Original Article

TEXTO & CONTEXTO ENFERMAGEM
TEXT & CONTEXT NURSING TEXTO & CONTEXTO ENFERMERÍA

DISCOURSES OF HEALTH PROFESSIONALS ON LATENT TUBERCULOSIS INFECTION AND THE USE OF ISONIAZID

Melina Mafra Toledo[1]
Ethel Leonor Noia Maciel[2]
Wildo Navegantes de Araújo[3]
Josenaide Engracia dos Santos[4]
Rozemere Cardoso de Souza[5]

[1]Fundação de Ensino e Pesquisa em Ciências da Saúde do Distrito Federal. Brasília, Distrito Federal, Brasil.
[2]Universidade Federal do Espírito Santo, Departamento de Enfermagem. Vitória, Espírito Santo, Brasil.
[3]Universidade de Brasília, Departamento de Saúde Coletiva, Campus Ceilândia. Brasília, Distrito Federal, Brasil.
[4]Universidade de Brasília, Faculdade Ciências da Saúde, Campus Ceilândia. Brasília, Distrito Federal, Brasil.
[5]Universidade Estadual de Santa Cruz, Departamento de Ciências da Saúde. Ilhéus, Bahia, Brasil.

ABSTRACT

Objective: to understand the collective thinking and action of health workers in relation to Latent Tuberculosis Infection and its treatment with Isoniazid.
Method: qualitative study with 22 health professionals from four cities in Brazil and the Federal District. Data collection occurred through a semi-structured group interview in March 2019, with an average duration of one hour and thirty minutes. Content analysis was performed using the Collective Subject Discourse technique.
Results: the professionals' discourses revealed uncertainties related to the prevention and treatment of Latent Tuberculosis Infection, the "fear of error" and inadequate forms of use of Isoniazid 300 mg, the power of the decision on the treatment of Latent Tuberculosis Infection, the difficulties of integration between services and the organization of care flows.
Conclusion: although the emphasis in the professionals' discourse considers objective aspects in the management of Latent Tuberculosis Infection, subjective manifestations related to the need to address the fears that affect the decision about treatment and possible medication errors were identified, among others, and to think about this process in a collaborative way, which considers autonomy in acting, both of professionals and of the person with Latent Tuberculosis Infection.

DESCRIPTORES: Latent tuberculosis. Tuberculosis. Isoniazid. Health professional. Cooperation. Adhering to drug treatment.

HOW CITED: Toledo MM, Maciel ELN, Araújo WN, Santos JE, Souza RC. Discourses of health professionals on latent Tuberculosis infection and the use of Isoniazid. Texto Contexto Enferm [Internet]. 2022 [cited YEAR MONTH DAY]; 31:e20220241. Available from: https://doi.org/10.1590/1980-265X-TCE-2022-0241en

DISCURSOS DE PROFISSIONAIS DE SAÚDE SOBRE INFECÇÃO LATENTE POR TUBERCULOSE E USO DE ISONIAZIDA

RESUMO

Objetivo: compreender o pensar e o agir coletivo de trabalhadores da saúde em relação à Infecção Latente por Tuberculose e ao uso da Isoniazida no enfrentamento da doença.
Método: estudo qualitativo com 22 profissionais de saúde de quatro cidades do Brasil e do Distrito Federal. A coleta de dados ocorreu mediante realização de entrevista coletiva semiestruturada, em março de 2019, com duração média de uma hora e trinta minutos. Realizou-se análise de conteúdo pela técnica do Discurso do Sujeito Coletivo.
Resultados: os discursos dos profissionais revelaram incertezas relacionadas à prevenção e ao tratamento da Infecção Latente por Tuberculose, ao "medo de errar" e formas inadequadas de uso da Isoniazida 300 mg, ao poder da decisão sobre o tratamento da Infecção Latente por Tuberculose, às dificuldades da integração entre os serviços e à organização de fluxos assistenciais.
Conclusão: embora a ênfase no discurso dos profissionais considere aspectos objetivos no manejo da Infecção Latente por Tuberculose, foram identificadas, dentre outras, manifestações subjetivas relacionadas à necessidade de trabalhar os receios que afetam a decisão sobre o tratamento e os possíveis erros de medicação, e de pensar esse processo de forma colaborativa, que considere autonomia no agir, tanto dos profissionais quanto da pessoa com Infecção Latente por Tuberculose.

DESCRITORES: Tuberculose latente. Tuberculose. Isoniazida. Pessoal da saúde. Cooperação. Adesão ao tratamento medicamentoso.

