

# CUIDADO É FUNDAMENTAL

UNIVERSIDADE FEDERAL DO ESTADO DO RIO DE JANEIRO • ESCOLA DE ENFERMAGEM ALFREDO PINTO

RESEARCH

DOI: 10.9789/2175-5361.rpcfo.v13.9614

## TUBERCULOSIS TREATMENT FROM THE PERSPECTIVE OF INCARCERATED INDIVIDUALS IN A MAXIMUM SECURITY UNIT

Perspectiva do tratamento da tuberculose por pessoas privadas de liberdade em uma unidade de segurança máxima

Perspectiva del tratamiento de la tuberculosis por prisioneros en una prisión de máxima seguridad

Jéssica Lorena Palmeira de Morais<sup>1</sup>, Lázaro dos Santos<sup>2</sup>, Karinna de Abreu Lima<sup>3</sup>, Jancelice dos Santos Santana<sup>4</sup>, Josilene de Melo Buriti Vasconcelos<sup>5</sup>, Karelline Izaltemberg Vasconcelos Rosenstock<sup>6</sup>.

### Como citar este artigo:

Morais JLP, Santos L, Lima KA, Santana JS, Vasconcelos JMB, Rosenstock KIV. Tuberculosis treatment from the perspective of incarcerated individuals in a maximum security unit. 2021 jan/dez; 13:907-911. DOI: <http://dx.doi.org/0.9789/2175-5361.rpcfo.v13.9614>.

### ABSTRATC

**Objective:** the objective of this study is to analyze the challenges encountered and establish a directly observed tuberculosis treatment in a maximum security penitentiary. **Method:** a qualitative approach was adopted for the exploratory descriptive study. **Results:** the respondents' contributions indicate an exclusionary environment for those diagnosed with tuberculosis and fear of cross contamination. Knowledge about the disease is minimal, but treatment is eagerly accepted. However, a multidisciplinary team is not available to continually accompany the directly observed treatment. **Conclusion:** in light of these findings it the implementation of effective health promotion, prevention and recuperation measure for the detainees have therefore become necessary.

**DESCRIPTORS:** Tuberculosis; Treatment; Prisoners; Prisons; Nursing.

### RESUMO

**Objetivos:** caracterizar o tratamento diretamente observado da tuberculose entre as pessoas privadas de liberdade, em um presídio de segurança máxima, e identificar os desafios por elas vivenciados. **Método:** trata-se de um estudo de caráter exploratório-descritivo, com abordagem qualitativa. **Resultados:** constatou-se que os discursos dos entrevistados apontam para um cenário de exclusão dos indivíduos

- 1 Student of the Nursing Undergraduate Course at UNIESP University Center . João Pessoa(PB). Brazil.
- 2 Student of the Nursing Undergraduate Course at UNIESP University Center. João Pessoa (PB). Brazil.
- 3 Graduation Course at Universidade Federal da Paraíba (UFPB). Title of Specialist in Nursing Oncology by the Brazilian Society of Nursing Oncology.
- 4 Undergraduate course at the Federal University of Paraíba. Master's and Doctorate in Nursing by the Federal University of Paraíba (UFPB).
- 5 Graduation Course by the Federal University of Paraíba. Specialist in Training of Human Resources for Educational Research by the Federal University of Paraíba (UFPB), Master in Public Health Nursing by the UFPB and PhD in Fundamental Nursing by the School of Nursing of Ribeirão Preto - USP.
- 6 Graduation Course by the Federal University of Paraíba (UFPB). Master in Health Care Nursing by the Federal University of Paraíba.

DOI: 10.9789/2175-5361.rpcfo.v13.9614 | Morais JLP, Santos L, Lima KA et al. | Tuberculosis treatment from the perspective of incarcerated...

com diagnóstico de tuberculose e o medo de contaminação cruzada. Há conhecimento mínimo sobre a doença e boa aceitação ao tratamento. No entanto, não há equipe multidisciplinar para acompanhar o tratamento diretamente observado continuamente. **Conclusão:** mediante o exposto, faz-se necessário implementar ações eficazes de promoção, prevenção e recuperação de saúde do apenado.

