

## COMPLETENESS OF NURSES' RECORDS IN THE CARE OF PEOPLE WITH TUBERCULOSIS: A TREND STUDY

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### ABSTRACT

**Objective:** to assess the completeness and tendency of non-completeness of the records of nurses in the care of people with tuberculosis followed up in Primary Health Care.

**Method:** this is a descriptive, documentary, retrospective study, with quantitative approach, developed in family health units of a municipality in the state of Paraíba. It took place between July and September 2020. A sample of 190 medical records was delineated, selected by sampling in two stages: proportionality and systematic probabilistics. The collected data were analyzed using the R software, assuming a significance level of 5%. Descriptive statistics, Pareto Chart and trend analysis were used.

**Results:** completeness classification was predominantly "very bad" (76.9%), with a higher percentage of non-completion for the indicators: prejudice (91.1%), preliminary findings (85.2%), absenteeism in consultations (80.8%), family history of tuberculosis (74.7%) and psychosocial aspects. They showed a trend of significant non-completion ascending: lifestyle and conditions of life ( $p=0.0088$ ) and physical examination ( $p=0.0352$ ). The only indicator with a trend of significant non-completion descending was Prejudice ( $p=0.0077$ ).

**Conclusion:** unsatisfactory completeness and a predominantly ascending trend towards non-completion of records was found, indicating points to be prioritized in public health interventions due to their importance in the production of indicators in tuberculosis management in Primary Health Care that can influence decision-making.

**DESCRIPTORS:** Nursing. Nursing records. Tuberculosis. Health evaluation. Quality of health care. Primary health care.

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# COMPLETUDE DOS REGISTROS DE ENFERMEIROS NO CUIDADO À PESSOA COM TUBERCULOSE: ESTUDO DE TENDÊNCIA

## RESUMO

**Objetivo:** avaliar a completude e a tendência de não completude dos registros de enfermeiros no cuidado às pessoas com tuberculose acompanhadas na Atenção Primária à Saúde.

**Método:** estudo descritivo, documental, retrospectivo, com abordagem quantitativa, desenvolvido nas Unidades de Saúde da Família de um município do estado da Paraíba. Realizou-se entre julho e setembro de 2020. Delineou-se uma amostra de 190 prontuários, selecionados por amostragem em duas etapas: proporcional e probabilística sistemática. Os dados coletados foram analisados mediante o *software* R, admitindo-se nível de significância de 5%. Empregou-se estatística descritiva, Diagrama de Pareto e análise de tendência.

**Resultados:** observou-se classificação de completude predominantemente “muito ruim” (76,9%), com maior percentual de não completude para os indicadores: preconceito (91,1%), achados propedêuticos (85,2%), absenteísmo em consultas (80,8%), histórico familiar de tuberculose (74,7%) e aspectos psicossociais. Apresentaram tendência de não completude significativa crescente: estilo e condições de vida ( $p=0,0088$ ) e exame físico ( $p=0,0352$ ). O único indicador com tendência de não completude significativa decrescente foi Preconceito ( $p=0,0077$ ).

**Conclusão:** constatou-se completude insatisfatória e tendência predominantemente crescente para não completude dos registros, assinalando pontos a serem priorizados nas intervenções de saúde pública em razão de sua importância na produção de indicadores no controle da tuberculose na Atenção Primária à Saúde que podem influenciar a tomada de decisão.

**DESCRITORES:** Enfermagem. Registros de enfermagem. Tuberculose. Avaliação em saúde. Qualidade da assistência à saúde. Atenção primária à saúde.

# INTEGRIDAD DE LOS REGISTROS DE ENFERMERAS EN EL CUIDADO DE PERSONAS CON TUBERCULOSIS: ESTUDIO DE TENDENCIAS

## RESUMEN

**Objetivo:** evaluar la completitud y la tendencia de incompletitud de los registros de enfermeras en la atención de personas con tuberculosis seguidas en Atención Primaria de Salud.

**Método:** estudio descriptivo, documental, retrospectivo, con enfoque cuantitativo, desarrollado en las Unidades de Salud de la Familia de un municipio del estado de Paraíba. Tuvo lugar entre julio y septiembre de 2020. Se diseñó una muestra de 190 historias clínicas, seleccionadas por muestreo en dos etapas: proporcional y probabilística sistemática. Los datos recopilados se analizaron utilizando el *software* R, asumiendo un nivel de significancia del 5%. Se utilizó estadística descriptiva, Diagrama de Pareto y análisis de tendencias.