DISCURSOS DE PROFESIONALES DE LA SALUD SOBRE INFECCIÓN TUBERCULOSIS LATENTE Y USO DE ISONIAZIDA

RESUMEN

Objetivo: comprender el pensamiento y la acción colectiva de los trabajadores de la salud en relación con la Infección Latente de Tuberculosis y el uso de Isoniazida en el enfrentamiento de la enfermedad.
Método: estudio cualitativo con 22 profesionales de la salud de cuatro ciudades de Brasil y del Distrito Federal. La recolección de datos ocurrió a través de una entrevista colectiva semiestructurada, en marzo de 2019, con una duración promedio de una hora y treinta minutos. El análisis de contenido se realizó mediante la técnica del Discurso del Sujeto Colectivo.
Resultados: los discursos de los profesionales revelaron incertidumbres relacionadas con la prevención y el tratamiento de la Infección Tuberculosa Latente, el "miedo a equivocarse" y las formas inadecuadas de uso de Isoniazida 300 mg, el poder de decisión sobre el tratamiento de la Infección Tuberculosa Latente, las dificultades para la integración de servicios y la organización de los flujos de atención.
Conclusión: aunque el énfasis en el discurso de los profesionales considera aspectos objetivos en el manejo de la Infección Tuberculosa Latente, se identificaron manifestaciones subjetivas relacionadas con la necesidad de abordar los miedos que afectan la decisión sobre el tratamiento y posibles errores de medicación, entre otros, y pensar sobre este proceso de forma colaborativa, que considera la autonomía de actuación, tanto de los profesionales como de la persona con Infección Tuberculosa Latente.

DESCRIPTORES: Tuberculosis latente. Tuberculosis. Isoniazida. Personal sanitario. Cooperación. Adherencia al tratamiento farmacológico.

INTRODUCTION

The World Health Organization (WHO) estimates that 2 billion people worldwide have Latent Tuberculosis Infection (LTBI) and 10% of them may develop the active form due to the reactivation of the causative microorganism, *Mycobacterium tuberculosis*[1]. Overall, in 2020, 7 million contacts of bacteriologically confirmed pulmonary Tuberculosis (TB) cases were reported, of which 3.9 million (55%) were evaluated for both TB infection and the disease[2].

To reduce the development of active TB and eliminate infection worldwide, individuals with LTBI and their contacts should be treated appropriately[3–5]. The annual treatment of only 8% of these individuals would reduce the overall incidence by 14 times by 2050, compared to previous incidences, even in the absence of additional TB control measures[3].

Isoniazid (INH) is among the alternative treatments consistently recommended in preventive treatment for LTBI eradication: daily isoniazid for six or nine months[6–7]. This substance is able to reduce the risk of active TB illness by 60% to 90%. [8–9]

In Brazil, through the Unified Health System (SUS), 100 mg of INH is distributed for the treatment of LTBI for periods of six months or nine months. From 2018, the presentation of INH 300 mg was also available, aiming at better treatment adherence. In this case, depending on weight, the patient may decrease the intake of tablets from three (100 mg) to one (300 mg). [9]

The use of prophylactic treatment has gained increasing support worldwide by demonstrating a reduction in TB rates and preventing other negative outcomes in patients with comorbidities[10–11]. The number of people receiving preventive TB treatment has quadrupled since 2015, from 1 million in 2015 to more than 4 million in 2019[2,12].

However, the pandemic caused by COVID-19 in 2020 had a great impact on the management of active and latent TB, resulting from interruptions in services. Countries with high TB loads showed sharp decreases in notifications of this disease in 2020 and, consequently, in LTBI screenings and preventive treatment[2].

In Brazil, most losses in the TB and LTBI treatment process occur in the first steps: contact identification and referral for investigation[13–14]. A study highlighted that 43% of close contacts are identified and, of these, only 3% start receiving treatment[15]. Other research has shown that in countries such as India and Indonesia, where TB cases are managed in the private sector and have poor quality of care, the care cascade is compromised[16].

The identification of users with LTBI and their contacts are tasks that depend heavily on health workers, especially those who work in Primary Health Care, as this is an effective strategy for organizing the health system, care networks and coping with problems, through a multidisciplinary team and collaborative work[17].

However, the knowledge of health professionals is insufficient in relation to the epidemiological data of TB, the concepts about LTBI and the active location of cases, which interferes in the practices of coping and preventing the disease[18]. In this sense, the objective of this study was to understand the collective thinking and action of health professionals in relation to LTBI and the use of INH for its treatment.

METHOD

This is a descriptive study, with a qualitative approach.

The convenience sample consisted of 22 health workers who developed LTBI care, prevention, treatment and management actions in four cities in Brazil (Curitiba, Vitória, São Paulo, Belo Horizonte) and the Federal District (DF). The inclusion criteria were: minimum clinical experience of one year in the development of practices related to LTBI and the use of 300 mg INH and having a permanent contract with the public health agency at the time of the research. Workers who were on leave from work for medical or personal reasons were excluded from the study.

