Research Article
Artigo de Pesquisa
Artículo de Investigación

DOI: https://doi.org/10.12957/reuerj.2024.83269

Care Practices of Nurses Focused on Individuals with Pulmonary Tuberculosis in Eunápolis, BA, Brazil

Práticas de cuidado dos enfermeiros voltadas aos indivíduos com tuberculose pulmonar em Eunápolis-BA

Prácticas de cuidado del enfermero para personas con tuberculosis pulmonar en Eunápolis-BA

Jéssica Barbosa Ramos Bandeira Sena[I] *; Sonia Acioli*[I]

[I]*Universidade do Estado do Rio de Janeiro. Rio de Janeiro, RJ, Brazil*

ABSTRACT

Objective: to analyze the care practices of nurses aimed at individuals with pulmonary tuberculosis in the Family Health Strategy in Eunápolis, state of Bahia. **Method:** a qualitative study in which 15 nurses working in family health strategies in Eunápolis, Bahia, Brazil, were interviewed between June and July 2023. Data analysis was conducted using Bardin's content analysis. The research protocol was approved by the Research Ethics Committee. **Results:** the data generated two empirical categories: Nurses' care practices in the family health strategy and aspects of health care and their expression in care delivery. **Final considerations:** a careful examination of these professionals' training revealed that specializations are not directly related to the specific field of nurses in the Family Health Strategies. However, it also highlighted the crucial role of nurses in tuberculosis monitoring in the studied locality.

Descriptors: Primary Health Care; National Health Strategies; Nurses; Nursing Care; Tuberculosis.

RESUMO

Objetivo: analisar as práticas de cuidado dos enfermeiros voltadas aos indivíduos com tuberculose pulmonar na Estratégia de Saúde da Família em Eunápolis, Bahia. **Método:** estudo qualitativo, onde foram entrevistados 15 enfermeiros atuantes nas estratégias de saúde da família em Eunápolis, Bahia, Brasil, entre junho e julho de 2023. A análise dos dados foi realizada mediante a análise de conteúdo de Bardin. O protocolo de pesquisa foi aprovado pelo Comitê de Ética em Pesquisa. **Resultados:** os dados originaram duas categorias empíricas: Práticas de cuidado do enfermeiro na estratégia de saúde da família e Aspectos da atenção à saúde e sua expressão na produção do cuidado. **Considerações finais:** uma verificação cuidadosa da formação desses profissionais revelou que as especializações não estão diretamente relacionadas ao campo de atuação específico dos enfermeiros das Estratégias de Saúde da Família. Contudo, apontou também para um papel crucial dos enfermeiros no acompanhamento da tuberculose na localidade estudada.

Descritores: Atenção Primária à Saúde; Estratégia de Saúde da Família; Enfermeiras e Enfermeiros; Cuidados de Enfermagem; Tuberculose.

RESUMEN

Objetivo: analizar prácticas de cuidado del enfermero para personas con tuberculosis pulmonar en la Estrategia salud de familia en Eunápolis, Bahía. **Método:** estudio cualitativo con entrevistas a 15 enfermeros que trabajan en las estrategias salud de familia en Eunápolis, Bahía, Brasil, entre junio y julio de 2023. Análisis de los datos mediante el análisis de contenido de Bardin. El protocolo de investigación fue aprobado por el Comité de Ética en Investigación. **Resultados:** a partir de los datos surgieron dos categorías empíricas: Prácticas de cuidado del enfermero en la estrategia salud de la familia y Aspectos de la atención para la salud y manifestación en la producción del cuidado. **Consideraciones finales:** un análisis cuidadoso de la formación de estos profesionales reveló que las especializaciones no están directamente relacionadas con el campo específico de actuación de los enfermeros de las Estrategias Salud de la Familia. Sin embargo, también señaló que el enfermero desempeña un papel fundamental en el seguimiento de la tuberculosis en la localidad estudiada.

Descriptores: Atención Primaria de Salud; Estrategias de Salud Nacionales; Enfermeras y Enfermeros; Atención de Enfermería; Tuberculosis.

INTRODUCTION

The fight against tuberculosis (TB) remains a challenge for health professionals and systems. It is estimated that in 2019, approximately ten million people worldwide developed TB, and 1.2 million died from the disease [1]. Epidemiological reports indicate that in the first year of the COVID-19 pandemic, around 10.1 million people developed tuberculosis globally, but only 5.8 million (57.4%) were diagnosed and reported, representing an 18% reduction compared to 2019[2].

Brazil remains among the 30 countries with a high TB burden and TB-HIV coinfection, thus being considered a priority for global disease control actions by the World Health Organization (WHO)[2].

Corresponding author: Jéssica Barbosa Ramos Bandeira Sena. E-mail: jessicabrbandeiraa@gmail.com
Editor in Chief: Cristiane Helena Gallasch; Associate Editor: Magda Guimarães de Araujo Faria

Received: Apr 2nd 2024 – Accepted: Oct 22nd 2024

DOI: https://doi.org/10.12957/reuerj.2024.83269

This scenario highlights the need for strategies that can contribute to tuberculosis control, as medication efficacy alone does not ensure treatment success[3]. Primary Health Care (PHC), particularly within the Family Health Strategy (FHS), is tasked with actively seeking individuals suspected of having tuberculosis, diagnosing, monitoring, and treating cases[4].

