

Performance of tuberculosis control services in municipalities of Paraná: family centeredness

Desempenho dos serviços de controle da tuberculose em municípios do Paraná: enfoque na família

Desempeño de los servicios de control de la tuberculosis para los municipios de Paraná: se foco en la familia



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ABSTRACT

Objective: To analyse and compare the performance of tuberculosis control services from the perspective of healthcare service users in relation to family centeredness.

Methods: A descriptive, quantitative and qualitative study with 89 patients undergoing TB treatment in the 15th regional health district of Paraná. Data were collected from April to June 2012 using semi-structured interviews. The quantitative data were submitted to variance analysis or to the Kruskal-Wallis test and the qualitative data were subjected to content analysis.

Results: The quantitative data showed that the health units performed better for the indicators 'healthcare professionals know the people who live with the user' ($p = 0.1340$) and 'evaluation of family members with specific tests' ($p = 0.1430$), while the benchmark outpatient units performed better for 'dialogue with family members about tuberculosis' ($p = 0.5203$) and 'treatment' ($p = 0.4788$). Analysis of the qualitative data produced two categories: 'family involvement in the treatment of tuberculosis' and 'disconnection of the health service from the family of patients with tuberculosis'.

Conclusions: Healthcare teams should support and guide the families since they provide the care to patients undergoing tuberculosis treatment.

Keywords: Tuberculosis. Family. Health services evaluation. Nursing. Millennium Development Goals.

RESUMO

Objetivo: Analisar, sob a perspectiva dos usuários, o desempenho dos serviços de saúde no controle da tuberculose em relação ao enfoque na família

Métodos: Estudo descritivo, quanti-qualitativo com 89 pacientes que realizavam o tratamento de tuberculose no âmbito da 15ª Regional de Saúde do Paraná. Os dados foram coletados entre abril e junho de 2012 por meio de entrevistas semiestruturadas. Os dados quantitativos foram submetidos à análise de variância ou ao teste de Kruskal-Wallis e os dados qualitativos à análise de conteúdo.

Resultados: Os dados quantitativos mostraram que as Unidades Básicas de Saúde apresentaram melhor desempenho em relação aos indicadores: conhecimento pelos profissionais de saúde das pessoas que moram com o usuário ($p=0,1340$) e avaliação dos familiares com exames específicos ($p=0,1430$) enquanto os ambulatórios de referência foram melhor avaliados quanto ao diálogo com os familiares sobre tuberculose ($p=0,5203$) e o seu tratamento ($p=0,4788$). Da análise dos dados qualitativos emergiram duas categorias: envolvimento da família no tratamento da tuberculose e desconexão do serviço de saúde com a família do doente com tuberculose.

Conclusões: Considera-se que a equipe de saúde deve oferecer suporte e orientações às famílias, pois elas são fonte de cuidado e apoio às pessoas em tratamento de tuberculose.

Palavras-chave: Tuberculose. Família. Avaliação de serviços de saúde. Enfermagem. Objetivos de Desenvolvimento do Milênio.

RESUMEN

Objetivo: Analizar, bajo la perspectiva de los usuarios, el desempeño de los servicios de salud en el control de la tuberculosis en relación al enfoque en la familia.

Métodos: Estudio descriptivo, cuantitativo y cualitativo con 89 pacientes que se sometieron al tratamiento de la tuberculosis en el marco de la 15ª regional de Salud de Paraná. Los datos fueron recogidos entre abril y junio de 2012 a través de entrevistas semiestruturadas. Los datos cuantitativos fueron sometidos a análisis de la varianza o la prueba de Kruskal-Wallis y los datos cualitativos al análisis de contenido.

Resultados: Los datos cuantitativos mostraron que las Unidades Básicas de Salud mostraron un mejor desempeño en relación a los índices: conocimiento de los profesionales de la salud de las personas que viven con el usuario ($p = 0,1340$) y la evaluación de los miembros de la familia con exámenes específicos ($p = 0,1430$), mientras que las policlínicas de referencia fueron mejor evaluados en relación el diálogo con los miembros de la familia sobre la tuberculosis ($p = 0,5203$) y su tratamiento ($p = 0,4788$). Del análisis de los datos cualitativos surgieron dos categorías: participación de la familia en el tratamiento de la tuberculosis y la desconexión del servicio de salud a la familia del paciente con tuberculosis.