The participants were approached using the following steps: a) survey of possible participants by the project team in the health services of the Federal District. In the cities, the team had the support of the Ministry of Health to perform this stage and formalize the invitation to participate; b) sending the invitation by telephone contact or institutional email with contents related to: research objectives, data collection procedures, place of realization, ethical aspects, schedule and cost of daily travel to the DF. c) obtaining the Consent Form in response to the invitation letter. Two potential DF participants refused to participate due to unavailability of time; d) face-to-face meeting for interview. The research was carried out in a private space of the Oswaldo Cruz Foundation (Fiocruz) of DF/Brasília, Brazil. At this stage, there were still two dropouts due to emergency reasons, however it was possible to replace them with other professionals.

Data collection occurred in person in March 2019, through the semi-structured press conference, a technique chosen for facilitating the collection of collective testimonies, favoring the deepening of certain themes and the construction of meanings related to the object of study[19]. The interviews were conducted by a nurse researcher, a master in collective health, and three collaborators in the area of psychology, all with experience in qualitative research.

The participants, including physicians, nurses, biologists and epidemiological surveillance technicians, were divided into three groups for the group interview, which lasted an average of one hour and thirty minutes. The groups were organized by the criterion of similarity of the area of activity: group of managers, group of professionals working in Primary Health Care and group of professionals working in specialized health care (outpatient clinics, Emergency Care Units - UPAs - and hospitals).

The script of the semi-structured group interview included questions common to the three groups and specific to each group. A guiding script with spontaneous evocations was used to bring the research participants closer to reality in order to know their perceptions/meanings in relation to the disease and management of LTBI and the process of implementing INH 300 mg and the strategies used to overcome difficulties.

Previously, the test interviews were carried out with professionals working in care, specialized and management areas in order to adjust the evocative questions. There was no need to change the interviews, only the order of the questions was changed to facilitate the conduct of the interview and the understanding of the participants. By consensus of the researchers, data from the test interview were not included in the analysis.

The interviews were recorded and one of the collaborators recorded the emerging contents of the participants' speeches and nonverbal expressions during the group dynamics. To close the groups, the repetition of emerging contents was considered, without the introduction of new components related to the object of study.

In addition to the semi-structured collective interview, a form containing sociodemographic and occupational characteristics of the individuals (age, gender, length of time since graduation and length of time working in the unit) was used.

After transcription and review of the materials, the emerging contents of the groups were analyzed by the Collective Subject Discourse (CSD) technique, a methodological strategy that consists of a way of representing the thought of a collectivity, aggregating the contents with similar meanings emitted by different people in a summary-discourse.

The CSD captures the essential content, selects the most significant extracts of speech, which are classified by: Key expressions – summary of ideas and speeches, better signal the content of the answers; Central Idea - semantic label describing the meaning of a statement[19].

With the material of the Key Expressions of Central Ideas, synthesis discourses were constructed, in the first person of the singular, which configure the CSDs and express the thought of a group or collectivity, as if the collectivity were the emitter of the discourse.

The study was approved by the Research Ethics Committee and followed all ethical precepts of research with human beings.

RESULTS

Of the total of 22 participants, 80% were women. Regarding the age group, the mean interval was 45 years. The time in years of experience in the current position was, on average, eight years for primary care professionals and 11 and a half years for professionals in specialized care and management. Regarding the professional category, six physicians, one sanitarist, three pharmacists, nine nurses, two technicians in epidemiological surveillance and one biologist participated in the research.

The group of managers contained seven participants: three nurses (tuberculosis program coordinators), a sanitarist (Primary Care Service Manager), a pharmacist (Manager of a specialized unit) and a biologist (Municipal Health Manager).

The group of primary care professionals consisted of eight participants, five nurses and three physicians, all working in family and community health teams. The group of specialized care professionals had seven professionals distributed in the following categories: two nurses and a doctor from a hospital with a specialized TB service, and two physicians, a nurse and a pharmacist who worked in medium complexity specialized services.

The CSDs represent the perceptions, meanings and positions of professionals about LTBI and 300 mg of INH, from four Central Ideas, which will be presented below.

Central Idea 1: Uncertainties related to the prevention and treatment of LTBI

Professionals question about the treatment of LTBI, describe knowledge gaps about this process and the feeling that they lack arguments to convince patients to adhere (Chart 1), an aspect that can also interfere with the non-adherence of these professionals to the procedures established by the professionals. treatment protocols

Chart 1 - CSD on uncertainties related to prevention and treatment of LTBI.

CSD 1 **Key expressions= asymptomatic; prevention; tracing**
CSD 1 - *In fact, LTBI is unknown to professionals and patients. It even treats active TB, but the ILTB seems that this way the evaluation of contacts is very visual. It's not going through the whole process of doing the PPD, doing the X-ray. For example, the person who seeks the doctor, the professional warns that he is sick, but has no symptoms. So, "He's great." Huh? And then you'll explain that you had a reaction, right, no, in the PPD and then you mean he's infected? So we have this difficulty. How to treat latent infection? Do you have to treat latent infection?*

Central Idea 2: The “fear of error” and inadequate forms of using 300 mg of INH

The professionals’ discourse revealed fears and little familiarity with the use of INH 300 mg (Chart 2). The “fear of making mistakes” stands out in the steps that involve dispensing and/or administering the medication. The discourse also considered that errors of dispensing this substance, involving doses or incorrect forms, require greater efforts of professionals both in the physical identification of the medication and in the guidance with users.