Nurses systematically develop their care practices in assisting individuals with TB, acting as participatory and organizational agents in combating and controlling this disease[5]. It is important to emphasize that other team members must be engaged in this effort, with the primary goal of maintaining the health and well-being of individuals, families, and communities[6].

Given this context, for this study, the term "*care practices*" is understood as an expression where care is also considered a practice. Care emerges as a structural element in nursing practice, making it increasingly necessary to identify, study, understand, and analyze the care practices performed by nurses in the FHS[7].

In national scientific literature, there is limited bibliographic production related to nurse care in the FHS[8], which reinforces the need to reflect on nurses' care practices for individuals with pulmonary tuberculosis in the FHS.

Thus, this research poses the guiding question: What are the care practices performed by nurses for individuals with pulmonary tuberculosis in the context of the family health strategy in Eunápolis, BA?

The objective of this study was to analyze the care practices of nurses aimed at individuals with pulmonary tuberculosis in the Family Health Strategy in Eunápolis, state of Bahia, Brazil.

METHOD

This study followed the recommendations established by the Consolidated Criteria for Reporting Qualitative Research (COREQ).

This is a qualitative study conducted in the municipality of Eunápolis, located in the far south of Bahia, Brazil. The city has an estimated population of 113,710, with a population density of 84.97 inhabitants per km², making it the 16th most populous city in the state. Regarding labor activities and income, in 2020, the average monthly salary of formal workers was approximately 2.2 minimum wages (BRL 2,285.80), with only 20% of the population employed (n=22,914)[9].

The choice of this municipality was based on factors such as Eunápolis being considered a priority for tuberculosis control actions due to its high incidence rate, which was 51.88/100,000 inhabitants in 2019[10] and a primary care coverage of 97.98%. Additionally, due to the COVID-19 pandemic, cases were underreported, with an incidence rate of approximately 23.74/100,000 inhabitants in 2020[11], despite 100% primary care coverage.

The number of nurses working in FHS totals 41 workers[12], distributed among 36 health teams. Thus, 15 nurses agreed to participate; two were on vacation, four were off duty, eight abstained, and 12 were not contacted due to data saturation.

The data were produced through interviews guided by a semi-structured script developed in two stages. The first stage enabled the characterization of the professionals, and the second consisted of questions aimed at addressing the study's objectives, which served as the basis for developing the empirical categories. Data collection was conducted from June 15 to August 7, 2023, with each interview lasting an average of one hour. The interviews were recorded and transcribed into Microsoft Office Word, forming the corpus for analysis.

For data analysis, Laurence Bardin's Content Analysis technique[13] was chosen, with the Registration Units (RUs) extracted from segments of the interview transcripts.

The research protocol was approved by the ethics committee of the proposing institution on May 23, 2023, and by the Eunápolis City Hall through an institutional authorization term issued on February 13, 2023. All participants signed the Free and Informed Consent Form (FICF) and were informed about the study's objectives.

To maintain confidentiality, transcriptions were identified by the participant's category (N) associated with the interview order number.

DOI: https://doi.org/10.12957/reuerj.2024.83269

RESULTS AND DISCUSSION

The study included 14 female nurses and one male nurse, aged between 25 and 59 years. Regarding race/color, participants self-identified as white or mixed-race. All identified as heterosexual, with most being married and having children.

Regarding academic background, 12 professionals graduated from private institutions and three from public institutions. All had postgraduate courses at the specialization level in various fields, and one nurse held a master's degree.

Regarding employment type, seven professionals were statutory public employees, seven were hired under a Special Administrative Regime (*Regime Especial de Direito Administrativo* - REDA), and one was appointed. The length of service in the FHS ranged from six months to seven years

Regarding postgraduate courses, it is worth detailing them as presented in Table 1 since all professionals had two or more specialization courses, a factor that may influence or enhance the care practices offered by nurses.

Table 1: Postgraduate courses of nurses in the municipality. Eunápolis, BA, Brazil, 2023.

Postgraduate courses	n (%)
Stricto senso	
Master in Science in Nursing	1 (6.67)
Lato Sensu	
Public/Collective Health	8 (53.34)
Emergency/ICU	8 (53.34)
Administration, Management, and Planning	7 (46.67)
Nursing (Obstetric, Occupational, Dermatological)	8 (53.34)

The identified specialization courses do not align with the practical work of nurses in the FHS. There is heterogeneity in the pursuit of qualifications due to the fact that seven professionals are hired through REDA, a hiring process based on curriculum evaluation according to the number of postgraduate courses the professional holds, regardless of their field of practice.

From the analysis, coding resulted in a total of 501 RUs in the corpus. Thus, 32 Meaning Units (MU) were formed, which were regrouped into empirical categories: Nurses' care practices in the family health strategy and aspects of health care and their expression in care delivery.

