

Chapter 283

Difficulties in early detection of respiratory symptomatic patients in primary health care: The contribution of community health workers

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ABSTRACT

Objective: To identify and understand the difficulties in early detection of tuberculosis in primary health

1 INTRODUCTION

In 2021, about 10.6 million people contracted tuberculosis worldwide, of which 6 million were men, 3.4 million were women, 1.2 million were children, and people living with HIV accounted for 6.7% of the total (WHO, 2022).

care, while recognizing the contribution of community health workers in prior screening of patients in vulnerable regions. Method: integrative review with scientific articles published in Portuguese and English, in full, which address the problem of underreporting and weaknesses of primary care and family health in terms of strengthening the capture of patients contacting tuberculosis cases in the area of health responsibility. We selected 21 articles for sampling in the following databases: LILACS, BVS-Enfer Nursing, PUBMED and Scielo, from which only 6 articles were selected, whose theme focuses on three main axes: tuberculosis in primary health care; weaknesses of the territory; the contribution of community health workers in the early screening of contacts and respiratory symptoms. Results: based on the sample and analysis of the proposed content, it was observed that Community Health Agents have great relevance in the active search for patients with respiratory symptoms and transmission of knowledge and information to the population, considering that they also have the role of educator of the population and are characterized as the direct link between the health team and the community. Conclusion: there is a great need for training and strengthening the practice of continuing education with this group of professionals, since their level of knowledge reflects in the quality of home care and in the resoluteness of the search for respiratory symptomatic patients.

Keywords: Tuberculosis, Catchment, Primary Health Care, Vulnerabilities, Community Health Agent.

In this context, Brazil (2019, P. n.p) states that "tuberculosis (TB) control involves a series of actions related to clinical practices, organization of services, interactions with other areas inside and outside the health sector, and information and surveillance system."

In this scenario, tuberculosis advances over the decades and is still represented as a serious public health problem, in which, in addition to multidisciplinary actions, intersectoral actions are necessary (BRASIL, 2021; BRASIL, 2019).

TB treatment saved 74 million lives worldwide between the years 2000 and 2021. Worldwide, the number of people newly diagnosed with tuberculosis (TB) and those most recently notified, fell to 7.1 million in 2019 and to 5.8 million in 2020, however, there was a partial recovery to 6.4 million in 2021 (WHO, 2022).

However, tuberculosis is in fact a treatable and curable pathology, its diagnosis and treatment are made available free of charge by the Unified Health System (SUS) with priority offer in the Primary Health Care (PHC) and Family Health Strategy (FHS) Basic Units (BRASIL, 2017).

In this sense, the most visible professional in the Family Health Strategy (FHS), Community Health Agent (CHA), which is closely linked to the community, taking the health team to the user's home and health information. This contributes significantly to the success of health actions aimed at health promotion, prevention of diseases, early detection, facilitator of access to treatment in the Unified Health System and recovery of health of these users (BRASIL, 2017).

However, it is necessary to discuss and study the theme to strengthen continuing education actions in order to improve the practices in the daily work of these professionals, taking into account the difficulties that permeate the daily practice of activities in the territory.

Therefore, the general objective of the present study is to identify and understand the difficulties in the early capture of respiratory symptomatic patients for the detection of tuberculosis in primary health care, having as specific objective: To recognize the contribution of community health agents in the early screening of household contacts of users with tuberculosis in vulnerable regions.

To this end, the study is characterized as an integrative literature review, which groups, examines, and summarizes the scientific production on the proposed theme with the purpose of obtaining a comprehensive understanding of the issue raised.

The delimitation of the present study comprised the following phases: 1) definition of the theme from the problematic for conducting the research through the aforementioned objectives; 2) definition of the criteria to delimit the sampling of the content to be addressed; 3) presentation and analysis of the content gathered.

Based on the pre-selected contents, three important themes emerged to be discussed: 1) tuberculosis in primary health care; 2) fragilities of the territory; 3) the contribution of community health agents in the early screening of contacts and respiratory symptoms. Thus, preliminary studies were carried out to survey the articles in the updated literature.

A compilation was made in the following databases: Latin American and Caribbean Literature on Health Sciences (LILACS), Scientific Electronic Library Online (SciELO) platform, Nursing Database (BDENF), Virtual Health Library (BVS-Nursing), and PUBMED.