Conclusiones: Se considera que el equipo de salud debe apoyar y orientar a las familias, ya que son una fuente de atención y apoyo para las personas que reciben tratamiento para la tuberculosis.

Palabras clave: Tuberculosis. Familia. Evaluación de servicios de salud. Enfermería. Objetivos de Desarrollo del Milenio.

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■ INTRODUCTION

Currently, a third of the world's population is infected with tubercle bacilli (TB) and at risk of developing the disease⁽¹⁾. An estimated nine million people around the world had TB in 2013⁽²⁾. The number of cases and deaths has dropped over the past few years. In 1990, there were about 1.3 million deaths, while in 2012, deaths caused by TB totalled 940 thousand⁽³⁾. However, despite the drop in the mortality rate, the number of deaths from TB is considered high since they could have been avoided with effective treatment that has been available since the 1960s⁽³⁻⁴⁾.

Brazil is among the 22 countries with the highest burden of TB in the world⁽¹⁾. Between 2005 and 2014, an average of 73 thousand new cases were recorded per year in the country and 4577 deaths were recorded in 2013 alone⁽²⁾. In 2002, Brazil signed a global commitment along with other 192 countries members of the United Nations called the Millennium Development Goals (MDGs), which established social, political, economic, cultural and environmental goals to fight HIV/Aids, malaria, and TB, among other diseases⁽⁵⁾. With regard to TB, the goals are to reverse the trend of incidence coefficient and reduce the prevalence and mortality of the disease by 50% by 2015, in comparison to 1990⁽²⁾.

In 2001, the Brazilian ministry of health implemented some areas of action, such as technical, political and social mobilisation; decentralisation; improvement of epidemiological surveillance and information system; expansion and qualification of the laboratory network; access to treatment and human resources training; and incorporation of disease control actions in the Family Health Strategy (ESF), a family care project of the Unified Health System⁽²⁾. However, the decentralisation of the National Tuberculosis Control Programme (PNCT) to the municipalities and to the primary healthcare network is still a challenge⁽²⁾. To implement these actions, the investment for TB control has increased 14 times since 2002⁽⁴⁾.

Given the decentralisation of PNCT and the financial investment for the programme, it is essential to evaluate the performance of TB control services in different scenarios and in all dimensions, including in relation to the family approach since healthcare must be family-centered. The assessment of health needs should consider the family context, exposure to health threats of any nature, and limited family resources⁽⁵⁾.

The process of decentralising TB control to the level of primary care has been determining interventions that extend to family and community care. However, the current model of healthcare, which is still centered on the individ-

ual, must include prevention and health promotion within the family to ensure important advancements in the planning and development of therapeutic interventions⁽⁶⁾.

Health workers must know the family dynamics of the TB patient, including the form of intra-family communication, support and family resources (educational levels, financial and cultural competence) to deal with the health problems of these patients⁽⁷⁾.

The families of individuals with TB must receive the appropriate assistance because they provide the support network in the health/disease process and must confront a higher risk of being infected by the disease-causing agent due to close contact with the patient. Health workers are mainly responsible for answering questions and providing guidelines, screening and the systematic follow-up of contacts within the families. The investigation of the presence of TB symptoms in individuals who have been in contact with sick people is an important preventive action against new infections and outbreaks in the community since it enables the diagnosis of active disease and of latent infection.

As far as is known, at a national level only two investigations on this subject have been published. The first investigation was carried out with users of the TB control programme of São José do Rio Preto, SP, Brazil⁽⁸⁾, and the results showed that the professionals were concerned with the signs/symptoms of patients and, to a lesser extent, with the living conditions of the families and their illnesses. The second investigation, conducted in the state of Paraíba⁽⁷⁾ with ESF professionals, showed a continued investigative action in the households and inclusion of family members in the therapeutic process⁽⁷⁾. It also identified that the ESF teams do not usually intervene once they obtain information on the users and their families⁽⁷⁾.

These studies did not investigate or provide segregated data of both services. Therefore, they did not confirm whether the decentralised services performed better than the centralised services. In view of the relevance of the social support offered by the family and the need to evaluate the household contacts of individuals infected by *Mycobacterium tuberculosis*, the aim of this study was to analyse the user's perspective of the performance of healthcare services in disease control regarding the families of patients.