Nurses' care practices in the family health strategy

This category addresses the daily activities of nurses in the FHS. Actions such as requesting additional tests, sputum smear microscopy, rapid molecular tests (RMT), health education with individuals, directly observed therapy (DOT), and team meetings are examples of this professional's routine within the FHS. During the discussion, some statements from nurses are presented to confirm the meaning attributed to the defined empirical category.

It was found that nurses' work is based on nursing consultations as a tool that enables interventions contributing to a better understanding of the individual's health situation. As nurses conduct person-centered nursing consultations, they establish a bond and ensure regular attendance by individuals and their families at the service[14], increasing the chances of cure discharge

> *Often, what we offer patients is our care; I take that moment to assess their knowledge about the disease so we can develop a care plan together. I've learned that dictating what they should do doesn't work—it's a partnership. (N 7)*

> *The nursing consultation is also important for establishing a bond between professional and patient, which greatly aids in care; patients feel more comfortable. (N 14)*

According to the results, nursing consultations are seen as a tool that brings professionals closer to individuals. The way FHS is organized—being individuals' first contact with the service—promotes bond formation

DOI: https://doi.org/10.12957/reuerj.2024.83269

between professionals and individuals with TB, fostering a closer and longer-lasting relationship throughout disease monitoring[15].

Nurses' care practices aimed at individuals with pulmonary tuberculosis reflect an approach focused on organizing assistance for individuals and their families by providing resources and means for case follow-up. Among the practices developed by nurses are requesting laboratory tests, performing diagnostic tests and case follow-up, and sharing necessary information with epidemiological surveillance for continued care. Nurses initiate treatment upon receiving positive sputum smear results, screen contacts and call them for nursing consultations, fill out relevant program records, conduct a preliminary socioeconomic assessment of individuals, and hold team meetings about cases.

> *In Eunápolis, there is considerable diagnostic support: I request sputum smear microscopy, RMT, sensitivity tests, and cultures; then there are laboratory tests to request; I try to perform HIV testing during the first consultation. (N 1)*

> *Usually, I attend to patients, notify them, and fill out the records. I like to hold team meetings to discuss cases—not to expose patients but to facilitate their access to the unit and me. (N 6)*

These practices attributed to nurses within the FHS align with Sanna's[16] explanation within the caregiving dimension. In this perspective, nursing care focuses on individuals, families, and communities—not just biological needs but also physical, psychological, and social demands.

As observed in the research results, most caregiving activities are mediated through nursing consultations. According to Federal Law No. 7.498/86, regulated by Decree No. 94.406/87, nurses can conduct consultations, prescribe medications, and request tests. Thus, this study indicates that nurses spend most of their time caregiving, performing interventions related to individuals' needs to provide comprehensive care.

The practices highlighted in this research also fall within the management dimension. As managers, nurses are responsible for planning, decision-making, supervision, and auditing—conditions that ensure efficient and effective care[16]. However, nurses' responsibilities within the FHS often limit their ability to manage teams and population health since they must divide their time between caregiving and unit management.

The health unit has support from two nurses: one acts as a health authority responsible for service management while the other dedicates time to individual care[17]. This reality differs from that of the studied municipality, where one nurse is responsible for all FHS demands. It is necessary to expand family health teams with more nurses so these two dimensions can be effectively carried out[18].

> *We try to follow up with patients as best we can. When they come to me, I assess how far I can go—whether I need to coordinate with other network points or if it's a case requiring my attention and that of a doctor, you know? Some patients can be managed alone; others require team care involving their families. (N 3)*

> *It's very rewarding to see patients cured after team-based care, you know?! Sometimes we collaborate with NASF because I have NASF here at my unit—they help me a lot. The doctor helps; the community health agent (CHA)... it's truly a partnership. (N 15)*

As nurses communicate with patients and their teams—evaluating the best therapeutic approach together—they make decisions that meet individuals' needs and manage care satisfactorily. Care management is a nurse's responsibility and relates to caregiving and administration; these two processes are not parallel but simultaneous[19].

Health education practices are developed in waiting rooms or during territorial actions through printed materials and pamphlets on tuberculosis or other means that convey relevant information about the disease and its care. Usually, this moment is not led by nurses; however, they organize it during team meetings since nurses also use their consultations for education.

> *So I handle health education during nursing consultations. Waiting rooms are managed by CHAs who also conduct this task in the community (N 5).*

DOI: https://doi.org/10.12957/reuerj.2024.83269

> *I work on this topic year-round—it's part of our team's routine. During team meetings, we schedule these talks; we develop them both inside and outside the unit—I hold waiting room sessions. (N 11)*

Waiting times between consultations can be long; this can cause anxiety and negative feelings toward services. This time should be better utilized for health education practices and interaction between patients and workers[17].

The health education methods presented suggest a traditional model of education. Waiting rooms are merely one resource for health education—open to new knowledge and experience exchanges[20]. It is through this knowledge construction that social transformation occurs—new habits are acquired and topics are reflected upon[21].

No teaching activities aimed at nurses or other team members were reported; however, it was mentioned that the municipal tuberculosis program coordinator was available for inquiries from nurses.

