Coordination of health care with the community in the clinical management of tuberculosis

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ABSTRACT

Objective: determine the coordination of Primary Health Care with community resources in the clinical management of tuberculosis. Method: descriptive study, of quantitative approach, with participation of one hundred health professionals. Part of a questionnaire was used in evaluating local institutional capacity for the model of chronic conditions care, adapted for tuberculosis care. Results: the coordination between health units, individuals with tuberculosis, and community organizations; the partnerships between institutions and local health councils/committees showed limited capacity. On the other hand, the component for the participation of the Community Health Agent presented more favorable capacity. Conclusion: the municipality has unfavorable capacity for coordination of health units and the community. It is reinforced the need to promote these coordinations in search of symptomatic cases in the communities, in the directly observed treatment, and in promoting the association between different social actors.

Descriptors: Tuberculosis; Primary Health Care; Community Participation; Health Staff; Community Health Agents.

RESEARCH

Coordination of health care with the community in the clinical management of tuberculosis

Articulação da saúde com a comunidade no manejo clínico da tuberculose

Estructuración de la salud con la comunidad en el manejo clínico de la tuberculosis

RESUMO

Objetivo: identificar a articulação da Atenção Primária à Saúde com os recursos comunitários no manejo clínico da tuberculose. Método: estudo descritivo, de abordagem quantitativa, do qual participaram cem profissionais da saúde. Utilizou-se parte de um questionário na avaliação da capacidade institucional local para o modelo de atenção às condições crônicas, adaptado para a atenção à tuberculose. Resultados: a articulação entre as unidades de saúde, as pessoas com tuberculose e as organizações da comunidade, as parcerias entre instituições e conselhos/comissões locais de saúde apresentaram capacidade limitada. Em contrapartida, o componente referente à participação do Agente Comunitário de Saúde apresentou capacidade mais favorável. Conclusão: o município possui capacidade desfavorável de articulação das unidades de saúde e comunidade. Reforça-se a necessidade de promover essas articulações na busca de casos sintomáticos nas comunidades, no tratamento diretamente observado e na promoção do vínculo entre diferentes atores sociais.

Descritores: Tuberculose; Atenção Primária à Saúde; Participação Comunitária; Pessoal de Saúde; Agentes Comunitários de Saúde.

RESUMEN

Objetivo: identificar la estructuración de la Atención Primaria de Salud con los recursos comunitarios en el manejo clínico de la tuberculosis. Método: estudio descriptivo, de abordaje cuantitativo, en el cual participaron 100 profesionales de la salud. Se utilizó parte de un cuestionario en la evaluación de la capacidad institucional local para el modelo de atención a las condiciones crónicas, adaptado a la atención de la tuberculosis. Resultados: la estructuración entre las unidades de salud, las personas con tuberculosis y las organizaciones de la comunidad, las alianzas entre instituciones y consejos/comisiones locales de salud presentaron capacidad limitada. En contrapartida, el componente referente a la participación del Agente Comunitario de Salud presentó capacidad más favorable. Conclusión: la capacidad de estructuración de las unidades de salud y comunidad
INTRODUCTION

Considered an important public health problem, tuberculosis (TB) still has high rates of prevalence and mortality worldwide, although there are noticeable reductions in these numbers over the 1990s to 2015. Global estimates show that 9.6 million people got sick from TB and that 6 million of these were new cases, which makes the disease remain as one of the leading causes of death, as in 2014 for example, when about 1.2 million people with TB died<sup>[1-2]</sup>.

When the occurrence of the disease in Brazil is analyzed, it is observed that there is heterogeneity in its distribution throughout the units of the Federation. In addition, TB is still affecting the most vulnerable populations of large cities<sup>[3]</sup>.

Brazil, in conjunction with other countries, adopted the goals established internationally by the World Health Organization (WHO) and by the Pan American Health Organization (PAHO) regarding the strategies for the end of TB. The objective is to identify more than 70% of new cases, cure at least 85% of patients affected by the disease, decrease the incidence rate of active TB by 90%, and have its mortality reduced by 95% by 2035, compared with 2015. Four principles must be followed in seeking these results, one of them being the involvement of civil society in the treatment of people with TB<sup>[4-5]</sup>.