■ METHODOLOGY

This is a descriptive study of a quantitative and qualitative nature based on the theoretical framework of primary healthcare dimensions, specifically in relation

to the dimension family centeredness⁽⁵⁾. The quantitative approach was used to correlate variables in order to better understand the behaviour of several factors that influence the performance of services. The qualitative approach sought to subjectively explore aspects covered with the quantitative method to better analyse the indicators under consideration.

The location of the investigation was the 15th regional health (RS) district of Paraná, which is composed of 30 municipalities and the city of Maringá - PR. Of the 30 municipalities in the study, seven still had benchmark centralised outpatient care for TB patients, six had a population between 20,000 and 36,000 inhabitants, and one had more than 80,000 inhabitants. The other 23 municipalities provided a decentralised service in the primary health units (UBS) that was incorporated to the ESF. Of these municipalities, six had a population of less than 5,000 inhabitants and ESF coverage between 71.5% and 100% (average of 86.6%), five had a population of 5,000 to 10,000 inhabitants and ESF coverage between 59.1% and 100% (average of 71.8%), and two had little more than 10,000 inhabitants, one of which had no ESF team and the other of which only 32.7% of the population had ESF coverage. One municipality had 32,209 inhabitants and an ESF coverage of 64.2%, and Maringá had 362,329 inhabitants and an ESF coverage of 60.9%.

Since 2008, treatment has been provided in the municipality of residence of the patients and the cases of difficult diagnosis, multidrug-resistant infection, among others, are referred to specialists of the *Consórcio Público Intermunicipal de Saúde do Setentrião Paranaense* (CISAMUSEP) based in Maringá, Paraná.

The inclusion criteria were individuals over 18 years of age, residents at the studied municipalities, and individuals who have undergone at least one month of TB treatment. The criteria of exclusion were individuals who did not have the cognitive ability to answer the questionnaire and patients receiving care in the prison system.

The sample of the quantitative study was defined by surveying TB cases in the 15th RS district from January to March 2012. During this period, 151 cases were reported. Of these cases, 133 (88%) met the inclusion/exclusion criteria of the study since 12 patients were receiving treatment in prison, three abandoned the treatment and three had cognitive deficit.

The number of individuals included in the study was determined considering the prevalence of 50%, a confidence level of 90% and an error margin of 5%, resulting in a sample of 89 people. The sample was defined using the proportional stratified technique according to the type of

service that provided TB treatment (centralised or decentralised). For the draw of the study participants, Statistica 8.0 (StatSoft) software was used to generate a list of random numbers.

Data were collected from April to June 2012 at the homes of the participants. The researchers contacted the potential subjects by telephone to explain the objectives of the study and request their participation in the study. When the subjects agreed, an interview was scheduled at their homes. After three telephone contact attempts or absence, the researchers visited the homes of the individuals. In both cases, the researchers briefly explained the objectives of the study, the use of an interview to obtain answers to a script of questions, the option to participate or not to participate in the study without prejudice to the assistance provided at the health services, and the need to record the statements.

The Primary Care Assessment Tool (PCAT), which was formulated, validated in Brazil⁽⁹⁾ and adapted to assess TB care⁽¹⁰⁾ was used to assess the performance of the TB services. This instrument is composed of eight dimensions: access, point of entry, longitudinality, comprehensiveness, coordination, family centeredness, community orientation and competence. Each of these dimensions is related to a set of actions in clinical practice, public health or the implementation of disease control policies at municipal level. Each question allowed the subject to establish the frequency of each situation (whether or not applied to the individual situation) with a Likert-type scale of six possible ratings: I don't know, never, hardly ever, sometimes, almost always, and always. Sociodemographic data were also considered to characterise the individuals in treatment⁽¹⁰⁾. The questionnaires were completed by the researcher according to the responses of the participants.

The questions of the instrument were related to family centeredness and defined by eight indicators: 1) investigation of social risk factors or living conditions of users and their families, 2) knowledge of the people who live with the users, 3) investigation of the diseases in the families, 4) investigation of the symptoms of the diseases in the families – cough, fever and weight loss, 5) evaluation of family members, with examination of the sputum and/or x-rays and/or tuberculin test, 6) dialogue with the families about the disease, 7) dialogue with the families about TB treatment, 8) dialogue with family members about other health problems.