> *We haven't had training for a while now, but whenever I have a question, I call the coordinator for help. (N 4)*

> *We had a meeting where training needs were discussed but nothing was finalized. The coordinator is very accessible—when questions arise, I send her a message. (N 9)*

Nurses are expected to graduate ready for daily practice. The Ministry of Health's publications—National Plan to End TB and Nursing Protocol—emphasize the critical role of nurses in FHS but do not detail qualification processes necessary for effective performance. As nurses provide described care practices in results, they enable FHS to be an open-access space where spontaneous service-seeking can establish trust relationships that aims to mediate and to promote care.

The nurse serves as an important link connecting the individual with the entire healthcare team throughout the care process, making it possible to identify needs and refer patients to other levels of healthcare assistance. In this context, the Family Health Strategy (FHS) aims to bring healthcare closer to the population, with the nurse acting as a coordinating agent for the actions carried out by the service[17].

> *I enjoy working here at this unit; people seek care. In cases involving tuberculosis patients, we treat them here, but if referral is needed elsewhere, we manage it without much difficulty. (N 10)*

> *The FHS here is located in a very poor area. The population really uses the service, so depending on the patient's case I ask for help from CAPS (Psychosocial Care Center), NASF (Family Health Support Center), Street Clinic (Healthcare for Homeless People), POP Center (Specialized Reference Center for Homeless Population), municipal reference and even social assistance... Everyting to help the patient. (N 14)*

In addition to monitoring TB patients within FHS settings, nurses must be sensitive to referring them to other levels of care when appropriate[6]—ensuring necessary treatment without breaking ties with assigned units.

Nurses' care practices were active in welcoming and addressing individuals' health demands. Welcoming care is provided through qualified listening to individuals' needs, strengthening the bond and accessibility to health services[22].

Aspects of health care and their expression in care delivery

The second category emerged from meaning units identified as factors and challenges in developing nurses' care practices. Issues such as medical staff absence from population healthcare services; hospitals serving as entry points into healthcare; difficulty accessing services; care practices tied to medical practices; valuing medical referrals for continued care; expanding nurse access in care construction; and low adherence to TB control practices linked with passive case-finding shaped this category.

Results indicate medical staff absence from population healthcare services due to agreements related to working hours with municipal management, where doctors only work certain shifts within FHS settings. Thinking about FHS as a strategic model for expanding Primary Health Care—capable of positively reorienting healthcare practices toward individuals[23]—also requires committed professionals qualified for family health[24].

DOI: https://doi.org/10.12957/reuerj.2024.83269

> *Look—the doctor isn't here all day—they come for certain shifts—and this is agreed upon with management. Some patients arrive wanting only doctors. I try attending them, but sometimes only doctors will do, right? (N 4)*

> *It's hard because I don't always have doctors here. It is difficult for her to attend to a tuberculosis patient, so I usually take over because she is rarely available. Only when it's a complex case do I triage, request tests, and schedule her appointment in advance to make things easier for the patient. (N 13)*

Professionals working in family health strategies must operate as a team, know their area of operation, participate in territorialization, conduct situational diagnoses, and identify the social determinants of health for the assigned population, providing care both at the health unit and, when necessary, at home[23].

Another factor reported by nurses, related to the absence of medical professionals in healthcare facilities, is the inverted entry point for pulmonary tuberculosis cases. The inverted entry point means that individuals seek assistance at the municipal hospital, where cases are diagnosed and then referred to the corresponding FHS. The individual's first contact with the health service should be at the PHC level, and if necessary, they should be referred to another level of care while maintaining continuity of care[25].

Thus, the results indicate a failure to comply with one of SUS's (Unified Health System) principles: the hierarchical organization of care. This principle involves structuring health services into levels of care, ensuring access according to the complexity of the service[26].

> *I don't recall identifying a tuberculosis case myself. The patients I see already come with positive sputum smear results, usually from the regional hospital. (N 2)*

> *Generally, patients arrive with positive sputum sputum smear results, and I receive them and manage the treatment as recommended. (N 12)*

For more than 40 years, PHC has been recognized as the foundation of a responsive and effective system. Factors like "facilitating access," "health closer to the population," and "addressing social determinants" are the premises of family health teams' work[4]. However, the results of this research diverge from these points. The municipality of Eunápolis offers decentralized care for TB cases, with 36 family health teams[12] and 86.74% primary care coverage in 2023[11]. High investment in PHC requires satisfactory returns in response to the demands that arise at this level of care.

One strategy suggested for identifying tuberculosis cases is actively searching for respiratory symptomatic individuals in the community[4]. One professional involved in this process is the Community Health Agent (CHA), but nurses reported challenges in coordinating care due to uncovered areas without CHA coverage.

> *The CHAs are great partners; they support me through home visits, reinforcing the need for medication adherence or reminding patients of their return appointments... My main problem is that my uncovered area is large, and I can't manage to cover it all. (N 12)*

> *My team is excellent; I enjoy working here, but my big issue is the uncovered area. I've been here for four years, and the uncovered areas keep growing; I don't have enough CHAs. (N 13)*

The nurses' reports regarding CHA coverage differ from the coverage history in the *E-gestor* system. The municipality of Eunápolis has 90.78% CHA coverage[11]. CHAs are strong partners in the fight against tuberculosis and active agents in implementing DOT, positively influencing patient adherence and potential cure[6].