Among the strategies employed to achieve the above objectives, there is health education, which seeks to raise the users’ awareness as to TB and its treatment, providing the exchange of knowledge, strengthening the professional-user bond, and contributing to the resolution regarding the healing process. The aim, therefore, is to empower users so they are active agents in their own treatment, have access to health services, and can claim improvement of quality of life. These initiatives must seek to promote the integration of families and communities through the effective work of professionals of Primary Health Care (PHC)<sup>[6-7]</sup>.

The role of the State is also of utmost importance in the creation and implementation of policies and programs for the training of human resources and for improvement of infrastructures for the treatment of TB<sup>[8]</sup>. It is necessary to promote the establishment of partnerships between the public-public and public-private sectors, foster the provision of care to populations that are most vulnerable to this disease, and promote the effective participation of civil society in social control with the consequent reduction of morbidity and mortality rates<sup>[9]</sup>.

Community involvement in the provision of care to the user was emphasized at the International Conference of Primary Health Care, held in Alma-Ata in 1978. At the time, it was highlighted the importance of communities and families participating individually and collectively in the planning and implementation of health care.

This coordination was reaffirmed by Brazil’s Ministry of Health by showing the relevance of intra and intersectoral connection to fight TB in the country, which should involve non-governmental organizations (NGOs), community centers, churches, ministries, academy, civil society, and professionals of health, social service, justice, and other sectors, which are essential in the coordination and guidance of disease control<sup>[10]</sup>.

Considering this reality and founded on reflections from practice experienced in PHC during the follow-up of the clinical management of user with TB, there is interest in investigating the existence of coordination between the PHC services and the other sectors of civil society. It is believed that this study will contribute to understanding the topic, with information that will be relevant to guide initiatives for improvement of the relations between the community resources, aimed at strengthening strategies for detection and control of the disease. The proposal, therefore, is to answer the question: how does the coordination of PHC with the community resources occur in the clinical management of TB?

OBJECTIVE

Determine the coordination of Primary Health Care with community resources in the clinical management of tuberculosis.

METHOD

Ethical aspects

The research respected the ethical precepts in involving human beings and was based on Resolution No. 466, of December 12, 2012, of the National Council of Health. To this end, its assessment was submitted to the Research Ethics Committee of the Federal University of Rio Grande do Norte, where it received a favorable opinion.

The PHC professionals were invited to participate in the research by signing the free and informed consent form (TCLE), in which the nature and objectives of the study were explained, with the guarantee of anonymity of all information provided.

Study design, location, and period

This is a descriptive study with quantitative approach, held in the municipality of Natal, capital of Rio Grande do Norte, Brazil. The population of the municipality consists of 853,928 inhabitants, distributed in 167.3 km<sup>2</sup> of land area. Its network of health services is organized in five Health Districts (DS): South, East, West, North I, and North II<sup>[10]</sup>.

Population or sample, inclusion and exclusion criteria

The quantitative identification of PHC professionals who followed cases of TB found 384 professionals, including physicians, nurses, nursing assistants and/or technicians, and Community Health Agents (CHA).
For the sampling procedure we used the random mode, considering populational ratio equal to 0.5, confidence interval of 95%, and sampling error of 5%. The sample totaled one hundred professionals, distributed in 27 health units, according to the following inclusion criteria: being PHC professionals working in the period of data collection and having followed the treatment of people with TB.

Study protocol

To conduct the study, there was prior contact with the Municipal Department of Health (SMS) of the municipality to explain the research, request authorization, and survey the number of professionals.