An average score corresponding to the sum of the responses of all the interviewed subjects was attributed to each indicator and divided by the total number of respondents. This score was classified as unsatisfactory (less than

three), regular (greater than three and less than four) and satisfactory (greater than or equal to four).

The data were entered into an Excel 2003 spreadsheet and checked for possible misconceptions, such as entry errors or omitted answers. The data were then subjected to descriptive analysis, average and standard deviation.

Subsequently, the data were submitted to analysis of variance using the F-test to evaluate the performance of the services in the UBS and benchmark outpatient units. Variance analysis was applied to issues that satisfy the assumptions of independence, homoscedasticity and normality. Homoscedasticity was verified using the Levene's test. Non-parametric variance analysis, i.e. the Kruskal-Wallis test, was used for the analyses that did not meet the criteria for the Anova. The statistical significance level adopted in all tests was 5%.

The qualitative data were collected by means of the following questions: Did the professionals who monitor your TB treatment ask about your family or who lives with you? Did the professionals who monitor your TB treatment request any tests from members of your family or whoever lives with you? If yes, which? Do your family members provide support during TB treatment? If yes, which? The individuals who answered the qualitative issues were selected randomly among all the participants of the quantitative interview, and priority was given to those who showed greater interest in the study and willingness to continue the interview. The total number was not established a priori, but to the extent that an understanding of the studied phenomenon was reached according to the repetition of lines.

The statements of the 22 subjects were recorded to ensure the reliability of the data and avoid the loss of research elements, transcribed in full, and subjected to content analysis⁽¹¹⁾.

The steps were pre-analysis and exploration of the material, inference of the results and interpretation of the significant categories. The thematic unit is the unit of meaning that naturally arises from an analysed text according to criteria of theory. It serves as a reading guide and consists in discovering the core of meaning that makes up the communication. Moreover, the presence or frequency of this unit can have some relevance to the analytical goal of the study⁽¹¹⁾. This analysis led to the following two categories: Family involvement in the treatment of tuberculosis and Disconnection of the health service from the family of patients with tuberculosis.

The study is part of a larger project entitled *Avaliação das ações dos serviços de atenção primária à saúde no controle da tuberculose em adultos no âmbito da 15ª RS do Paraná* funded by the Fundação Araucária⁽¹²⁾ and was conducted

in accordance with the guidelines of Resolution 196/96 of the national health council⁽¹³⁾, in force at the time of the investigation and approved by the Comitê Permanente de Ética em Pesquisa com Seres Humanos of the Secretaria de Saúde do Estado do Paraná (opinion No. 423/2011). All the study participants signed informed consent statements and were identified by the letter "E" followed by ordinal numbers, month of treatment and clinical form of TB to guarantee their anonymity.

■ RESULTS

Most of the study participants had pulmonary TB (82%), were between the third and sixth month of treatment (51%), did not have private health insurance (95.5%), were male (50.6%), married (56.2%), between the ages of 30 and 49 (51.7%), with a household income between one and three minimum wages (52.8%), had not finished primary school (59.6%), and lived with one to three people (58.4%). A total of 13.5% received the government family benefit and 16.9% consumed alcohol. The percentage of people who worked before acquiring TB was 78.7%, which dropped to 41.6% after diagnosis. The areas of work were construction (7.9%), health (6.7%), general services (5.6%), and others (79.8%).

Table 1 shows that none of the indicators of the performance of TB services in relation to family centeredness obtained a satisfactory score with the exception of "evaluation of family members, with sputum smear and/or x-rays and/or tuberculin test" in the outpatient units since 71.4% of the users of these services reported that family assessments were always or almost always carried out.

Forty-two percent of the respondents reported that the risk factors or social living conditions of the users were never investigated. Only 46.5% reported that the health professionals knew their families, 28.4% reported that the health professionals always talked to them about their families, and only 52% reported that the health professionals asked about the occurrence of TB symptoms in the home contacts.

The results demonstrate that there was no statistically significant difference of the indicator measurements between the centralised and decentralised health services.