Another challenge pointed out by nurses was the difficulty in following up with pulmonary tuberculosis patients during the pandemic when care practices became unfeasible due to patients not attending appointments and FHS professionals being redirected to other levels of care.

> *The pandemic made TB treatment even more difficult; many patients abandoned treatment, and I still haven't managed to get them back. (N 1)*

> *It was a very challenging period during the pandemic. I had two patients at that time: one abandoned treatment, but I managed to get the other to complete it. It wasn't easy—I did teleconsultations, gave out my number, and even went to their house to deliver medication, but we succeeded. (N 5)*

Although social isolation was an important prevention measure for COVID-19[27], it impacted individuals undergoing pulmonary TB treatment, compromising care and leading to unfavorable outcomes[28]. While it was

DOI: https://doi.org/10.12957/reuerj.2024.83269

reported that the pandemic hindered access to the FHS and led to treatment abandonment, no mention was made of efforts to retrieve these individuals.

Despite factors like treatment abandonment during the pandemic, medical staff absence in some strategies, and pulmonary TB diagnoses being made in hospitals, people still seek the FHS when they experience prolonged coughs. Cough screening is a public health activity aimed at identifying individuals with pulmonary TB. This screening is conducted through active case-finding of respiratory symptomatic individuals in the community or when individuals seek healthcare services, known as passive case-finding[4].

> *This is not a quiet unit; patients come in with coughs, we collect samples, and they usually test positive. (N 09)*

> *I always have respiratory symptomatic cases here at the unit. Every week, I send a report on the samples. We discuss this topic a lot, so I think they're aware now. (N 14)*

Passive case-finding is based on: (I) individuals recognizing TB symptoms and spontaneously seeking healthcare; (II) healthcare professionals recognizing signs/symptoms and diagnostic suspicion criteria; and (III) healthcare professionals knowing diagnostic methods for detecting the disease[4].

The interviews also indicated low adherence to pulmonary tuberculosis control practices. Understanding the role of nurses and their importance in tuberculosis history, the documents "Manual of Recommendations for Tuberculosis Control in Brazil" (*Manual de Recomendações para o Controle da Tuberculose no Brasil*) and "Expanding the Role of Nurses in Primary Health Care" (*Ampliação do papel dos enfermeiros na Atenção Primária à Saúde*) were pillars for implementing the National Plan to End Tuberculosis as a Public Health Problem (*Plano Nacional pelo Fim da Tuberculose como Problema de Saúde Pública*) and supported the Nursing Protocol, which focuses on assisting nursing professionals in preventing and caring for TB patients in PHC[6].

Thus, nurses working in the FHS must be present at all stages of the care process for individuals with pulmonary tuberculosis, responsible for: (I) identifying respiratory symptomatic individuals; (II) requesting tests for diagnosing active TB and latent tuberculosis infection (LTBI); (III) initiating treatment for drug-sensitive TB by prescribing the basic regimen; among other tasks. Therefore, there is no need for a medical professional to identify and initiate treatment based on test results, as nurses are qualified to manage this entire process[6].

> *I have to admit that I'm falling short in these actions... I usually act when something comes from coordination. I know there are many cases in the municipality, and they're out there... they need to be found. (N 1)*

> *So, I don't do much. I give guidance during consultations and ask CHAs to inquire about coughs during visits, but I don't schedule any specific actions. (N 5)*

The World Health Organization (WHO) developed Agenda 2030, which includes 17 sustainable goals for countries to follow. Among these is Goal 3, specifically Target 3.3, which aims to end TB as a public health problem. Thus, efforts must be made to diagnose cases early and address their determinants.

Even though their responsibilities are supported by protocols, some nurses tie their care practices to medical practices. Even when individuals are referred by hospitals with diagnosis in hand, they are scheduled to see the unit doctor before having a nursing consultation and follow-up care. Despite Ministry of Health (MH) guidelines directing TB treatment, the nurses interviewed prefer to leave it to the unit doctor. The municipality does not have a municipal nursing protocol for TB cases, which may inhibit professional performance.

> *I don't start treatment myself; when patients arrive with test results, I refer them to the doctor to prescribe the medication. (N 1)*

> *I receive the patient, listen, notify, explain the disease and treatment process, but I only release the medication after the doctor prescribes it. (N 8)*

Research data show that while some nurses depend on medical professionals to initiate pulmonary tuberculosis treatment (basic regimen), others manage this care themselves based on test results, demonstrating autonomy in care and referring patients to other involved professionals. In this sense, nurses must equip themselves with knowledge-enhancing factors that increase their professional autonomy. This autonomy is part of nursing practice, and through it, nurses can make assertive care decisions[29].

DOI: https://doi.org/10.12957/reuerj.2024.83269

> *I have many tuberculosis cases here, so sometimes I request samples, and sometimes patients already arrive with hospital referrals... I don't waste time waiting for a doctor's appointment; I start treatment according to ministry protocols. (N 13)*

> *When I have doubts about a patient and the doctor isn't available, I check with the reference service for an appointment and refer them there for evaluation. (N 2)*

The municipality of Eunápolis has a municipal reference service for diagnosing children and extrapulmonary tuberculosis, as well as support for difficult-to-diagnose cases. As a result, many nurses refer individuals to this service even when cases could be managed within the FHS, seeking care from network infectious disease specialists and pulmonologists.