Chart 2 - CSD on the “fear of error” and the inappropriate use of INH 300 mg.

CSD 2 **Key expressions= 300 mg of INH administration errors**
CSD 2 - *Wow, one pill causes confusion, imagine releasing the whole blister pack . What’s it going to be like? Isoniazid, it is already where we organize it together with the HIV stock, so as not to confuse. The doctor prescribed 100 milligrams, three times a day, but, in the professional’s mind, she could dispense with the 300 mg, took it, and dispensed it in the wrong way for the patient, that is, 900 mg. But we managed to resolve it with the patient. I get goosebumps, but I get goosebumps with these stories, because, look... I’ve already got a good doctor, that I know, who was a resident there at the hospital, giving me a basic regimen pill once a day. I’ve already had a pharmacist, a nurse, who told the patient to take the medicine every six hours. So I was worried about them taking the wrong thing. The fear of making mistakes is too great.*

Central Idea 3: Regarding the power of LTBI treatment decision

The professionals’ discourse reveals the medical hegemony in the decision regarding the treatment of LTBI with INH. In addition, the discourse speaks of individual decision, to the detriment of teamwork and the autonomy of other professionals regarding the best treatment (Chart 3). Therapeutic conduct does not include participatory dialogues, with recognition of all actors in the care process.

Chart 3 - CSD on the power of the decision to treat LTBI.

CSD 3 **Key expressions=prescription as a medical decision**
CSD 3 - *I talked last week with an infectologist[...] she said, “Do you really think you need to treat, A latent infection? You can’t keep making Isoniazid in the water tank for everyone to drink.” It’s just the doctor you treat. And he’s the one who does all the treatment. Just him. And so it wasn’t decentralized. A colleague of ours who retired who is infected who worked on the program, she tried hard to talk to colleagues, from the SAE itself, about the need for the HIV patient to have the LTBI, but we feel resistance.*

Central Idea 4 - Disarticulation of services, care flows and network organization

The discourse of the professionals relates the importance of building care networks for the care of patients with LTBI (Chart 4). However, in daily professional life, health services are disarticulated at different levels of health care, impacting the absence of definition and monitoring of care flows.

Chart 4 - CSD on the disarticulation of services, care flows and network organization.

CSD 4 Key expressions= articulation of health care networks
CSD 4 - *There really is this difficulty of flows, right? So, I think that this conversation between networks, or protocol to organize, is also missing. There's the flow there. "Oh nice!" I send the patient there... But when the patient gets there, he often doesn't make it, it's not quite the way we imagine. So we have no idea of the processes. When you're in the specialty, you have no idea what it's like in Primary Care. So, there is a gap for us in relation to Primary Care at the secondary level. We don't have a flow, we don't have a line of care.*

DISCUSSION

The discourse of health professionals reveals barriers to the treatment of LTBI, evidenced by the central ideas that speak of uncertainties, limitations and failures in the management of the best therapeutic approach. And not only that, professionals revealed doubts whether people in this condition should be monitored. This understanding converges with a study carried out in three Brazilian capitals with a high incidence of TB. Of the total sample of participating nurses and physicians, high percentages did not consider it important to investigate the presence of tuberculosis and LTBI in child (46%) and adult (49%) contacts[18].

Another explanation for the uncertainties of professionals regarding the treatment of LTBI can be given by the fact that individuals with this infection are asymptomatic and, therefore, clinically undetectable. As with any preventive health service, it can be difficult to treat people with LTBI who are asymptomatic and feel healthy[20].

Although there is global recognition of the importance of screening and treatment for LTBI, with INH being the most used monotherapy[4], such uncertainties have direct implications for the control and elimination of the disease and also for the low adherence of patients to the recommended protocols, which is commonly related to the lack of knowledge about the real need for treatment and the possible consequences of the evolution to active tuberculosis, as well as the development of multidrug-resistant bacteria[21].

Converging with the bibliographic study on adherence/non-adherence to patient treatment, the analysis of this discourse leads to a reflection on the co-responsibility of professionals in solving problems involving this process, and also on the need to overcome a reduced conception of the submissive role of both the patient, to think of him as an active subject of his way of living and living with the disease and the treatment[22], as well as the professional, when he receives, in a vertical way, care protocols, without them being products of a co-participatory construction.

Adherence to treatment depends, among many factors, on the relationship established between the professional and the person undergoing treatment, the way the person understands the disease, the organization of care (flows), modern health and social policies. Thus, the possibilities for coping with tuberculosis are diverse, however, it is important to outline them considering the existing resources and the involvement of key actors[21]. In this way, health care can transcend the culture of reductionist interventions to the biological/clinical plan, and moving towards the culture of joint intervention projects between teams and health services[17].