The following descriptors were used: "Tuberculosis", "Attrition", "Primary Health Care", "Vulnerabilities", "Community Health Agent".

The inclusion of the chosen articles was defined through pre-established criteria: articles in Portuguese/English, in full, with thematic content equivalent to the title of this document, and published in the last five years. Twenty-one (21) studies published between May 2017 and April 2022 were selected, and they were reevaluated and reselected, obtaining as final sample 6 six studies pertinent to the theme.

2 TUBERCULOSIS IN PRIMARY HEALTH CARE

Tuberculosis (TB) is a global public health problem due to its high prevalence in many countries, including Brazil (CECILIO; TESTON; MARCON, 2017).

CECILIO, TESTON, MARCON (2017), also state that the disease is closely linked to the socioeconomic conditions of the population and factors such as prevention, diagnosis, treatment, quality of health services and the peculiarities of the affected patients make it difficult to control.

In Brazil, in 2020, the incidence of tuberculosis was 33.5 cases per 100,000 inhabitants, while the mortality rate, was 0.91 registered deaths per 100,000 inhabitants (HÄRTER et al., 2022).

However, during the year 2019, as Härter et al. (2022) state, the incidence of cases regressed to 31.6 per 100,000 inhabitants, with the mortality coefficient showing an average of 2.2 deaths per 100,000 inhabitants.

Tuberculosis is an airborne disease transmitted by coughing, speaking or sneezing, eliminating bacilli in the environment and infecting healthy people. The Respiratory Symptomatic, in the general population, is the person who presents coughing for three weeks or more (HÄRTER, et al., 2022; BRAGA et al., 2021; NASCIMENTO et al., 2020; CECILIO, TESTON, MARCON, 2017).

According to BRASIL (2021), the laboratory diagnosis for the identification of Mycobacterium Tuberculosis is done through sputum smear microscopy and Rapid Molecular Test (RMT-MTB) obtained from sputum sample. Tuberculosis is a curable disease in virtually all cases, in people with bacilli sensitive to antituberculosis drugs (anti-TB), provided that the basic principles of drug therapy are obeyed and that proper operationalization of treatment occurs (BRASIL, 2019).

However, Braga et al. (2021, p. 2) states:

The importance of the performance of Primary Health Care (PHC) as the preferred gateway to the health service acting in the prevention and protection of health, from screening of respiratory symptomatic (SR) for early diagnosis to the closure of cases, including strategies that enable adherence and therapeutic success, such as the ODT and the insertion of community health workers (CHW) in the Family Health Strategy (FHS) (BRAGA et al. 2021, p. 2).

According to Brazil (2019), the treatment regimen for tuberculosis is standardized, should be performed according to the recommendations of the Ministry of Health and comprises two phases: the intensive (or attack phase), and the maintenance phase. In Brazil, the basic regimen for treating TB in adults and adolescents consists of four drugs in the intensive phase and two in the maintenance phase. The pharmacological presentation of the drugs, currently in use, for the basic scheme is of tablets in fixed doses combined with the presentation type 4 in 1 Rifampicin (R), Isoniazid (H), Pyrazinamide (Z) and Ethambutol (E) or 2 in 1 (RH).

However, despite the great visibility obtained in the single health system, tuberculosis is still a disease that requires more discussion in social spaces for the dissemination of the characteristics, signs, and symptoms of the disease, recognition of the pathology widely by the public for greater and better adherence to treatment in an appropriate manner.

3 FRAGILITIES OF THE TERRITORY

Considered a major public health obstacle, tuberculosis (TB) still shows high rates of precessions and mortality worldwide, in addition, TB remains affecting the most susceptible populations, so Brazil, together with other countries, accepted the goals internationally determined by the World Health Organization (WHO) and the Pan American Health Organization (PAHO), concerning the strategies for the end of tuberculosis (PINTO, et al., 2018).

The goal 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 reduce its mortality by 95% by the year 2035, compared to 2015. Four principles must be followed in the pursuit of these results, one of them being the involvement of civil society in the treatment of people with TB. (PINTO, et al., 2018, p. 1189).

According to Pinto, et al. (2018), among the strategies used to achieve the objectives, health education is included, which aims to make patients aware of tuberculosis and its treatment, contributing to the healing process and strengthening the professional and user bond, so it is essential the participation of the state in the development and implementation of policies and programs to train staff and improve infrastructure for the treatment of tuberculosis, in addition to the involvement of the community in user care, highlighting the importance of individual and collective participation of families and communities in the organization and performance of health care.