Data collection was carried out between November 2013 and January 2014, through interview with a structured questionnaire. This instrument was proposed by the MacCooll Institute for Health Care Innovation and later adapted to and validated for the Brazilian reality. It is used in evaluating the capacity of local institutions and of health professionals to develop a model of care for chronic conditions, adapted by the Group of Epidemiological and Operational Studies of the Brazilian Network of Tuberculosis Research to measure the initiatives implemented for the control of TB. The instrument consists of questions that address the evaluation of TB care in the following dimensions: organization of TB care; supported self-care; support to decision; design of the service provision system; clinical information systems; integration of the components of the model of care for people with TB; and coordination with the community, the focus of this study.

To better understand the influence of the professionals’ time of work on the answers, the results for this variable were presented in four groups: less than one year of service in the health unit; one to five years of service; six to ten years of service; and more than ten years of service.

The dimension of coordination with the community comprises four components: relationship between the health unit, the people with TB, and the community organizations; partnerships with community organizations for control of TB; local council/commission of health; and CHA.

The answers provided are presented in four levels (D, C, B, A), with D being the most unfavorable; B and C being intermediaries, and A being the most favorable. The levels are represented by values ranging from 0 to 11, which refer to capacity to provide care to people with TB, as follows: scores between 0 and 2 = limited capacity; between 3 and 5 = basic capacity; between 6 and 8 = reasonable capacity; from 9 to 11 = great capacity.

Analysis of the results and statistics

The data obtained were tabulated, organized in worksheets and analyzed through descriptive statistics through the software Statistical Package for Social Sciences (SPSS) version 22.0. The results were organized and presented in tables in absolute and relative numbers.

RESULTS

This study had the participation of one hundred PHC professionals, with 35 nurses, 22 nursing technicians, nine physicians, and 34 CHAs. The data for the time of exercise of the profession and of work in the health unit are presented in Table 1.

Regarding the time of work in the health units, of the one hundred professionals surveyed only 7% had less than one year in activity, 23% and 29% had between one and five years of service; and most, 41%, had worked for more than ten years.

Considering the mean time of work in the health unit and the mean professional exercise, the CHA category presented higher results, corresponding to 11.6 years, unlike the physician category, which showed a mean of 7.1 years. Regarding the mean time of exercise of the function, the physicians showed longest period, 20.4 years, and the CHAs showed the shortest, 14.3 years of professional exercise.

Table 1 – Characterization of the time of work in the health units and of exercise of the profession, Natal, Rio Grande do Norte, Brazil, 2013-2014

<table>
<thead>
<tr>
<th>Professional category</th>
<th>Time of work in the health units (years)</th>
<th>Time of exercise of the profession (years)</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>n (%)</td>
<td>n (%)</td>
</tr>
<tr>
<td>CHA (n=34)</td>
<td>Less than 1</td>
<td>-</td>
</tr>
<tr>
<td></td>
<td>Between 1 and 5</td>
<td>8 (24,6)</td>
</tr>
<tr>
<td></td>
<td>Between 6 and 10</td>
<td>7 (20,6)</td>
</tr>
<tr>
<td></td>
<td>More than 10</td>
<td>24 (70,6)</td>
</tr>
<tr>
<td></td>
<td></td>
<td>5 (14,7)</td>
</tr>
<tr>
<td></td>
<td></td>
<td>29 (85,3)</td>
</tr>
<tr>
<td>Nursing technicians</td>
<td>Less than 1</td>
<td>-</td>
</tr>
<tr>
<td>(n=22)</td>
<td>Between 1 and 5</td>
<td>8 (36,4)</td>
</tr>
<tr>
<td></td>
<td>Between 6 and 10</td>
<td>7 (31,8)</td>
</tr>
<tr>
<td></td>
<td>More than 10</td>
<td>7 (31,8)</td>
</tr>
<tr>
<td></td>
<td></td>
<td>17 (77,3)</td>
</tr>
<tr>
<td>Nurses (n=35)</td>
<td>Less than 1</td>
<td>5 (14,3)</td>
</tr>
<tr>
<td></td>
<td>Between 1 and 5</td>
<td>11 (31,4)</td>
</tr>
<tr>
<td></td>
<td>Between 6 and 10</td>
<td>10 (28,6)</td>
</tr>
<tr>
<td></td>
<td>More than 10</td>
<td>9 (25,7)</td>
</tr>
<tr>
<td></td>
<td></td>
<td>27 (77,1)</td>
</tr>
<tr>
<td>Physicians (n=9)</td>
<td>Less than 1</td>
<td>2 (22,2)</td>
</tr>
<tr>
<td></td>
<td>Between 1 and 5</td>
<td>5 (55,6)</td>
</tr>
<tr>
<td></td>
<td>Between 6 and 10</td>
<td>1 (11,1)</td>
</tr>
<tr>
<td></td>
<td>More than 10</td>
<td></td>
</tr>
<tr>
<td></td>
<td></td>
<td>1 (11,1)</td>
</tr>
<tr>
<td></td>
<td></td>
<td>6 (66,7)</td>
</tr>
</tbody>
</table>