The professionals' discourse also revealed specific limitations related to the clinical management of LTBI. The first one refers to the possible errors given by the new presentation of the 300 mg INH. In Brazil, until 2017, only 100 mg of INH was available. The availability of both dosages by the health network, with similarities in presentation and packaging, in the design of the CSD, seems to induce

administration and dose errors, discouraging the use of the new technology for the treatment of LTBI. Thus, the discourse expresses little familiarity with the new prescription and fears about making errors in dispensing and handling the medication.

Medication errors involve complex issues, and can be related to professional practice and products, such as failures in packaging, procedures and health systems[23]. In addition, health professionals usually associate failures in their activities with shame, loss of prestige and fear of punishment, and tend to underreport the problem[24].

It is important to emphasize that medication errors are also the main cause of preventable damage to health systems around the world. The global goal would be to reduce by 50% serious and preventable harm related to drugs by the year 2023. The development of safe and efficient health systems at each stage of the process depends on this[25], the understanding of why and how people make mistakes and of how systemic factors decisively influence human failures. Thus, the fears in the professionals' discourse suggest the need to raise awareness about the occurrences, their causes and, especially, the pertinent measures to be taken regarding the possibilities of medication failure, within the scope of individual efforts, protocols and existing systems.

Another limitation expressed in the professionals' discourse concerns the medical hegemony in the treatment decision, which implies non-autonomy of other professionals, much less of the patient, whose opinion is not mentioned in the discourse. Autonomy is related to "respecting the interest of each person in living their life according to their conception of what is good"[26:2], and this, in the field of health, speaks of the professional purposes and identity, as well as the users of the services.

According to the recommendations of care protocols in the country[21,27–28],the responsibility for the treatment of LTBI/TB lies with the multiprofessional team, and in cases of TB, the drug prescription can also be attributed to the nurse. Regarding the LTBI, this prescription is exclusive to the doctor, as the discourse says, which does not prevent dialogues or sharing the decision with other team professionals.

Within the Scope of the Brazilian SUS, the comprehensive approach provides for a collaborative care practice, composed of various knowledge, where individuals can make and participate in the choices about care. Therefore, the discourse of the professionals points to a complex challenge regarding the construction of the relational autonomy of teamwork and the role of users[26].

Finally, limitations and flaws in the discourse about the flow of care are highlighted. The professionals' speech revealed poor communication and consequent disarticulation between the services for the care of users. Such difficulties are particularly aggravating patient compliance. Therefore, the importance of care flows aims to ensure that the needs of users are fully met, with flexibility, adapting these needs to the itinerary that the person needs to do within an organized network[28]. Thus, these care flows should not be constructed by verticalized management models[29].

Care management requires a collective action of several actors and is linked to the organizational dimension, a process that defines flows, protocols and standards of care[30]. In this process, interprofessional education is a strategy that can favor a collaborative practice, between services of the health care network and between these and professionals from other sectors, in the adoption of integrated systems[17].

Such administrative aspects constitute the first and most important component of strategies for the control of LTBI[31]. However, studies that address adherence in the treatment of LTBI emphasize the risks of toxicity and adverse reactions of INH[32–33], to the study of biomarkers that may better predict the progression of the disease or the difference between TB and LTBI[34]. Thus, treatments that can be shorter and safer, such as four-month regimens of rifampicin or a nine-month regimen of INH, or combined use of this substance with the INH[33,35]. The authors recommend basic and clinical research to overcome barriers related to drug reactions, and prevent the spread of the disease through the treatment of LTBI.

In turn, the present study advances knowledge by seeking to understand the issue of coping with LTBI from the perspective of health professionals and managers on the new treatment protocol with INH. The main contribution of the study to the field in which it is inserted is that the daily life of professionals is linked to symbolic and social values that affect adherence/non-adherence to LTBI treatment. The thinking and acting of these professionals urgently need to be considered in the design of care protocols, transmuting the role of executors into protagonists, co-responsible for care.

The study has limitations regarding the power of generalization restricted to its scope, regarding the temporal context, that is, the dynamics with which the protocols are modified and recommended, and also regarding the approach focused on technical and operational aspects. New studies are suggested related to management models, the process of building care protocols and subjective assessments of health work, involving all actors. Investing in these aspects is also a necessary move to strengthen the practice and advance in the treatment and follow-up of the person with LTBI.

CONCLUSION

Health professionals perceive the treatment of LTBI from technical and operational issues, which express uncertainties, barriers and failures in the management of care protocols recommended in the use of INH, despite the evidence on the benefits of this substance for the adequate confrontation of the infection and disease prevention.

Although the emphasis in the professionals' discourse considers objective aspects in the management of LTBI, among other subjective manifestations, the need to address the fears that affect the decision about treatment and possible medication errors were identified, and to think about this process in a different collaborative manner, which considers autonomy in acting, both for professionals and for the person with LTBI.