**Resultados:** hubo una clasificación predominantemente “muy mala” de completitud (76,9%), con un mayor porcentaje de incumplimiento de los indicadores: prejuicio (91,1%), hallazgos diagnósticos (85,2%), absentismo en las citas (80,8%), antecedentes familiares de tuberculosis (74,7%) y aspectos psicossociales. Mostraron una tendencia de incumplimiento creciente: estilo de vida y condiciones de vida ( $p=0,0088$ ) y exploración física ( $p=0,0352$ ). El único indicador con una tendencia a la disminución de los incumplimientos significativos fue Prejuicio ( $p=0,0077$ ).

**Conclusión:** se encontró una exhaustividad insatisfactoria y una tendencia predominantemente creciente hacia la no cumplimentación de registros, lo que indica puntos a priorizar en las intervenciones de salud pública por su importancia en la producción de indicadores en el control de la tuberculosis en Atención Primaria de Salud que pueden influir en la toma de decisiones.

**DESCRIPTORES:** Enfermería. Registros de enfermería. Tuberculosis. Evaluación en salud. Calidad de la atención de salud. Atención primaria de salud.

## INTRODUCTION

Tuberculosis (TB), despite being a disease with low cost and high efficacy treatment, is still understood by the World Health Organization (WHO) as an important and persistent global public health problem, due to its potential to cause death. In the world, in 2020, an estimated 5.8 million new cases of TB were estimated, of which approximately 1.3 million deaths from the disease were recorded among HIV-negative people and 214,000 among seropositive people, superimposing a greater amount of infection in compared to 2019, with 1.2 million and 209 thousand, respectively<sup>1</sup>.

In Brazil, in 2020, records showed 66,819 new cases of TB, which represents an incidence coefficient of 31.6 cases/100 thousand inhabitants. Between 2011 and 2016, it was possible to observe a constant downward trend in this coefficient in the country, but it increased during 2017 and 2019. In 2019, the state of Paraíba (PB) was among the Federative Units with a cure rate for pulmonary TB lower than 70.1%, lower than the national cure rate, recording 999 new cases of the disease<sup>2</sup>.

The TB scenario in Brazil is alarming and needs immediate attention in the adoption of measures aimed at the quality of health actions and disease management, especially in Primary Health Care (PHC) services, as the Ministry of Health (MoH) recognizes it as the level of care responsible for users' entry into the health system, due to its proximity to the community<sup>3</sup>.

The greatest availability of actions to manage TB in Brazil is carried out in the APS, in a decentralized manner. Thus, due to the vast contribution to TB management in this area, there is a need for studies that cover indicators aimed at documenting the information constituted in the service provided to users, which is understood as an essential condition for improving the management and quality of care; therefore, such care offered to users must be improved<sup>3-4</sup>.

In this context, patients' medical records are an effective communication tool for (re)planning, continuity and assessment of the quality of care provided. This is considered an important mechanism to support the health care process, used as a source of clinical and administrative data that helps decision-making, form of communication shared between all health professionals, legal record of implemented care, in addition to research support<sup>5</sup>.

Nursing is responsible for most records in the health system in the country, highlighting the collaboration of nurses in information production, which has a substantial contribution to TB management, especially in PHC services. Among the actions of this professional are: performing an active search, diagnosing, guiding the enrolled population about the relationship between disease and latent TB infection, informing about bacillary transmissibility and benefits of adhering to treatment completely, informing about the repercussions of not adherence, among other actions and activities. With this, nurses participate in the planning of actions to manage the disease, reducing the weaknesses surrounding the operationalization of TB care<sup>6</sup>.

The adequacy of records and information systems is included in the National Plan for Ending Tuberculosis recommendations to meet surveillance and monitoring needs<sup>7</sup>. Ratifying this action, there is also the need for commitment and attention to the third pillar of the End TB strategy, proposed by the WHO, which corresponds to the execution and promotion of operational research, especially in countries like Brazil, with a high load of TB. These studies are essential for the disease control program: they collaborate in its improvement and help to identify the operational challenges involved that need to be overcome<sup>8</sup>.

Therefore, it is necessary that the accuracy and completeness of records of nurses in the care of users with TB are implemented, as well as the conversion of these into information, within the scope of PHC, as they are essential in the exercise of health actions for the control of illness and continuity of care<sup>9</sup>.