**DESCRIPTORIOS:** Tuberculose; Tratamento; Prisioneiros; Prisões; Enfermagem.

## RESUMEN

**Objetivo:** el presente análisis tuvo como objetivo caracterizar el tratamieto observado directamente de la tuberculosis entre las personas privativas de libertad em una prisión de máxima seguridad e identificar los desafios que experimentaron. **Método:** es un estudio exploratorio descriptivo com um enfoque cualitativo. **Resultados:** fue probado que, para los entrevistados, hay un encenario de exclusion social de las personas acometidas con diagnostico de tuberculosis y el miedo de contaminación cruzada. Hay básico conocimiento de su tratamiento, pero no hay equipo especializado para aplicar adecuadamente los procedimientos adoptados de la tuberculosis. **Conclusión:** em consecuencia, es necessário implementar acciones más efectivas de prevención y cura para los individuos que cumplen sentencia de prisión.

**DESCRIPTORIOS:** Tuberculosis; Tratamiento; Prisioneros; Prisiones; Enfermería.

## INTRODUCTION

It is estimated that about 10.4 million people have developed tuberculosis (TB) worldwide in the last decade, but there are still about 4.3 million underreported cases.<sup>1</sup> Considered a disease socially determined by poverty, represented by individuals living in closed communities, such as prisons, asylums, shelters, asylums, drug users, and beggars, TB is a disease that is widely treated by the Sistema Único de Saúde (SUS), but it is still a disease that deserves a closer look at the low-income population living in extreme poverty, as well as individuals who are inmates serving custodial sentences.

TB is an infectious communicable disease that primarily affects the lungs, although it can affect other organs and systems. It is transmitted through the upper airways through *Mycobacterium tuberculosis* or Koch's bacillus, through droplets of saliva from positive bacillifers, and can present in two forms: pulmonary TB and extrapulmonary or miliary TB. The pulmonary form, besides being more frequent, is also the most relevant to public health, especially the bacilloscopy positive form, since it is the main responsible for maintaining the chain of disease transmission. The miliary or extrapulmonary form is classified according to its location, affecting other organs such as the pleura, peripheral ganglia, bones, joints, genitourinary system, meninges, and encephalus; it occurs more frequently in people living with HIV, especially those with immunological impairment.<sup>2</sup>

In 2014, Brazil was one of the countries that proposed a new post-2015 TB prevention, care and control guideline during the World Health Assembly (WHA), with the goals of reducing the incidence coefficient to less than 10 cases per 100,000 inhabitants and reducing the number of deaths per TB by 95%.<sup>1</sup>

Brazil is one of the 30 high-burden countries prioritized by the World Health Organization (WHO) and ranks 20th in absolute number of cases, with an incidence of 41 cases per 100,000 inhabitants and a mortality rate of 2.7 deaths per 100,000 inhabitants.<sup>3</sup>

Confining people deprived of their liberty (PDL) in a country with high or medium endemicity of TB like Brazil, in overcrowded and poorly ventilated environments, has as an immediate consequence the amplification of transmission and hyperendemicity so that the risk is not restricted to the people affected by the disease, but extends to their families, to professionals who carry out their activities in prisons and to the communities where PDL will be inserted after the sentence is served.<sup>4</sup>

The increase in the prison population is a phenomenon observed in several countries, including Brazil. In 2012, there were in Brazil 548,003 thousand prisoners, and now, according to data from the National Prison Monitoring Bank(NOMB 2.0), this resulted in the registration of 602 thousand prisoners, almost all of the PDL in the country.<sup>5</sup> Thus, the excessive growth of the prison population in the country does not correspond adequately to all the physical and personal structure that the penitentiaries require for a good functioning.<sup>6</sup>

As the prison population grows, infectious and communicable diseases multiply more and more. The spread of contagious diseases, especially HIV/AIDS and TB infection, is a serious risk to the health of inmates and is of significant magnitude. The impact of TB on prisons is not limited to inmates, but also affects the community with which they are related, i.e., family members and prison staff, during and after detention. Walls are irrelevant in view of the triviality of the movement of individuals between the prison system and the community. In addition to frequent transfers, the delay in identifying inmates suspected of having TB, and the carelessness of control and therapy procedures have favoured the outbreak of the disease in prisons.<sup>4</sup>

Considering the sociological aspect that the convicted person already carries in himself, due to his condition of being an individual who serves a custodial sentence, it is deduced that this individual is negatively stigmatized and excluded from society from the moment he commits any illicit act foreseen in the Brazilian penal code. In addition to the discrimination and exclusion from society due to the fact that he is a PDL, there is an additional stereotype when this individual is a TB carrier and serves a sentence in a closed or semi-open regime, at which time he is trying to reintegrate into society.