Thus, it is clear that in this study, reference and counter-reference (RCR) system is limited to referring individuals to specialists. RCR system is carried out superficially; a critical perspective is needed to understand the referral and counter-referral system and its applications[30].

> *Here we have a reference service, so I always request an appointment for my patient and also check with regulation for pulmonology appointments. It depends a lot—usually patients stay with me in the FHS, but when they use drugs or alcohol... they are better managed by the reference service because even scheduling exams becomes easier. (N 6)*

> *I don't have trouble requesting exams; my scheduler helps me a lot with TB patients. The problem is that the lab is very far from here, and patients often don't go because they have no way to get there. (N 9)*

> *It's a very complex situation here because scheduling complementary exams is already difficult, and when we manage it, patients don't go because the lab is too far away. They don't have transportation and miss the opportunity, which is very sad because we often treat blindly. (N 14)*

The study highlighted difficulties in accessing services, expressed through challenges in accessing exams and consultations due to labs or polyclinics being far from patients' homes. Access is guaranteed by Brazilian Public Health System (SUS); however, universal access to public health services does not always occur for all populations, especially those living in social vulnerability. Coverage can be understood as a possibility of obtaining care, but this possibility may or may not be realized[31], as seen with the barriers mentioned by nurses.

Given all these points, nurses recognize pulmonary tuberculosis as a disease with strong social determinants, marked by various factors that can lead to illness. It is evident that professionals possess this understanding, which highlights various aspects of individuals' living conditions that contribute to the health-disease process.

> *It's complicated—you see, better-educated individuals understand the effects of the disease and adhere well to treatment, but some don't care and abandon it, never returning. (N 6)*

> *There's also difficulty tracking private-sector patients—they arrive with all their tests done but deny having the disease. They refuse contact tracing or CHA visits and only come to pick up their medication. (N 11)*

Tuberculosis is associated with filth and promiscuity, and when someone falls ill, they become invisible—isolating themselves from family because they feel like disease vectors. To avoid exposure, they choose to hide their diagnosis[32]. The interviewed professionals recognize the stigmatizing burden surrounding tuberculosis, noting that many affected individuals delay seeking assistance, deny their symptoms, and feel embarrassed when diagnosed.

> *The stigma around the disease is significant. Patients themselves already arrive feeling responsible for others' illness; they are ashamed to admit they have TB. I've had patients leave their homes and live alone for a while—even after we reassured them that once their sputum smear was negative there was no more transmission risk—they still preferred isolating themselves from their families. One patient told me: How can I have tuberculosis? I don't have HIV; my house is clean and organized—how did I get this disease? Others ask not to have CHA visits because their neighbors might suspect something. (N 14)*

Although they recognize the stigmatizing aspect of the disease, these professionals' practices show little effort toward rationally addressing stigma with individuals. Family health professionals have a duty to support individuals burdened by stigma, helping them strengthen themselves and complete treatment[32].

DOI: https://doi.org/10.12957/reuerj.2024.83269

Documents from the Ministry of Health, such as the "Manual of Recommendations for Tuberculosis Control in Brazil" (*Manual de Recomendações e Controle da Tuberculose no Brasil*), in the second edition from 2019, as well as the National Plan and Nursing Protocols, acknowledge that stigma exists but provide little detail on how professionals can improve patients' conditions.

Study limitations

It is worth noting that the study was conducted with 15 nurses. The results revealed considerable aspects regarding care; however, the methodology for selecting interviewees, designed by the regional health department but carried out subject to availability, may allow for generalization of the findings. Therefore, it is essential to conduct further studies in different scenarios and contexts to analyze more comprehensively the practices aimed at individuals with tuberculosis in the municipality.

FINAL CONSIDERATIONS

A careful examination of professionals' training revealed diversity in their specialization courses. Many of these specializations are not directly related to their field of practice, which may significantly impact their care practices.

Nurses are actively involved in administering medications and nursing consultations, demonstrating competence and dedication in managing this disease. However, the study identified a significant gap: low adherence to tuberculosis diagnosis and control actions. This highlights the need to strengthen proactivity in case identification, aligning nurses' care practices with national and global guidelines for effective disease control.

The findings bring new insights into nursing practice, particularly regarding care dynamics and tuberculosis case flow within health systems. The inverted entry point reveals a weakness in timely tuberculosis case identification and underscores the importance of rethinking early diagnosis approaches in FHS settings.

Therefore, future studies focusing on developing interventions to improve active TB case-finding in primary care are imperative. This will contribute to more effective disease control and enhance SUS overall, benefiting the population of Eunápolis and neighboring regions facing similar challenges.