The literature review on the subject was carried out in the Latin American and Caribbean Literature in Health Sciences (LILACS), Scientific Electronic Library Online (SciELO), PubMed, Scopus and Web of Science databases. Studies were identified related to the record of health professionals, including nurses, in a computerized system in the care of TB in PHC<sup>10-11</sup> and the completeness of physical<sup>12</sup> and computerized medical records<sup>13</sup>. There was only one study that deals with the completeness of records of nurses in the care of people with TB in PHC; however, it was delineated through direct interviews with nurses<sup>9</sup>.

Thus, there are gaps in national and international scientific production with regard to assessing the completeness and trend of non-completion of these records through direct research in the medical records. This reality reinforces the relevance of this research, given the importance of these data for the management of actions, production of indicators and aid in decision-making, both by managers and by nurses in the daily routine of activities<sup>7</sup>.

For the subject under discussion, the following guiding question was drawn: How is the completeness and the trend of non-completion, on the part of nurses, of records related to the care of people with TB followed up in PHC? Thus, this study aims to assess the completeness and the trend of non-completion of records of nurses in the care of people with TB followed in PHC.

## METHOD

This is a descriptive, documentary, retrospective study with a quantitative approach, carried out in the Family Health Units (FHU) of a city in the state of Paraíba (PB), in northeastern Brazil. The city has been considered a priority for TB management by the Ministry of Health (MoH) since 2001. It has a regionally structured care, providing 90% Family Health coverage in five Health Districts (HDs) (A, B, C, D and E), totaling 211 Family Health teams distributed in 99 FHUs.

The study population consisted of the record instrument (clinical record) of nurses in the follow-up of people with TB in the aforementioned FHUs that met the inclusion criteria: records of users (aged 18 and over) with TB who resided in the researched municipality and who had completed follow-up during the Tuberculosis Control Program (TCP) treatment. Records of users in a situation of termination due to change of diagnosis or transfer to another municipality were excluded.

The calculation for sample size was based on the survey of new TB cases notified by PHC services, which started and ended treatment between January 2015 and December 2019, totaling 1,191 medical records (255 belonging to HD A; 410 to B; 224 to C; 214 to D; and 88 to E). The parameters considered were 4% sample error ( $e=0.04$ ); significance level of 5% (i.e., confidence is 95%) and an anticipated value of  $p=10.5\%$ , based on study<sup>14</sup>. Through the equation, a sample of 190 medical records was obtained using the R software, version 4.0.2.

$$n = \frac{N z^2 \left(1 - \frac{\alpha}{2}\right) p(1-p)}{p(1-p) z^2 \left(1 - \frac{\alpha}{2}\right) + (N-1) \varepsilon^2}$$

The sampling process was performed in two stages: 1) proportional, with stratification of the sample between the HDs equitably according to the population of patients with TB, arriving at the sample size for each district (41 in HD A; 65 in B; 36 in C; 34 in D; and 14 in E); and 2) systematic probabilistic, through an ordered list with information acquired in each of the HDs. In this second step,

the population size was divided by the sample size to obtain the systematization factor ( $k=N/n$ ): in this case,  $k=6$  ( $k=1191/190=6.27 \approx 6$ ). To ensure sample randomness, the first element of the sample was drawn (from the 1<sup>st</sup> to the 6<sup>th</sup>), with the value equal to 3 being randomly admitted, following the line of systematization from that element until the sample size was complete.

Data collection took place in the morning and afternoon shifts, from July to September 2020. The time spent analyzing each medical record was an average of 30 minutes. A structured form was used, based on the Manual of Recommendations for TB Control, Nursing Protocol on Directly Observed Treatment (DOT) of TB in Primary Care and institutional documents, which regulate nursing records in PHC. This form was pilot-tested in order to test, assess, rectify and improve the instrument and research procedure. Thus, the number of records was admitted at 10%, i.e., 19 records, which were selected by lot, proportionally. After its application, some questions of the questionnaire were object of reflection for variable refinement. It is noteworthy that the records captured in this phase were included in the final sample considered in this study.

The form was created based on variables related to sociodemographic and clinical data (gender, age, clinical form of TB), in addition to specific information from nurses' records in the clinical record, giving rise to their respective indicators, for greater data robustness. The listed indicators were related to records about: clinical manifestations; psychosocial aspects; lifestyle and living conditions (record on the dietary pattern; living conditions of patients with TB; use of alcohol/illicit drugs or other substances); family history of TB; treatment (history of treatment dropout, DOT performance; DOT location and contact management).