Analysis of the qualitative data produced the two categories listed below. It should be noted that the statements that were considered most complete for the category bases were selected to illustrate the study.

Table 1 – Indicators of family centeredness in the UBS and outpatient units of the 15th regional health district of Paraná, 2012

Indicators	Basic Health Unit (n = 64)		Outpatient Unit (n = 25)		P-value
	Average*	SD	Average*	SD	
Investigation of risk factors or living conditions of the users and their families.	2.92	1.71	2.27	1.69	0.1145
The professionals know the people who live with the user	3.43	1.73	3.79	1.86	0.1340
Investigation of family diseases	2.61	1.80	2.50	1.69	0.8013
Investigation of symptoms of tuberculosis among family members, such as coughing, fever and weight loss	3.43	1.78	3.25	1.38	0.6724
Assessment of family members with sputum smear and/or x-rays and/or tuberculin test	3.66	1.83	4.20	1.38	0.1430
Dialogue with family members about tuberculosis	2.69	1.74	3.01	2.04	0.5203
Dialogue with family members about tuberculosis treatment	2.66	1.76	3.05	1.97	0.4788
Dialogue with family members about other health problems of the user	2.28	1.64	1.66	1.52	0.1125

Source: Research data, 2012.

Note: *Score classification: unsatisfactory: average less than three; regular: average greater than three and less than four; satisfactory: average greater than or equal to four.

Family involvement in the treatment of tuberculosis

According to the participants of the study, many professionals do not talk with the family members of people with TB about the treatment and other health problems of the affected member, although they are generally the people who are most involved with the treatment of the sick person. Family members often seek the medication at the health service, care for the patient at home, and assume the burdens caused by the interrupted work activities of the sick person due to lack of physical conditions to work or perform any other remunerated activity.

I have to work, so my wife is the one who gets my medication and picks up the test results. But they don't talk about these things with her [TB symptoms and treatment [...]] When I got there they don't ask about her or my children either (E07, 2nd month of treatment, pulmonary TB).

My mum always goes with me. At first I was really weak and it was hard to go to the unit, so she would get the medication (E22, 5th month of treatment, pulmonary TB).

My family supports me, family is family. My wife always makes a milkshake so I can take my medication, because I feel bad if take it on an empty stomach (E18, completed treatment, bone TB).

My family always supported me, I don't know what I'd do without them, because I had to stop working and they help me (E20, 2nd month of treatment, pulmonary TB).

I haven't even told the others, only my family knows that I have TB [...]] My mother is taking care of my children for me, because have multidrug-resistant TB and I can't be in contact with them (E4, 6th month of treatment, pulmonary TB).

Disconnection of the health service from the family of patients with tuberculosis.

The statements showed that the contact of health professionals with the families is often inexistent and that the health actions for family members are impersonal and only occurred through the indirect delivery of exam requests to the patient during treatment. In other words, health workers did not approach the family members to obtain information or provide support. Consequently, the health workers were unaware of the social and health conditions of the families. This lack of knowledge removes any possibility of establishing integrated and collaborative assistance between the health service and the family, and prevents the family from supporting the treatment of TB patients.

They haven't talked to the people who live with me, they don't even know them, because they never came to visit me (E3, completed treatment, pulmonary TB).

The health workers don't know the members of my family, because when it was time to test them to see if anyone else had the disease, I was given a guide, they did an x-ray and I took it back to the doctor (E06, 2nd month of treatment, pulmonary TB).

Sometimes, the health woman [Community Health Agent] comes home, but she never talked to the people that live with me or asked them if they were coughing [...] They haven't done the test, yet (E10, 2nd month of treatment, pulmonary TB).

Furthermore, the statements revealed that the health workers provided guidelines that implement unnecessary disease prevention measures, such as separating cutlery and glassware and staying away from loved ones. Family assistance is not considered a priority, especially by the physician.

The doctor asked me to stay away from my daughters. It's very hard to stay away from them (crying), but I have to put up with, because I don't want them to get sick (E11, 6th month of treatment).

I asked the doctor if they [relatives] didn't have to do the tests, because they are always with me and it took some time before they discovered I had TB, but he said it wasn't necessary, I thought it was strange, but now that I know, I'm going to ask him to run the tests (E14, 6th month of treatment, pulmonary TB).