Individuals in a prison environment make up a group vulnerable to infection by various infectious agents, highlighting the need for public actions, including strategies, that take into account the health demand of prisoners in the prison system. In addition, the individual with infectious diseases is disabled for full social acceptance, reinforcing the idea of stigmatization and discriminatory aspects existing in the prison environment.<sup>7</sup> Although the PDLs have been considered a population at risk for the dissemination and

control of TB since 1944, when studies conducted in various parts of the world indicated a higher prevalence and incidence of TB in the prison population than in the general population, in Brazil it was only in 2003, through the National Health Plan for the Prison System, that activities and goals for TB control in this population were established that did not differ from those for the general population, following the general norms of the National TB Control Program (NCP). Even if treatment is offered by the State and the Unified Health System for the PDL, there is no way to avoid the spread of TB in Brazilian penitentiaries, since overcrowding weakens the system and it is not possible to have control of infected penitentiaries and possible transmissions.

In the light of these findings, the following questions have arisen: Is there Directly Observed Treatment (DOA) of TB for PLP? What are the challenges faced by PLWP in terms of directly observed TB treatment?

This study aims to characterize TB OCD among people deprived of their liberty in a maximum security prison and to identify the challenges they face.

## METHOD

It is an exploratory-descriptive study with a qualitative approach.

For this, three steps were adopted for the research: 1) choice of population and sample; 2) data collection; 3) data analysis.

The study site was a Maximum Security Penitentiary located in João Pessoa, Paraíba. After the initial contact for research authorization, the only nurse in that unit reported that in a prison population composed of 316 convicts, according to the medical records, eight convicts were infected with TB under treatment. The following criteria were considered for sample selection: living in private freedom in the maximum security unit selected for the study, being a carrier of pulmonary TB, being in use of the antibiotics used in DOTS, and accepting to participate in the study. Thus, six inmates infected with TB participated in the study, two refused to participate.

The data was collected in April 2019, through a semi-structured, recorded interview, consisting of two parts, the first relating to socio-demographic data and the second to the guiding questions: Do you think the State provides the necessary treatment for your disease? How is your treatment followed up? Does a health professional supervise the taking of the medicine?

The language material was analyzed by the content analysis technique in the thematic modality, respecting the following steps: Pre-analysis, Exploration of the material and treatment of the results/inferences/Interpretation.<sup>8</sup> For the preservation of the anonymity of the participants, identification codes were used, where "PA" corresponds to the apenado, followed by the number of the sequential realization of the interviews.

It is worth noting that the research took into consideration the ethical aspects contained in Resolution No. 466/12 of the National Health Council that regulates research with human beings, in force in the country, as well as authorized

by the management of the aforementioned prison unit and approved by the Ethics and Research Committee with an opinion under CAAE No. 11731319.4.0000.5184..

## RESULTS AND DISCUSSION

Of the six TB-infected inmates, all were male, aged 20 to 40, with incomplete primary schooling.

Comparing the data obtained with the Nurse responsible for the penitentiary, it could be seen that there was a 38% reduction in the rate of TB inmates in the prison unit investigated in the last four years. It was found that there is a 100% rate of cure of the convicts who follow all treatment offered by the State, however, it should be noted that these convicts who have reached the cure, all served sentence in closed regime, thus ensuring the completion of complete treatment, ie six months, being divided the first two months the intensive phase and the last four months the maintenance phase of treatment.

Although the treatment was not carried out in accordance with the rules established by the Ministry of Health, due to the incompatibility of the prison nurse responsible for following all the procedures required by the TDO, it was found that all the convicts of the closed regime obtained a cure, unlike the convicts who won the conditionality of the semi-open regime.