REFERENCES

1. World Health Organization (WHO). Global tuberculosis report. Geneva: WHO; 2021 [cited 2022 July 26]. Available from: https://www.who.int/teams/global-tuberculosis-programme/tb-reports.
2. Ministério da Saúde (Br). Boletim da tuberculose. Brasília: Ministério da Saúde; 2021 [cited 2022 Dec 26]. Available from: https://www.gov.br/saude/pt-br/centrais-de-conteudo/publicacoes/boletins/epidemiologicos/especiais/2020/boletim-tuberculose-2020-marcas-1.pdf/view.
3. Magalhães MAFM, Medronho RA. Spatial analysis of tuberculosis in Rio de Janeiro in the period from 2005 to 2008 and associated socioeconomic factors using micro data and global spatial regression models**.** Ciênc. saúde colet. 2017 [cited 2022 Sep 10]; 22(3):831-9. DOI: https://doi.org/10.1590/1413-81232017223.24132015.
4. Ministério da Saúde (Br). Secretaria de vigilância em saúde. Departamento de vigilância das doenças transmissíveis. Manual de recomendações para o controle da tuberculose no Brasil. Brasília: Ministério da Saúde; 2019 [cited 2022 Aug 18]. Available from: https://bvsms.saude.gov.br/bvs/publicacoes/manual_recomendacoes_controle_tuberculose_brasil_2_ed.pdf.
5. Silva NC, Lima EF, Costa RMF, Araujo EEM. Tuberculose: assistência de enfermagem na atenção básica. Rev Estácio Recife. 2020 [cited 2023 June 10]; 6(1):1-14. Available from: https://reer.emnuvens.com.br/reer/article/view/423.
6. Ministério da Saúde (Br). Secretaria de vigilância em saúde. Departamento de doenças de condições crônicas e infecções sexualmente transmissíveis. Tuberculose na atenção primária: protocolo de enfermagem. Brasília: Ministério da Saúde; 2022 [cited 2022 Sep 15]. Available from: https://www.gov.br/saude/pt-br/centrais-de-conteudo/publicacoes/svsa/tuberculose/tuberculose-na-atencao-primaria-a-saude-protocolo-de-enfermagem.pdf.
7. Ferreira VA, Acioli S. O cuidado na prática do enfermeiro no campo da atenção primária em saúde: produção científica. Rev. enferm. UERJ. 2009 [cited 2024 Jan 10]; 17(4):506-9. Available from: http://www.revenf.bvs.br/pdf/reuerj/v17n4/v17n4a09.pdf.
8. Acioli S, Kebian LVA, Faria MGA, Ferraccioli P, Correa, VAF. Nurses' work with children with cancer: palliative care. Rev. enferm. UERJ. 2014 [cited 2023 June 10]; 22(5):637-42. DOI: http://dx.doi.org/10.12957/reuerj.2014.12338.
9. Instituto brasileiro de geografia e estatística. Estimativas da população residente com data de referência 1 de julho de 2022. Brasília: IBGE; 2023 [cited 2023 Jan 10]. Available from: https://cidades.ibge.gov.br/brasil/ba/eunapolis/panorama.
10. Ministério da saúde (Br). Datasus. 2023 [cited 2023 Jan 10]. Available from: https://datasus.saude.gov.br/.
11. Ministério da Saúde (Br). Espaço para informação e acesso aos sistemas da atenção básica. Brasília: E-gestor ab; 2023 [cited 2023 Apr 17]. Available from: https://egestorab.saude.gov.br/.