I just don't want someone here at home to get sick [...] I separate the cutlery and glassware correctly to avoid danger. I don't really like getting visits, because I can transmit the disease. I went to my sister's house the other day, but I didn't even eat to avoid the risk of spreading the disease to her and my nieces (E15, 4th month of treatment, pulmonary TB).

Professionals must provide information in relation to the disease after diagnosis and at the start of treatment, especially regarding TB prevention due to the risk of contagion and fear that patients have of spreading the disease to their loved ones.

■ DISCUSSION

This study found that most of the individuals had a family income between one and three minimum wages, had not finished primary education, did not have private health insurance, and some of the individuals received the government family benefit and were unemployed. It is widely agreed that people with low income who reside in urban areas with poor housing and education conditions are more susceptible to infection by *Mycobacterium tuberculosis*⁽⁷⁾.

In the past ten years, Brazil has reduced the incidence of new cases of TB by 22.8% and the mortality rate of the disease by 20.7%. In 2014, the incidence of the disease in Brazil was 33.5 cases per 100 000 inhabitants, against 43.4/1000 100 in 2004 (14). The ministry of health considers that social protection, in which the family benefit programme is inserted, was important to achieve the MDGs in relation to TB three years in advance⁽¹⁴⁾.

The family allowance programme is an income distribution benefit for families living in poverty and extreme poverty, and 14% of new TB cases receive this benefit, which is close to the percentage of the participants of this study (13.5%)⁽¹⁴⁾.

Despite the importance of social protection in the fight against TB, the health workers do not always question the social conditions a family lives of patients undergoing TB treatment, that is, they do not investigate aspects of employment, housing, education, among others.

The fight against this disease should not be limited to pathological aspects. The health team must have a broader, more humanised approach that reaches beyond the walls of the health units and interacts with other sectors that can provide social support to the patients and their families and consequently enable more comprehensive investigation and treatment⁽¹⁵⁾.

Health workers must pay closer attention to the family context of patients, as corroborated in other studies^(8, 16). Investigating the families of TB patients is critical from the social standpoint because it enables a quicker diagnosis that decreases the exposure of other individuals to the bacillus. From an individual standpoint, this investigation helps reduce the fear, tension and insecurity triggered by TB due to the suspicion that family members may also be infected⁽¹⁷⁾.

The quick discovery that family members are not infected and, in the case of infection, early drug intervention, demonstrates commitment of the health services in relation to the patients, their families and the community⁽¹⁶⁾.

The investigation of any respiratory contacts of the patient with TB should be a routine procedure in health services due to the simplicity of the required tests and the possibility of preventing the spread of the bacillus in case of a positive diagnosis⁽¹⁶⁾. However, this investigation requires specific technical skills and a humanised approach. It is characterised by a sequence of activities that begins with the contact at the homes of TB patients. It also involves the provision of guidelines on disease, signs and symptoms, and mode of transmission, the orientation to collect sputum, send and receive the material at the health unit, testing at the laboratory, reception by the unit and user, and start of treatment or referral to the outpatient unit according to the patient's situation⁽¹⁵⁾. Most of the studied health services performed poorly in relation to this investigative process.

In this study, the performance of the family centeredness indicators did not differ between the centralised and decentralised health services. According to the ministry of health, the decentralisation of treatment to the primary care units favoured the achievements of the MDGs by reducing the disease rates⁽¹⁴⁾.

The family health strategy seeks to change the shape of primary care by emphasising health promotion in all its contexts. By restructuring primary care, it proposes to humanise health practices and satisfy the needs of patients by narrowing the gap between health workers and the community, stimulating and acknowledging health as a right, and improving the quality of life of the general population⁽¹⁸⁾. In this perspective the ESF plays a critical role in TB control.

In the primary care units with family health strategy teams, home visits are part of the work routine and must support community interventions. Home visits are often fundamental to approach the families and, in the context of the TB control programme, to identify household contacts and a quick diagnosis of the disease.

However, according to the answers of the participants, it was observed that most of the health teams do not make home visits. Visiting the homes of patients in order to actively search for contacts can be complex due to the distance between the outpatient units and the homes of patients. However, the examination of the contacts of TB patients is imperative⁽¹⁶⁾. It is therefore important to establish a partnership between the patients and the family health strategy teams to carry out this action.