It is important to emphasize that to achieve success in the implementation of TB control actions, arrangements are needed that enhance early diagnosis and treatment of the disease. Thus, it is observed that the care in TB must be organized to ensure the success of the actions developed and professionals who act efficiently.<sup>9</sup>

Among the actions for the identification and investigation of TB, the Ministry of Health is implementing a new technology for the diagnosis of TB: the Molecular Quick Test (MQT-TB). The sensitivity of this test is about 90% (while that of the smear is 65%), the specificity is 99% and the result is released in just two hours, favoring the timely initiation of conventional treatment. In addition, TRM-TB also detects resistance to rifampicin, one of the main drugs used in the treatment of TB, which makes it possible to identify cases of resistance to the basic scheme, reducing the time needed to start treatment with 2nd line drugs. Together with OCT and the medications used in the treatment of TB, it is possible to develop more efficient practices to help control TB.<sup>1</sup> It was also found that the active search for respiratory symptoms in the prison environment is a frequent and daily conduct carried out by the health team and other penitentiary agents. Among the convicts there is the habit of reporting any type of TB-related symptoms in the environment or cell in which they are housed.

Recognizing TB control as one of the priority actions in the prison environment implies providing conditions for the prevention and control of this condition, which should be done by planning truly integral interventions from the promotion of the active search for respiratory symptoms and better conditions in the prison environment. By itself,

an environment of confinement with overpopulation, poor ventilation and lighting, exposes the prison population to a greater risk of aerial transmission of the bacillus. This inequality in exposure to disease is the result of social fragilities inherent to the individual himself, as well as this space, where overcrowding, poor ventilation, precarious nutrition, drug consumption and associated diseases coexist with precarious or non-existent health services.<sup>10</sup>

In AP1 and AP2 it is possible to check the knowledge about the most common symptoms of the disease:

*When we are coughing a lot and feeling very cold we call the agent and he takes us to the nurse, she does an exam there that tells us to spit from inside and waits there for the result. (AP1)*

*There are some colleagues who are ashamed to say that they are coughing too much and cold, so we call the agent and let him know, right? Because if he has a serious illness he'll get the medicine and won't pass it on to us.. (AP2)*

According to the Ministry of Health protocol, the most common symptoms of pulmonary TB are: persistent productive cough (mucus and eventually blood) or not, fever, night sweating and weight loss. In the physical examination, lymphadenomegaly can also be found, sometimes related both to the presence of concomitant extrapulmonary TB and to the existence of HIV coinfection. In addition to pulmonary TB, coughing can also occur in a large number of other diseases, such as acute respiratory infections, asthma, and chronic obstructive pulmonary disease. Because of this, most of the guides that guide the time of initiation of the diagnostic evaluation of pulmonary TB in areas with moderate prevalence of disease use the "cough time" criterion associated with the "cough symptom" to define an individual as a suspect for TB. Considering these aspects, a person who has a cough for three weeks or more is defined as a suspect in the presence of pulmonary TB (and with indication for a diagnostic investigation).<sup>1</sup>

In the current scenario of confronting TB, it is indisputable and indispensable the investigation by the health team and, beyond them, the participation of the populations affected by the problem. Knowing the signs and symptoms of the disease is a basic condition for making the diagnosis, and it is also necessary for identifying therapeutic efficacy or evidence of failure. Thus, the recognition of the disease clinic is intrinsic to the achievement of early diagnosis and a sine qua non condition for the control of the condition, providing for the insertion of trained and committed professionals in the health services.<sup>9</sup>

Studies indicate that the nurse should receive the patient in treatment against TB in the best possible way, respecting the context in which the patient lives.<sup>11</sup> Acting in this way the patient will feel more confident to continue the treatment, because the bonds will be strengthened, not only with the patient and the nursing professional, but also with the family

of the patient who is fundamental in this healing process. When this interaction exists, the patient recognizes its importance, acting positively in his recovery, thus reinforcing the commitment to continuity of treatment. This goes beyond medical issues, there are other areas that are also affected by the disease, such as the psychosocial dimensions, thus requiring a careful and differentiated look by the nurse in assisting this patient.

From the investigation of this study it was found that there is no multidisciplinary health team in the penitentiary investigated in this study, overloading only one nurse to meet all the demand for testing and distribution of medication for the treatment of TB and other health problems in the unit, and that this also leads to a deficiency in the health services provided in the prison unit.