12. Ministério da Saúde (Br). Cadastro nacional de estabelecimentos de saúde (CNES). Brasília: Ministério da Saúde; 2020 [cited 2023 Apr 17]. Available from: https://cnes.datasus.gov.br/.
13. Bardin L. Análise de conteúdo. São Paulo: Edições; 2011.
14. Cavalheiro AP, Silva CL, Veríssimo ML. Consulta de enfermagem à criança: atuação do enfermeiro na atenção primária à saúde. Enferm foco. 2021 [cited 2024 Jan 10]; 12(3):540-5. DOI: https://doi.org/10.21675/2357-707x.2021.v12.n3.4305.
15. Gomes ALC, Sá LD. The concepts of bonding and the relation with tuberculosis control. Rev. enferm. USP. 2009 [cited 2023 Jan 17]; 43(2):364-71. DOI: https://doi.org/10.1590/S0080-62342009000200016.
16. Sanna MC. Os processos de trabalho em enfermagem. Rev. Bras. Enferm. 2007 [cited 2023 Sep 13]; 60(2):221-4. DOI: https://doi.org/10.1590/S0034-71672007000200018.
17. Paula M, Peres AM, Bernardino E, Eduardo ED, Sade PMC, Larocca LM. Characteristics of the nurses' work process in the family health strategy. 2014 [cited 2024 Jan 10]; 18(2):463-70. Available from: http://www.revenf.bvs.br/pdf/reme/v18n2/en_v18n2a15.pdf.
18. Ferreira SRS, Périco LAD, Dias VRGF. The complexity of the work of nurses in Primary Health Care. Rev Bras Enferm. 2018 [cited 2023 Nov 13]; 71(Supl 1):704-9. DOI: http://dx.doi.org/10.1590/0034-7167-2017-0471.
19. Treviso P, Peres SC, Silva AD, Santos AA. Competências do enfermeiro na gestão do cuidado. Rev. Adm. Saúde. 2017 [cited 2023 Oct 15]; 17(69):1-15. DOI: http://dx.doi.org/10.23973/ras.69.59.
20. Teixeira ER, Veloso RC. O grupo em sala de espera: território de práticas e representações em saúde. Texto contexto – enferm. 2006 [cited 2024 Jan 17]; 15(2):320-5. DOI: https://doi.org/10.1590/S0104-07072006000200017.
21. Becker APS, Rocha NL. Ações de promoção de saúde em sala de espera: contribuições da psicologia. Mental. 2017 [cited 2024 Jan 17]; 11(21):339-55. Available from: http://pepsic.bvsalud.org/pdf/mental/v11n21/v11n21a04.pdf.
22. Franco TB, Bueno WS, Merhy EE. O acolhimento e os processos de trabalho em saúde: o caso de Betim, Minas Gerais, Brasil. Cad. Saúde Pública. 1999 [cited 2023 Aug 18]; 15(2):345-53. Avaiable from: https://www.scielo.br/j/csp/a/VRpYptVLKFZpcGFbY5MfS7m/?format=pdf&lang=pt.
23. Fertonani HP, Pires DEP, Biff M, Scherer MDA. The health care model: concepts and challenges for primary health care in Brazil. Ciênc. saúde coletiva. 2015 [cited 2023 Apr 23]; 20(6):1869-78. DOI: https://doi.org/10.1590/1413-81232015206.13272014.
24. Oliveira MPR, Carvalho IH, Menezes FA, Sousa LM, Peixoto MRG. Formação e qualificação de profissionais de saúde: fatores associados à qualidade da atenção primária. Rev Bras educ med. 2016 [cited 2024 Jan 28]; 40(4)547-59. DOI: https://doi.org/10.1590/1981-52712015v40n4e02492014.
25. Starfield B. Atenção básica: equilíbrio entre necessidades de saúde, serviços e tecnologia. 2002 [cited 2022 June 28]; Brasília: UNESCO, Ministério da Saúde. 710 p. Available from: https://bvsms.saude.gov.br/bvs/publicacoes/atencao_primaria_p1.pdf.
26. Casa Civil (Br)l. Lei nº 8.080, de 19 de setembro de 1990. Dispõe sobre as condições para a promoção, proteção e recuperação da saúde, a organização e o funcionamento dos serviços correspondentes e dá outras providências. Brasília: Presidência da República; 1990 [cited 2022 June 28]. Available from: https://www.planalto.gov.br/ccivil_03/LEIS/L8080.htm.
27. Nguyen TA, Cuong QN, Kim AL, Huong TN, Nguyen HN, Fox GJ, et al. Adapting a TB contact investigation strategy for Covid-19. The Union. 2020 [cited 2023 Oct 09]; 24(5):548-50. DOI: https://doi.org/10.5588/ijtld.20.0169.
28. Hino P, Yamamoto TT, Magnabosco GT, Bertolozzi MR, Taminato M, Fornari LF. Impacto da covid-19 no controle e reorganização da atenção à tuberculose. Acta Paul Enferm. 2021 [cited 2024 Jan 10]; 34:eAPE002115. DOI: https://doi.org/10.37689/acta-ape/2021AR02115.
29. Pires MRGM. The limitations and possibilities of nurses' work in the family health strategy: in the search for autonomy. Rev. esc. enferm. USP. 2011 [cited 2023 Apr 01]; 45(spe2):1710-5. DOI: https://doi.org/10.1590/S0080-62342011000800013.
30. Oliveira CCRB, Silva EAL, Souza MKB. Referral and counter-referral for the integrality of care in the Health Care Network. Physis. 2021 [cited 2023 Oct 25]; 31(1):e310105. DOI: https://doi.org/10.1590/S0103-73312021310105.
31. Noronha JC. Cobertura universal de saúde: como misturar conceitos, confundir objetivos, abandonar princípios. Cad saúde pública. 2013 [cited 2023 Oct 10]; 29(5):847-9. DOI: https://doi.org/10.1590/S0102-311X2013000500003.
32. Fernandes TSF, Pedrosa NS, Garcia MKQ, Silva AMBF. Estigma e preconceito na atualidade: vivência dos portadores de tuberculose em oficinas de terapia ocupacional. Physis. 2020 [cited 2023 Dec 12]; 30(1):e300103. DOI: https://doi.org/10.1590/S0103-73312020300103.

Author's contributions

Conceptualization, J.B.R.B.S. and S.A.; methodology, J.B.R.B.S. and S.A.; validation, J.B.R.B.S. and S.A.; formal analysis, J.B.R.B.S. and S.A.; investigation: J.B.R.B.S. and S.A.; resources, S.A; data curation, LJ.B.R.B.S. and S.A.; manuscript writing, J.B.R.B.S. and S.A.; writing – review and editing, J.B.R.B.S.; visualization, J.B.R.B.S. and S.A.; supervision, J.B.R.B.S. and S.A.; project administration, J.B.R.B.S. and S.A. All authors read and agreed with the published version of the manuscript.