The possibilities of transforming this panorama are related to the improvement of the structural and organizational aspects of the services and to the articulation of the key actors of the health system, with interprofessional education being a way to create these changes, as well as the movements for the fabric of the network of comprehensive and collaborative care.

REFERENCES

1. World Health Organization. Latent tuberculosis infection: updated and consolidated guidelines for programmatic management [Internet]. Geneva: World Health Organization; 2018 [cited 2020 Feb 04]. Available from: https://www.who.int/publications/digital/global-tuberculosis-report-2021/covid-19
2. World Health Organization. Global tuberculosis report 2021 [Internet]. Geneva: World Health Organization; 2021 [cited 2022 Jan 14]. Available from: https://www.who.int/publications/i/item/9789240037021
3. Haley CA. Treatment of latent tuberculosis infection. Microbiol Spectr [internet]. 2017 [cited 2019 Feb 12];5(2). Available from: https://doi.org/10.1128/microbiolspec.TNMI7-0039-2016
4. Anton C, Machado FD, Ramirez JMA, Bernardi RM, Palominos PE, Breno C, et al. Latent tuberculosis infection in patients with rheumatic diseases. J Bras Pneumol [Internet]. 2019 [cited 2020 Jun 23];45(2):e20190023. Available from: http://doi.org/10.1590/1806-3713/e20190023
5. D'Ambrosio L, Bothamley G, Caminero Luna JA, Duarte R, Guglielmetti L, Muñoz Torrico M, et al. Team approach to manage difficult-to-treat TB cases: Experiences in Europe and beyond. Pulmonology [Internet]. 2018 [cited 2022 Nov 01];24(2):132-41. Available from: https://doi.org/10.1016/j.rppnen.2017.10.005

6. Ministério da Saúde (BR). Tratamento diretamente observado (TDO) da tuberculose na atenção básica: protocolo de enfermagem [Internet]. Brasília: Secretaria de Vigilância em Saúde; Departamento de Vigilância Epidemiológica; 2011 [cited 2020 Jan 10]. Available from: https://bvsms.saude.gov.br/bvs/publicacoes/tratamento_diretamente_observado_tuberculose.pdf

7. Centers for Disease Control and Prevention. Treatment Regimens for Latent TB Infection [Internet]. 2020 [cited 2021 Jan 10]. Available from: https://www.cdc.gov/tb/topic/treatment/ltbi.htm

8. Ministério da Saúde (BR). Manual de recomendações para o controle da tuberculose no Brasil [Internet]. Brasília: Secretaria de Vigilância em Saúde; Departamento de Vigilância das Doenças Transmissíveis; 2019 [cited 2021 Feb 18]. Available from: https://bvsms.saude.gov.br/bvs/publicacoes/manual_recomendacoes_controle_tuberculose_brasil_2_ed.pdf

9. Ministério da Saúde (BR), Comissão Nacional de Incorporação de Tecnologias de Saúde no SUS. Relatório de recomendação Isoniazida utilizada para tratamento da tuberculose (TB): comprimidos de 300 mg [Internet]. Brasília (DF): Ministério da Saúde; 2018 [cited 2019 Feb 12]. Available from: http://conitec.gov.br/images/Relatorios/2018/Relatorio_INH300_InfeccaoLatente_MycobacteriumTuberculosis.pdf

10. Ross JM, Badje A, Rangaka MX, Walker AS, Shapiro AE, Thomas KK, et al. Isoniazid preventive therapy plus antiretroviral therapy for the prevention of tuberculosis: a systematic review and meta-analysis of individual participant data. Lancet HIV. [Internet]. 2021 [cited 2021 Dec 02];8(1):e8-e15. Available from: https://doi.org/10.1016/S2352-3018(20)30299-X

11. Menzies D, Adjobimey M, Ruslami R, Trajman A, Sow O, Kim H, et al. Four months of rifampin or nine months of isoniazid for latent tuberculosis in adults. N Engl J Med [Internet]. 2018 [cited 2020 Nov 02];379(5):440-53. Available from: https://doi.org/10.1056/nejmoa1714283

12. Harding E. WHO global progress report on tuberculosis elimination. Lancet Respir Med [Internet]. 2019 [cited 2020 Jun 25];8(1):19. Available from: https://doi.org/10.1016/S2213-2600(19)30418-7

13. Trajman A, Wakoff-Pereira MF, Ramos-Silva J, Cordeiro-Santos M, Hill PC, Menzies D, et al. Knowledge, attitudes and practices on tuberculosis transmission and prevention among auxiliary healthcare professionals in three Brazilian high-burden cities: a cross-sectional survey. BMC Health Serv Res [Internet]. 2019 [cited 2020 Jan 15];19(1):532. Available from: https://doi.org/10.1186/s12913-019-4231-x