The performance of the health services regarding dialogue with the families of TB patients about the disease and treatment was unsatisfactory for the study subjects, which corroborates the results of investigations carried out in São José do Rio Preto-SP⁽⁸⁾ and Jogjakarta, Indonesia⁽¹⁹⁾. Consequently, health professionals should acknowledge the role of the families in relation to the sick family member. They are the main source of support in most of the cases.

In general, the family provides social support and plays different roles in relation to the sick member. It also performs complex tasks that involve emotional support, sharing responsibilities, making decisions and establishing contact with healthcare professionals, especially when the patient is debilitated.

A study conducted in the province of Limpopo, South Africa⁽²⁰⁾ to explore and describe the experiences of family members who care for patients with TB at home revealed that the families provided financial support, food, hygiene and locomotion of the members with TB. In addition, families help cope with the disease and influence the adoption of habits, styles and conduct that enable successful treatment. Individuals perceive their families as a point of reference for values, interpretations, perceptions, models of practice, guidelines, protection against the daily challenges of life and of processes related to health, well-being and disease.

In the area of health, more specifically in the field of nursing, the practice of approaching the families lacks the intensity recommended by the health policies in force in the country⁽⁶⁾. The nursing practice is still influenced by the hospital-centered, individualistic model of care⁽⁶⁾.

Education that considers the family the centre of care has been raising the awareness of healthcare and nursing professionals. According to this approach, awareness is the capacity to acknowledge the family as a complex phenomenon that requires support, especially in a disease situation, and to consider the importance of the family in healthcare⁽⁶⁾.

Both the patients and their families should receive guidance from health professionals, especially nurses, on the nature of the disease and the transmission of the mi-

cro-organism, stressing that it is not necessary to separate the patients' household items. It is important to use accessible language to thoroughly explain the types and effects of drugs, the duration, benefits and adverse reactions of treatment, and the consequences of abandoning treatment⁽¹⁶⁾.

As found in this study, other investigations revealed that patients must distance themselves from their family members when eating, sleeping or cooking to prevent transmission⁽¹⁹⁻²⁰⁾. This distancing makes patients less prone to share their problems and concerns with family members and less motivated to continue the treatment⁽¹⁴⁾. Therefore, the health service, patients and their families should share the responsibility and commitment by agreeing to meet the needs of all the people involved. These individuals and their family members must be aware of all the means of transmission, treatment and care needed to become the protagonists of their own treatment and actively participate in the decision-making process of their treatment.

■ CONCLUSIONS

The quantitative and qualitative results of this study showed that within the framework of the 15th RS district of Paraná, the professionals who work in TB control, both in the reference outpatient unit and in the UBS, have not yet achieved the expected performance for the development of family-centered TB control. The family is not generally included in the treatment process of TB patients and the decentralisation of treatment to the UBS alone did not significantly improve the quality of the service provided to users.

The evaluation of the PNCT in different scenarios supports the care provided by health professionals that is planned by the service manager, who is usually the nurse, and directs this care toward the resolution of critical issues that hinder the achievement of the goals proposed by the World Health Organization and the Brazilian ministry of health.

The service manager must include the assessment of persons who live with the patient in the team activities or establish partnerships with other services, in the case of centralised units, to actively search for the respiratory contacts of people with TB.

The main limitation of the study is the assessment of TB control services in several cities that are inserted in one context with singularities that could not be fully explored due to the broad scope of the work. However, the grouping of municipalities into UBS and outpatient units revealed important characteristics of these services.

New studies are needed to produce evidence that will reinforce the need to qualify health services in relation to the families, which are the essential source of support for patients during the TB treatment process. Furthermore, it is important to know how families perceive the fact that a family member is infected with a contagious disease and address their experiences, fears and concerns regarding the possibility of having acquired the disease, as in the case of TB, to support the healthcare professionals who work in this area.

The results apply to the area of nursing because of the centrality of the topic in the overall context of health policies. For the education of nurses, the study reveals the need to incorporate teaching strategies that qualify the skills and abilities of students regarding the approach and assistance of families throughout the training process. In the context of assistance and nursing management, the studied indicators can be incorporated to evaluate and monitor the team work with the family and help establish a practice that is based on comprehensiveness and shared health management.

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