Furthermore, indicators were used on records related to: absenteeism in appointments (absences in scheduled appointments and adopted conduct); prejudice (suffering related to stigma/prejudice of the disease); social and family support (social incentives offered to patients with TB and family support to patients with TB during treatment); home visit; use of other health services by patients with TB; physical examination (record of physical examination, anthropometric measurements and vital signs); diagnostic findings (record of the diagnostic technique on inspection, palpation, auscultation and percussion); and exam assessment (radiography, bacilloscopy, rapid HIV test, rapid TB test and tuberculin test).

As a reference for analysis of completeness, the classification proposed by Romero and Cunha was accepted<sup>15</sup>, grouped according to the quality levels of each indicator: excellent (incompleteness <5%), good ( $5\% \leq$  incompleteness <10%), fair ( $10\% \leq$  incompleteness <20%), bad ( $20\% \leq$  incompleteness <50%) and very bad (incompletion  $\geq 50\%$ ).

Data were tabulated and grouped in a Microsoft Office Excel® 2019 spreadsheet, with double entry, in order to ensure compilation reliability. Later, for data processing and analysis, they were exported to R software, version 4.0.3, free and free, available for download at <https://www.r-project.org/>. The significance level adopted was 5%.

Initially, the simple frequency and the percentage of qualitative variables were performed. As for the trend of non-completion, all indicators were considered in the time interval from 2015 to 2019, using, for this purpose, a simple linear regression model,  $y = \alpha + \beta x + \varepsilon$ , where  $y$  is the incompleteness percentage,  $x$  is the temporal variable, that is, the year,  $\alpha$  and  $\beta$  are the unknown parameters to be estimated and  $\varepsilon$  is the unknown random error. The trend was considered significant when  $p$ -value was less than 5%; it was ascending, if the estimate of  $\beta$  was positive; and descending, if the estimate of  $\beta$  was negative. Additionally, to verify which indicators were responsible for a higher percentage of incompleteness in clinical records, the Pareto Chart was used.

In compliance with Resolution 466/2012 of the Brazilian National Health Council (*Conselho Nacional de Saúde*), this research was approved by the Institutional Review Board.

## RESULTS

The study sample consisted of 190 medical records, whose patients had a mean age of 39.92 years (SD=15.84), predominantly male (n=122; 64.21%) and with clinical pulmonary form (n= 167; 87.89%). The average of incomplete records was 53.01 (SD=26.13).

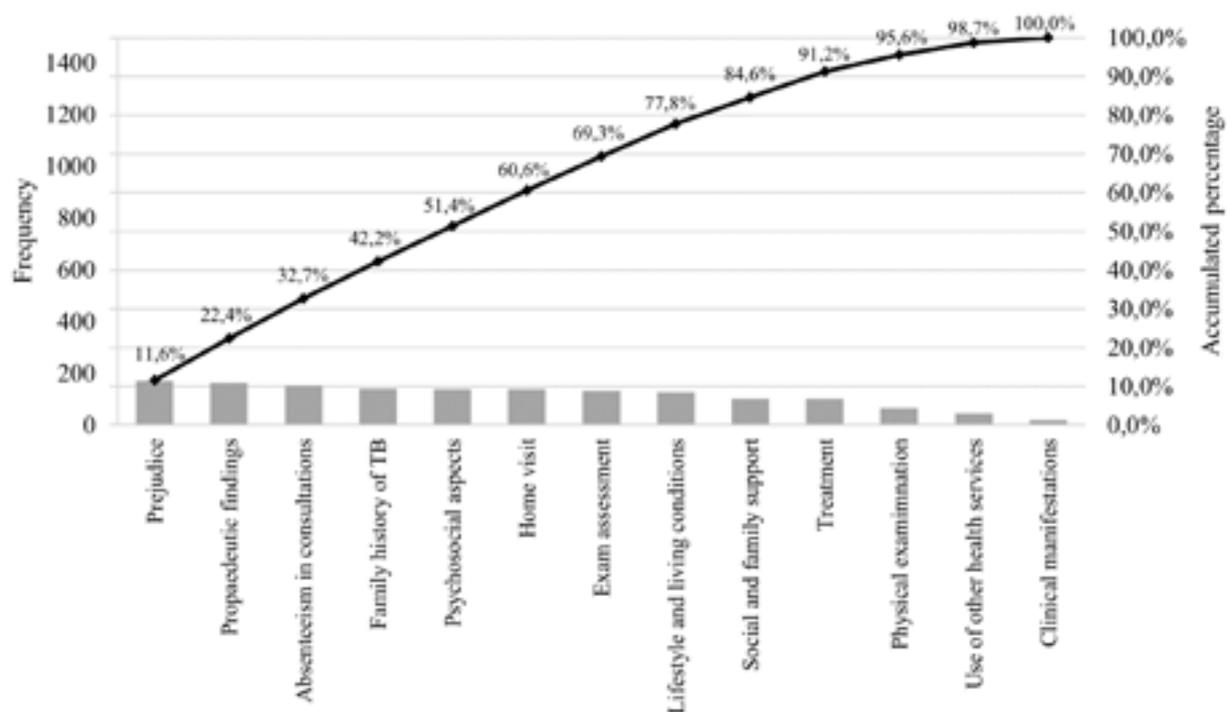
Regarding the completeness of the records, it is observed in Table 1 that ten indicators were classified as “very bad” (76.9%); two as “bad” (15.4%); and only one as “regular” (7.7%).