Specifically with regard to the performance of the health care team in the care of patients with TB in prison, the literature points out that the team's work process should be operated in compliance with the DOTS (Directly Observed Treatment Short-Course) pillars: case detection by smear, standardized treatment of short duration and directly observable, regular supply of medication, registration system that ensures the evaluation of treatment and political commitment to TB control. Therefore, it is necessary to articulate the prison system with the health system and to have multiprofessional teams qualified to manage this problem inside the prisons.

In the process of TB investigation and treatment, the health team should take into consideration clinical, epidemiological, and psychosocial aspects, noting that these indications will depend on the stage of the disease and the degree of patient involvement.<sup>1</sup> In this sense, the discourse of some of the interviewees in this study points to a scenario of exclusion of individuals diagnosed with TB and the fear of contamination of others:

*I don't think my colleagues leave me aside, they support us when we discover the disease and even help us remember to take the medicine every day. (AP1)*

*I feel good, the nurse gives the medicine to us the first time and then it is the agent who brings it, but I do not feel excluded. (AP2)*

*Apparently I don't think they're prejudiced against me, not if they are. But some are afraid to catch the disease. (AP3)*

*There are some who are afraid to catch the disease, but they don't treat us badly. The medicine comes right, and when it's almost over, you let us know. The cell mates give support and that helps. (AP4)*

As explained above, it is essential to understand the feelings reported by the patient diagnosed with TB during



the interview, since the disease is associated with the stigma of isolation and prejudice, resulting in the rejection of family members and cellmates, in addition to changes in the ability to resume social and work roles due to the physical limitations caused by TB. In addition, the feeling of denial of the disease may be present and interfere with the medication treatment instituted, causing anger, anxiety, apprehension and irritability.<sup>1</sup>

In the accompaniment of the treatment of a TB sufferer, nursing must become a reference of support and promotion of dialogue and moments of listening, trying to understand the anxieties and longings of the individual, in order to alleviate these feelings. Aspects of humanization should be valued and, at times, the professional nurse should demystify TB, seeking also to have contact with cellmates and relatives of TB carriers, in order to pass correct information about the treatment and transmission of the disease.<sup>12</sup>

Therefore, in order for the nursing care of the patient with TB to take place in a qualified manner, it is up to this professional to try to make a difference, treating the patient in a holistic manner, always trying to clarify his/her doubts so that the dialogue takes place in a clear manner so that he/she understands the importance of adherence to the treatment, always helping the patient in the organization of medications.<sup>11</sup> Whenever possible, the treatment should be closely supervised by the health team, thus ensuring its effectiveness. Once the patient gains confidence in the health care professional, it is easier to provide adequate guidance, comprehensive care, and care, involving multidisciplinary staff, with a view to quality of care and promotion of the health of the TB patient.

## CONCLUDING REMARKS

It was evidenced that the treatment for TB is provided by the State, however, the treatment directly observed is not performed as recommended by the Ministry of Health, since there is a deficiency in the cadre of health professionals to supervise the taking of the drugs on a daily basis, being performed only for those who are convicted.

From the present work, it is assumed that the Brazilian prison system needs to evolve in the promotion and prevention of penitentiary health, making available a team of health professionals daily in the penitentiaries, offering not only medicines for self administration, but a treatment duly accompanied by health professionals willing to offer a quality service to a certain group of individuals excluded from society.

The results of the study reveal that even though there is no health team performing OCT on a daily basis, the cure and treatment acceptance rate is highly positive, reaching 100% of infected convicts on a closed regimen, with the exception of convicts who have progressed to the semi-open regimen. It was noticed during the interview that there is still a certain fear of the other convicts in the cell to live with the colleague with TB, but that there is also a certain support on the part of the convicts for the colleague to do the treatment correctly, there is a certain companionship between them. Most responded that they consider the cell in which they live adequate for the

treatment of their disease, even knowing that the population of these cells are far above normal.