Note: CHA = Community Health Agents

Table 2 – Characterization of the capacity of the components of the coordination of the Primary Health Care with the community, Natal, Rio Grande do Norte, Brazil, 2013-2014

<table>
<thead>
<tr>
<th>Components</th>
<th>Capacity – Level (%)</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>Limited – D Basic – C Reasonable – B Great – A</td>
</tr>
<tr>
<td>Coordination with the community</td>
<td>80</td>
</tr>
<tr>
<td>Partnerships</td>
<td>87</td>
</tr>
<tr>
<td>Local Commission of Health</td>
<td>79</td>
</tr>
<tr>
<td>CHA</td>
<td>14</td>
</tr>
</tbody>
</table>

Note: CHA = Community Health Agents
Of all the professionals who participated in the research, 77% were from Family Health Unit (USF), 18% from Basic Health Unit (BHU), and 5% from Mixed Unit (UM).

Table 2 presents data concerning the coordination between health unit, people with TB, and community organizations, partnerships with the local authorities for the control of TB and the local council/commission of health. Most of these variables fall into answers level D, that is, the most unfavorable. The answers were classified into four types of capacity to provide health care to people with TB, namely: limited, basic, reasonable, and great.

This fact shows the deficiency of coordination and partnerships between health units and community organizations in the control of TB, as well as the lack of a local commission of health for assistance to the person with TB in the unit. The CHAs had 47% of answers level A, the most favorable, showing incorporation of the CHAs into the activities related to the clinical management of TB and their integration into the health unit team.

In relation to levels C and B, considered as intermediaries, the local council/commission of health presented a percentage of 10% at both levels; CHAs showed, respectively, 7%, and 32%; coordination between health unit, people with TB, and community organizations, as well as partnerships with local authorities for the control of TB obtained no significant values.

Regarding the CHAs, their integration into the clinical management of TB showed 47% of great capacity, indicating an important role of this professional category as essential subject in assisting the person with TB.

Concerning basic and reasonable capacity, there were no significant results, except for the CHAs, who showed 32% of reasonable capacity, that is, they are integrated into activities related to TB, as well as actively participate in the health team.

The answers related to the structuring between health unit, people with TB, and community organizations comprise 80% of limited capacity, that is, there is deficiency to integrate the services into the community. In the partnerships with local organizations for control of TB it was observed that 87% of the professionals fall into limited capacity, showing flaws in the partnerships between health unit and community. The local council/commission of health presented a percentage of 79%, also showing limited capacity.

**DISCUSSION**

The results show that in the health units surveyed there is predominance of professionals who had been in service for more than ten years. This situation can contribute to success in the community coordination process, because the longer time of work in PHC can foster a close relationship between families and social services. The fact that a professional works for a long time in a health unit contributes to the maintenance of longitudinal care and to the participation of users in the health service, which favors the building of bonds between these social actors, ensuring a relationship of trust in the work of professionals with users. Thus, the work in the clinical management of TB becomes active and continuous, since the user favors and allows this close relationship.