14. Souza AB, Arriaga MB, Amorim G, Araújo-Pereira M, Nogueira BMF, Queiroz ATL, et al. Determinants of losses in the latent tuberculosis infection cascade of care in Brazil. BMJ Glob Health [Internet]. 2021 [cited 2022 Feb 18];6:e005969. Available from: https://gh.bmj.com/content/6/9/e005969

15. Salame FM, Ferreira MD, Belo MT, Teixeira EG, Cordeiro-Santos M, Ximenes RA, et al. Knowledge about tuberculosis transmission and prevention and perceptions of health service utilization among index cases and contacts in Brazil: Understanding losses in the latent tuberculosis cascade of care. PLoS One [Internet]. 2017 [cited Jan 2020];12(9):e0184061. Available from: https://doi.org/10.1371/journal.pone.0184061

16. Subbaraman R, Nathavitharana RR, Mayer KH, Satyanarayana S, Chadha VK, Arinaminpathy N, et al. Constructing care cascades for active tuberculosis: a strategy for program monitoring and identifying gaps in quality of care. PLoS Med [Internet]. 2019 [cited 2021 Feb 02];16(2):e1002754. Available from: https://doi.org/10.1371/journal.pmed.1002754

17. Peduzzi M, Agreli F. Trabalho em equipe e prática colaborativa na Atenção Primária à Saúde. Interface (Botucatu) [Internet]. 2018 [cited 2022 Jun 12];22(Suppl 2):1525-34. Available from: https://doi.org/10.1590/1807-57622017.0827

18. Ramos J, Wakoff-Pereira MF, Cordeiro-Santos M, Albuquerque MFM, Hill PC, Menzies D, et al. Conhecimento e percepção de médicos e enfermeiros em três capitais brasileiras com alta incidência de tuberculose a respeito da transmissão e prevenção da doença. J Bras Pneumol [Internet]. 2018 [cited 2020 Jun 23];44(2):168-70. Available from: https://doi.org/10.1590/S1806-37562018000000019

19. Lefevre F. Discurso do sujeito coletivo. Nossos modos de pensar. Nosso eu coletivo. São Paulo, SP(BR): Andreoli; 2017.

20. Hannah A, Dick M. Identifying gaps in the quality of latent tuberculosis infection care. J Clin Tuberc Other Mycobact Dis [Internet]. 2020 [cited 2021 Jun 12];18:100142. Available from: https://doi.org/10.1016/j.jctube.2020.100142

21. Ministério da Saúde (BR). Tuberculose na atenção primária: protocolo de enfermagem. [Internet]. Brasília: Secretaria de Vigilância em Saúde; Departamento de Doenças de Condições Crônicas e Infecções Sexualmente Transmissíveis; 2022 [cited 2020 Jan 12]. Available from: https://www.gov.br/saude/pt-br/centrais-de-conteudo/publicacoes/publicacoes-svs/tuberculose/tuberculose-na-atencao-primaria-a-saude-protocolo-de-enfermagem.pdf

22. Sicsú AN, Gonzales RIC, Mitano F, Sousa LO, Silva LMC, Ballestero JGA, et al. Práticas de enfermagem centradas no indivíduo com tuberculose: interface com a democracia. Rev Bras Enferm [Internet]. 2019 [cited 2021 Jun 12];72(5):1284-90 Available from: http://doi.org/10.1590/0034-7167-2017-0380

23. Maia JLB, Batista RFL, Rosa MB, Melo JB, Silva FM, Carneiro S. Fatores associados erros de dispensação de medicamentos: contribuição à melhoria de sistemas de medicação. Rev Enferm UERJ [Internet]. 2019 [cited 2021 Jun 12];27:e44633. Available from: http://doi.org/10.12957/reuerj.2019.44633

24. Menegueti MG, Garbin LM, Oliveira MP, Shimura CMN, Guilherme C, Rodrigues RAP. Errors in the medication process: proposal of an educational strategy based on notified errors. J Nurs UFPE online. [Internet]. 2018 [cited 2021 Jun 12];11(Suppl 5):2046-55. Available from: https://pesquisa.bvsalud.org/portal/resource/pt/bde-31500

25. World Health Organization. Medication Without Harm - Global Patient Safety Challenge on Medication Safety [internet]. Geneva: World Health Organization; 2018 [cited 2021 Feb 20]. Available from: https://www.who.int/initiatives/medication-without-harm

26. Peres MAA, Paim L, Brandão MAG. Autonomia profissional como centralidade em Boas Práticas de Enfermagem. Rev Bras Enferm [Internet]. 2020 [cited 2022 Jan 15];73(2):e20180373. Available from: http://doi.org/10.1590/0034-7167-2018-0373

27. Ministério da Saúde (BR). Protocolo de vigilância da infecção latente pelo *Mycobacterium tuberculosis* no Brasil [Internet]. Brasília: Secretaria de Vigilância em Saúde; Departamento de Vigilância das Doenças Transmissíveis; 2018 [cited 2020 Feb 02]. Available from: https://bvsms.saude.gov.br/bvs/publicacoes/protocolo_vigilancia_infeccao_latente_mycobacterium_tuberculosis_brasil.pdf