This articulation was reaffirmed by the Ministry of Health of Brazil when showing the pertinence of the intra and intersectoral connection for the confrontation of TB in the country, a performance that should involve Non-Governmental Organizations (NGOs), community centers, churches, pastoral care, academia, civil society and professionals from health, social assistance, justice and other sectors, fundamental in the coordination and guidance of the control of the disease.(PINTO, et al., 2018, p. 1189).

In a study in the health units of Natal, Rio Grande do Norte, Brazil, 2013-2014 data related to the articulation between health facilities, users with TB and community organizations for the monitoring of tuberculosis were presented, it is concluded, for the most part, the most unfavorable, being a limited and deficit articulation, this being a factor of weakness, reaffirming the urgency of strengthening the monitoring and social involvement in the control of tuberculosis.(PINTO, et al., 2018).

Weakness in political articulation is another factor that can instigate the implementation of the Directly Observed Treatment (DOT), hindering partnerships with health professionals to develop strategies focused on the needs in this theme (PINTO, et al., 2018).

Siqueira et al, (2020), points out that access to health care is essential for the growth of SUS, but obstacles still persist to ensure universal and equal access to health services for the population, taking into account demographic changes, epidemiological and social inequalities.

Access to health encompasses geographical, organizational, and social aspects, which include the distance between the population and the health service resources, displacement, and the time used for adherence to care, the definitions and means that allow or hinder health care, and the socioeconomic aspects connected to the individual (SIQUEIRA et al., 2020).

For chronic conditions, such aspects can lead to difficulties in access to health services and delay in diagnosis and treatment of diseases such as tuberculosis (TB), which has its control actions decentralized to PHC, as recommended by the Ministry of Health (MH) (SIQUEIRA et al., 2020, p.393).

4 CONTRIBUTION OF COMMUNITY HEALTH AGENTS (ACS) IN THE EARLY SCREENING OF RESPIRATORY CONTACTS AND SYMPTOMATIC PATIENTS

CHWs began to act in Brazil from isolated experiences in the late 1970s. In the 1990s, the first professional courses were created and in 2002 the profession was created (CARDOSO, et al., 2020).

Within the Family Health Strategy, the Community Health Agent plays a key role in monitoring, active search, and health education, where he or she goes through all phases of the management of tuberculosis in the context of Primary Health Care (BRAZIL, 2017).

In the view of Braga et al. (2021), the insertion of the Community Health Agent contributes to the active search for RSSs through home visits for the earliest possible diagnosis, as well as assisting in the monitoring of cases in treatment, guidance on the disease, side effects, among others, and supervision of drug intake through the OHT. It also strengthens the bond between the health service, professionals, individuals, families, and the community, which is the main purpose of the CHAs' work.

Brazil (2019, p. 195), states that within the sphere of Primary Health Care:

Family Health Strategy (ESF)/Community Health Agent Program (PACS): the Active Search should be extended to the attached community, with the inclusion of the identification of the SR in all home visits, with the proper referral for tuberculosis screening (BRASIL, 2019, p. 195).

With regard to the daily practices aimed at actions to combat tuberculosis, there is an urgent need to increasingly encourage the role and dynamic insertion of Community Health Workers in the active search for Respiratory Symptoms (SR), household contacts of users with tuberculosis, timely approach to users who present signs and symptoms characteristic of tuberculosis (TB) through home visits for early diagnosis, monitoring of cases, Directly Observed Treatment (DOT), timely collection of sputum samples and dissemination of reliable information pertinent to the pathology, in this perspective, strengthening the link between the user and the population attached to the health team in the territory where this professional usually lives (BRAGA et al., 2021; BRAZIL, 2017).

The work that the ACS performs should enable, according to the network of the municipality, the first sputum sample to be collected at the time of suspected tuberculosis, allowing the timely initiation of treatment, the reduction of transmission and the consequent drop in the number of cases, since the main diagnostic test is the sputum examination (BRAZIL, 2017, p. 13).