## REFERENCES

1. Brasil. Ministério da Saúde. Secretaria de Vigilância em Saúde. Manual de Recomendações para o controle da tuberculose no Brasil. 2 ed. Brasília: Ministério da Saúde; 2019. [acesso em 08 jun 2020]. Disponível em: <http://portalarquivos2.saude.gov.br/images/pdf/2018/marco/19/APRES-PADRAO-JAN 2018-REDUZIDA.pdf>.
2. Magnabosco, GT, Andrade, RLP, Arakawa, T, Monroe, AA, Villa, TCS. Desfecho dos casos de tuberculose em pessoas com HIV: subsídios para intervenção. *Acta Paul. Enferm. (Online)*. [Internet]. 2019 [acesso em 11 de março 2020]; 32(5). Acesso em: <https://doi.org/10.1590/1982-0194201900077>.
3. World Health Organization (WHO). Global Tuberculosis Report 2018. [Internet] Geneva: WHO; 2018 [acesso em 08 jun 2020]. Disponível em: [https://www.who.int/tb/publications/global\\_report/en/](https://www.who.int/tb/publications/global_report/en/).
4. Navarro, PD, Almeida, IN, Kritski, AL, Ceccato, MG, Maciel, MMD, Carvalho, WS et al. Prevalence of latent Mycobacterium tuberculosis infection in prisoners. *J. bras. pneumol.* [Internet]. 2016 [acesso em 08 jun 2020]; 42(5). Disponível em: <https://doi.org/10.1590/S1806-37562016000000001>.
5. Brasil. Ministério da Justiça. Conselho Nacional de Justiça. Banco Nacional de Monitoramento das Prisões. Brasília: Ministério da Justiça; 2019. [acesso em 08 jun 2020]. Disponível em: <https://www.cnj.jus.br/86450-2/>.
6. Brasil. Ministério da Justiça. Conselho Nacional de Justiça. Brasília: Ministério da Justiça; 2019. [acesso em 08 jun 2020]. Disponível em: [https://www.cnj.jus.br/wp-content/uploads/2019/09/d40a3d24ad-793d0ae21bbaee253bfec\\_61aa3a00e9e4d974e6d8f1c2ab594ff3.pdf](https://www.cnj.jus.br/wp-content/uploads/2019/09/d40a3d24ad-793d0ae21bbaee253bfec_61aa3a00e9e4d974e6d8f1c2ab594ff3.pdf).
7. Telma T, Sam SR, Karinna K, Andreia A. Vulnerabilidade de pessoas privadas de liberdade ao vírus da imunodeficiência humana. *Rev. cuba. enferm.* [Internet]. 2019 [acesso em 08 jun 2020]; 34(4). Disponível em: <http://revenfermeria.sld.cu/index.php/enf/article/view/1571/400>.
8. Minayo MC de S, Deslandes SF, Gomes R. Pesquisa Social. Teoria, método e criatividade. Petrópolis: Vozes; 2009.
9. Cavalcante, EFO, Silva, DMGV. Nurses' Commitment To The Care Of Tuberculosis Patients. *Texto & contexto enferm.* [Internet]. 2016 [cited 2020 Mar 11]; 25(3). Available from: <http://dx.doi.org/10.1590/0104-07072016003930015>.
10. Valença MS, Possuelo LG, Cezar-Vaz MR, Silva PEA da. Tuberculose em presídios brasileiros: uma revisão integrativa da literatura. *Ciênc. Saúde Colet.* [Internet]. 2016 [acesso em 11 de março 2020]; 21(7). Acesso em: <https://doi.org/10.1590/1413-81232015217.16172015>.
11. Rego, CCD, Macedo SM de, Andrade CRB de, Maia VF, Pinto JTJM, Pinto ESG, et al. Pessoa Com Tuberculose Na Atenção Primária. *Rev. baiana enferm.* [Internet]. 2015 [acesso em 08 de junho 2020]; 29(3). Acesso em: <http://dx.doi.org/10.18471/rbe.v29i3.13038>.
12. Queiroga T, Hamad G, Dark A, Souza R, Santos R. Papel da enfermagem ao idoso portador da tuberculose: relato de experiência. In: *Anais do 4º Congresso Internacional de Envelhecimento Humano*, 2015; Campina Grande: Editora Realize; 2015. P 24-26.

Received in: 19/12/2019

Required revisions: 26/06/2020

Approved in: 18/01/2021

Published in: 01/07/2021

### Corresponding author

Jessica Lorena Palmeira de Moraes

Address: Rodovia BR 230, Km 14, s/n, Morada Nova  
Cabedelo/PB, Brazil

Zip code: 58.109-303

Email address: [jessicapalmeira@hotmail.com](mailto:jessicapalmeira@hotmail.com)

Telephone number: +55 (83) 99905-5505

Disclaimer: The authors claim to  
have no conflict of interest.