respiratory symptoms in the community; the non-realization of home visits; the occurrence of home visits without communicant control; health service delays related to the delayed suspicion of the disease and the need to visit the health service several times to obtain a diagnosis.

The identified barriers reveal the need for the local reorganization of health services, considering that these services have the responsibility of responding to spontaneous demands. The procedures that health teams follow should be reconsidered to encourage the incorporation of these actions. Health care professionals should be trained to perform an effective search for respiratory symptoms and provide early diagnosis, avoiding diagnostic delay. Additionally, professionals' lack of training resulted in less clinical suspicion and contributed to the diagnostic delays, reinforcing the importance of offering TB training to professionals.

Hence, professional training related to TB in the elderly should be offered, as such training is appropriate to the reality in which Family Health teams work. Furthermore, the teams' work processes should be reorganized, including the procedures related to home visits and active searching for respiratory symptoms.

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