28. Ministério da Saúde (BR). Linha de cuidado da tuberculose: orientações para gestores e profissionais de saúde [Internet]. Brasília: Secretaria de Vigilância em Saúde; Departamento de Doenças de Condições Crônicas e Infecções Sexualmente Transmissíveis; 2021 [cited 2021 Jun 12]. Available from: https://bvsms.saude.gov.br/bvs/publicacoes/linha_cuidado_tuberculose_orientacoes_gestores_profissionais_saude.pdf

29. Santos AM. Redes regionalizadas de atenção à saúde: desafios à integração assistencial e à coordenação do cuidado [Internet]. Salvador, BH(BR): EDUFBA; 2018 [cited 2022 Jan 30]. Available from: https://doi.org/10.7476/9788523220266

30. Villa TCS, Brunello MEF, Andrade RLP, Orfão NH, Monroe AA, Nogueira JA, et al. Management capacity of primary health care for tuberculosis control in different regions of Brazil. Texto Contexto Enferm [Internet]. 2018 [cited 2022 Jun 12];27(4):e1470017. Available from: http://doi.org/10.1590/0104-07072018001470017

31. Christof C, Nußbaumer-Streit B, Gartlehner G. WHO Guidelines on tuberculosis infection prevention and control. Gesundheitswesen [Internet]. 2020 [cited 2021 Jan 26];82(11):885-9. Available from: https://www.thieme-connect.com/products/ejournals/html/10.1055/a-1241-4321

32. Chung SJ, Lee H, Koo GW, Min J-H, Yeo Y, Park DW, et al. Adherence to nine-month isoniazid for latent tuberculosis infection in healthcare workers: a prospective study in a tertiary hospital. Sci Rep [Internet]. 2020 [cited 22 Nov 2022];10:6462. Available from: https://doi.org/10.1038/s41598-020-63156-8

33. Menzies D, Adjobimey M, Ruslami R, Trajman A, Sow O, Kim H, et al. Four months of rifampin or nine months of isoniazid for latent tuberculosis in adults. N Engl J Med [Internet]. 2018 [cited 22 Nov 2022];379(5):440-53. Available from: https://doi.org/10.1056/nejmoa1714283

34. Chee CBE, Reves R, Zhang Y, Belknap R. Latent tuberculosis infection: Opportunities and challenges. Respirology [Internet]. 2018 [cited 30 Oct 2022];23(10):893-900. Available from: https://doi.org/10.1111/resp.13346

35. Sun HY, Huang YW, Huang WC, Chang LY, Chan PC, Chuang YC, et al. Twelvedose weekly rifapentine plus isoniazid for latent tuberculosis infection A multicentre randomised controlled trial in Taiwan. Tuberculose [Internet]. 2018 [cited 01 Nov 2022];111:121-6. Available from: https://doi.org/10.1016/j.tube.2018.05.013

NOTES

ORIGIN OF THE ARTICLE

Article extracted from the thesis – Collective discourse: knowledge, attitudes and practices towards latent tuberculosis infection (ILTB) and treatment with isoniazid 300 mg, presented to the Graduate Program in Collective Health of the Faculty of Health Sciences, Universidade de Brasília, in 2021

CONTRIBUTION OF AUTHORITY

Study design: Maciel ELN, Araujo WN, Santos JE.
Data collection: Toledo MM, Santos JE.
Data analysis and interpretation: Toledo MM, Santos JE, Souza RC.
Discussion of results: Toledo MM, Santos JE, Souza RC, Araujo WN.
Writing and/or critical review of the content: Toledo MM, Santos JE, Souza RC.
Review and final approval of the final version: Toledo MM, Santos JE, Souza RC.

ACKNOWLEDGMENT

The authors thank the financial support of the Brazilian Ministry of Health - National Tuberculosis Control Program (PNCT).

FUNDING INFORMATION

The present work had the financial support of the Brazilian Ministry of Health - National Tuberculosis Control Program (PNCT). Mandate No 25000.060989/2018-79 -CGPNCT/DEVIT/SVS/MS TED 47/2018

APPROVAL OF ETHICS COMMITTEE IN RESEARCH

Approved by the Ethics Committee in Research of the Universidade Federal do Espírito Santo, Opinion no.3,029,507 Certificate of Presentation for Ethical Appreciation - CAAE: 88226218.0.1001.5060

CONFLICT OF INTEREST

There is no conflict of interest.

EDITORS

Associated Editors: Laura Cavalcanti de Farias Brehmer, Ana Izabel Jatobá de Souza.
Editor-in-chief: Elisiane Lorenzini.

HISTORICAL

Received: September 26, 2022.
Approved: November 07, 2022.

CORRESPONDING AUTHOR

Melina Mafra Toledo
melina.toledo@escs.edu.br