For this practice, it is necessary to implement permanent education on a periodic basis to recycle and improve the daily practices of this professional who, in the midst of routine, faces several difficulties related to the user's adherence to treatment, doubts about the pathology, established flows for the management as indicated in technical documents focused on the management of pre-existing cases and tracking of new cases, so that the collective involvement of the team occurs, in which everyone speaks the same language and develops actions aligned for a possible change in the reality of a community (DE AZEVEDO et al., 2021).

5 DATA PRESENTATION AND ANALYSIS

After being reevaluated, of the twenty-one (21) studies published between the years 2018 to 2022, the last five years, the final sample of six scientific articles was obtained, selected by pre-established criteria, where three important topics were submerged which were addressed - 1) tuberculosis in primary health care; 2) fragilities of the territory; 3) the contribution of community health agents in the early screening of contactants and respiratory symptoms, where the main difficulties related to the follow-up and actions of the community agent during the early capture of patients with respiratory symptoms in primary health care and the entire management of tuberculosis in this point of health care were identified.

The final pattern of the present review consisted of 6 (six) scientific articles, counted by the previously established inclusion criteria as shown in table 1.

Table 1: Articles surveyed in the BDENF, LILACS, REUOL, and SciELO databases on the management of tuberculosis focused on the daily practices of community health workers.

Source	Article Title	Authors	Periodical (vol., no., page, year)	Considerations/ Theme
SCIELO	Symbolic sites of belonging and tuberculosis	CARDOSO, Gisela	Ciência & Saúde Coletiva, v. 25, n.	The text highlights the sense of commitment of the CHWs as an important value in the actions

	prevention and control: perceptions and practices of Community Health Agents in Brazil and Ethiopia.	Cordeiro Pereira et al.	8, p. 2927-2937, 2020.	developed in both contexts (Brazil and Ethiopia), evaluating the contribution of the community DOTS (Directly Observed Treatment Short-Course) in the actions of prevention and control of tuberculosis in Primary Care in Brazil and Ethiopia.
LILACS	Knowledge, attitudes and practices of community health agents about pulmonary tuberculosis in a capital city in Northeastern Brazil.	GASPAR, Lucijane Maria da Silva et al.	Science & Collective Health , v. 24, p. 3815-3824, 2019	The article brings a representative sample of CHWs using a standardized questionnaire. A percentage of 61.7% had sufficient knowledge, and this knowledge (75.8%) was associated with adequate practices (p = 0.008). As for attitudes, 97.1% of the CHWs believed they were at risk of contracting tuberculosis, and 53.2% attributed the risk to their function.
PUBMED	Community health workers at the dawn of a new era: 6. Recruitment, training, and continuing education.	Schleiff MJ, Aitken I, Alam MA, Dantew ZA, Perry HB.	Health Res Policy Syst. 2021 Oct 12;19(Suppl 3):113.	The article reviews a number of important considerations for training CHWs in response to their enhanced roles, which requires continuing education.
BDEF	Health articulation with the community in the clinical management of tuberculosis.	PINTO, Erika Simone Galvão et al.	Brazilian Journal of Nursing , v. 71, p. 1122-1127, 2018.	The link between health care facilities, people with TB, community organizations, partnerships between institutions, and local health councils/committees showed a poor link, with the participation of the Community Health Agent being more positive.
SciELO	The reflection of the ACS home visit in the active search for SR in an Amazonian municipality.	PEREIRA, Camilo Eduardo Almeida et al.	Journal of APS , v. 21, n. 1, 2018.	The article evaluates the quality of the Home Visitation (DHV) of the CHW in the search for patients with Respiratory Symptoms, the DHV of this professional is concentrated on diabetic and hypertensive patients, thus limiting the active search for RSS, an area that presents susceptible groups for tuberculosis.
LILACS	Tuberculosis treatment from the perspective of Primary Health Care professionals.	SIQUEIRA, Tatiane Cabral et al.	Revista de APS , v. 23, n. 2, 2020	The article sought to analyze the actions and strategies for TB treatment in PHC in the municipality of Porto Velho-RO, from the perspective of health professionals. It was found that professionals do not recognize the difficulties of access for users.

Based on the sample and analysis of the selected articles and proposed theme, it was observed that community health workers have great value regarding the active search for respiratory symptomatic patients and transmission of knowledge and information to the population in home visits, considering that they also have the role of health educator of the population and is characterized as the direct link of the health team

with the community, involving the community to collaborate with the health system so that it responds to the demands and their complexities (SCHLEIFF, et al, 2021; CARDOSO, et al. 2020; PINTO, et al., 2018).