It was observed a large number of professionals who are part of the Family Health Strategy (FHS), a situation considered positive, as it contributes to a greater bond between professionals, communities, and patients through a very common activity in this type of service: the home visit. This is when should be reinforced the importance of mutual cooperation and of the possibility of seeking support in other sectors of the community where a person lives.

When the items concerning the community coordination are analyzed, it is observed that almost all presented unfavorable capacity. This reaffirms the urgent need to strengthen the social control and participation in the control of TB. To this end, it is necessary that this coordination becomes more effective, which is possible with the contribution of the different agents involved in the provision of care to the person with TB, whether they are health professionals, community members, or even local councils.

These councils, though absent in the context in which this research was conducted, constitute important strategies in the control of TB by enabling users of health services to require initiatives oriented to the needs of the community. An example of this was seen in study that examined the participation of a committee of representatives of society, which resulted in a coordinated action in the defense of collective interests, in the mobilization and in the exercise of citizenship for control of TB.

Another research showed that the weakness in political coordination, developed through local health councils, can influence the implementation of the Directly Observed Treatment (DOT). Consequently, it is not possible to establish partnerships with health professionals for the construction of strategies directed to the needs in this context.

Moreover, the presence of community workers allied in combating TB and trained to recognize the characteristics of the disease could aid in the search for respiratory symptoms in the community. This is a reality in Nigeria, where there are constant training for this purpose; even so, there is difficulty in the process of recognition of persons with TB. This demonstrates how the issue is challenging, especially considering the need to develop strategies that contribute to the reduction in morbidity and mortality rates aimed by the WHO, PAHO and the allied countries.

The capacity for coordination in the municipality was primarily defined as basic, with the exception of the CHAs, which had excelling percentages in relation to the other factors, reaching reasonable and great classifications. It is observed that other studies found similar data for community coordination in the first three items, for which they present limited or basic capacities. While for the item CHA, these studies indicate reasonable or great capacities, as was also observed in the results of this research.

It is believed that the important role of the CHA is related to the longer time of work in the health unit. It is known that this professional most often lives in the community in which he or she works, which reinforces the bond with users and families of the neighborhood.

The CHAs have contributed to treatment adherence and the consequent increase in the rates of cure. Accordingly, the
presence of these professionals in health units and their bond with the community are critical in the therapeutic process of persons with TB\textsuperscript{18}. It is expected, therefore, that the CHAs collaborate in the care TB users in the community where they work. This is possible when there is a close relationship of these professionals and their knowledge with the values, customs and languages of the population, and thus there is consistency between the use of health technology/knowledge and local beliefs. The CHAs would, then, be enabling elements, capable of building bridges between health units and the community, identifying their problems promptly, working on disease prevention and health promotion\textsuperscript{18}.

It is also important to contribute to the political participation of people with TB in the decision-making processes and in the implementation of public policies to, thus, obtain quality services and appropriate treatment. This would be possible through the creation of collaborative networks of people with TB, in coordination with NGOs and community councils, to encourage people to seek their health rights, as in the experience developed in Peru\textsuperscript{20}.

**Study limitations**

It should be noted as limitation the difference in the number of professionals by professional category, which can be attributed to the number of declines in certain professional category, which was replaced by another, resulting in different numbers of professionals. This situation prevented us from making inferences about the population through categories.

**Contributions of the study to the areas of Nursing, health, or public policy**

This research will contribute to determine the coordination of the PHC with the community resources, fostering the development of strategies to strengthen the participation of users in the planning and implementation of health services.

**CONCLUSION**

The results show that the coordination of the PHC with the community in the municipality researched is deficient in all health units studied. This was evidenced when coordination, partnerships, and local health councils showed limited capacity, which requires greater contribution of these variables to the detection and treatment of people with TB. On the other hand, it was possible to know the positive role of the CHAs in multidisciplinary teams and with the community in the clinical management of the patient with TB.

It is reiterated the need to promote better coordination of health units with the community in search of symptomatic cases, in the DOT, and in promoting the bond between the different social actors, in order to provide adequate clinical management of the patient with TB.

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