Taking into account the great relevance that the role played by CHWs has shown throughout the development of national and international health, Schleife et al. (2021), considers important the training of CHWs based on updated evidence and case studies for obtaining favorable and skillful answers to their daily practices with the community, being this a great difficulty faced by the category when there is no continuous offer of training for qualification of the approach of the theme in the territory.

For the other health professionals in Agaro, the difficulties linked to CHWs are: lack of knowledge about the side effects of drugs and their interactions, lack of financial incentive to go to the health center to get the medications (sometimes the CHW tells the patient to come to the health center to get the medications [health officer]), lack of knowledge, especially in tracking absentees. According to these professionals, CHWs should have formal training in TB actions: Only a few CHWs are able to perform so many recommended activities. They need more training and capacity building (pharmacist) (CARDOSO, et al. 2020, p. 2933).

In this bias, Gaspar et al. (2019) in their study assesses that of a total of 292 (75.8%) ACS performed adequate practices, i.e., according to what is recommended by the PNCT, which were statistically associated with satisfactory knowledge about TB ($p = 0.008$).

Still in this context, Cardoso et al. (2020, p. 2928) reports that "most of them take an introductory course of initial generic training (diagnosis of the area, portfolio of services, organization of PHC), lasting one week, with 40 hours.

In his study, Pereira et al. (2018) points out that one of the difficulties experienced by CHAs in their work routine is the deviation of the function of this worker, where the quality and purpose of the home visit of the CHA is compromised, and also states that the role of the CHA, according to the National Policy of Primary Health Care (PNAB), the CHA should act with the role of problem identifier, being the link between the enrolled population and the ESF team and vice versa, being also the health educator in the community and thus assessing the context of vulnerability of the territory.

A certain tension is identified by some ACS in both locations regarding the relationship with other health professionals. An ACS in Ethiopia reports: I try to discuss the cases at the health center, but they don't consider me very much...I think it's because I'm a CHW. In Brazil an ACS says that one of the difficulties she experiences is: Lack of partnership in the territory and help from professionals (CARDOSO, et al. 2020, p. 2933).

Table 2 below points out, for further elucidation, the difficulties raised during the compilation of the studies cited in Table 1, which presented the theme of the management of tuberculosis focused on the daily practices of community health workers:

Table 2: Survey of the difficulties experienced by CHWs related to the early capture of respiratory symptomatic patients in primary health care.

DIFFICULTIES EXPERIENCED BY ACS RELATED TO THE EARLY CAPTURE OF RESPIRATORY SYMPTOMATIC PATIENTS IN PRIMARY HEALTH CARE.	Introductory course of initial generic training (diagnosis of the area, portfolio of services, organization of the PHC), lasting one week, with 40 hours;
	Lack of continuous training to qualify the approach to the theme in the territory;
	Lack of knowledge about the side effects of drugs and their interactions;
	Lack of financial incentive to go to the health center to get the medications (sometimes the CHW tells the patient to come to the health center to get the medications);
	Lack of knowledge, especially in tracking absentees;
	Deviation from the function of this worker;
	Relationship with the other health professionals [...] they don't consider me very much... I think it's because I'm a CHW [...];
	Non-recognition of the role of the CHW as a professional problem identifier.

6 CONCLUSION

It is concluded that the lack of training and of continuing education for Community Health Agents is a difficulty in the early detection of respiratory symptomatic patients, since the level of knowledge they have reflects on the quality of home care and on the resoluteness of the search for respiratory symptomatic patients.

It was evidenced that the articulation of Primary Health Care with the community, organizations, partnerships, and local health councils, exhibit a limited capacity, requiring an improvement in the articulation of the units with the territory, for this reason it is necessary to understand the various factors that act as barriers to early detection of tuberculosis.

It was found that CHWs have considerable importance when it comes to the active search for respiratory symptomatic patients, dissemination of knowledge and information to users during home visits, taking into consideration that they have the role of health educators for the population, define themselves as the direct link between the health team and the community, and facilitate access to vulnerable regions.

Therefore, it is essential to incorporate training and continuing education for Community Health Agents, since they are directly linked to the community, besides involving this knowledge in the social, economic, and cultural context of the population.

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