**Table 1** - Distribution and classification of the completeness of indicators registered by nurses in tuberculosis care in Primary Health Care. João Pessoa, PB, Brazil, 2020. (n=190)

Indicators	2015	2016	2017	2018	2019	Total	Completeness classification*
	n <sup>†</sup> (%)	n (%)	n (%)	n (%)	n (%)	n (%)	
Prejudice	12 (100.0)	17 (100.0)	30 (93.8)	50 (89.3)	87.7 (64)	173 (91.1)	Very bad
Propaedeutic findings	10 (83.3)	14 (82.4)	28 (87.5)	48 (85.7)	84.9 (62)	162 (85.2)	Very bad
Absenteeism in consultations	8 (66.7)	15 (88.2)	29 (90.6)	48 (85.7)	74.0 (54)	154 (80.8)	Very bad
Family history of TB	10 (83.3)	15 (88.2)	24 (75.0)	41 (73.2)	71.2 (52)	142 (74.7)	Very bad
Psychosocial aspects	7 (58.3)	11 (64.7)	25 (78.1)	40 (71.4)	75.3 (55)	138 (72.6)	Very bad
Home visit	9 (75.0)	11 (64.7)	25 (78.1)	35 (62.5)	79.5 (58)	138 (72.6)	Very bad
Exam assessment	8 (66.7)	10 (58.8)	22 (68.8)	40 (71.4)	69.9 (51)	131 (68.9)	Very bad
Lifestyle and living conditions	7 (58.3)	10 (58.8)	21 (65.6)	37 (66.1)	71.2 (52)	127 (66.8)	Very bad
Social and family support	6 (50.0)	10 (58.8)	16 (50.0)	28 (50.0)	56.2 (41)	101 (53.2)	Very bad
Treatment	6 (50.0)	10 (58.8)	15 (46.9)	30 (53.6)	53.4 (39)	100 (52.6)	Very bad
Physical examination	2 (16.7)	5 (29.4)	11 (34.4)	19 (33.9)	38.4 (28)	65 (34.2)	Bad
Use of other health services	2 (16.7)	7 (41.2)	8 (25.0)	11 (19.6)	26.0 (19)	47 (24.7)	Bad
Clinical manifestations	-	-	2 (6.3)	2 (3.6)	20.5 (15)	19 (10.0)	Regular

\*The completeness classification is measured based on the quantity of records with incomplete fillings;<sup>15</sup> †n: number of records with incomplete filling.

Figure 1 shows the Pareto Chart of record non-compliance, in which it can be observed that 51.4% of non-completion is generated by the variables that make up the indicators related to prejudice, diagnostic findings, absenteeism from appointments, family history of TB and psychosocial aspects, these being the priority points for intervention according to the curve of accumulated percentages.



**Figure 1** - Pareto Chart of incomplete records of nurses in Primary Health Care in tuberculosis care. João Pessoa, PB, Brazil, 2020. (n=190)

Table 2 shows the trend of non-completion of the indicators of nurses' records in PHC in TB care, from 2015 to 2019. Of the total 13 indicators analyzed, 10 (76.9%) were classified as having an ascending trend of non-completion, and 3 (23.1%) showed a descending trend.

When assessed, the indicators that showed a significant upward trend were Lifestyle and living conditions ( $p=0.0088$ ) and Physical examination ( $p=0.0352$ ). On the other hand, Prejudice with a significant descending trend was evidenced ( $p=0.0077$ ) (Table 2).

**Table 2** - Trend of incompleteness of indicators of nurses' records in Primary Health Care in tuberculosis care, from 2015 to 2019. João Pessoa, PB, Brazil, 2020. (n=190)

Indicators	Model	R <sup>2</sup>	P-value	Trend	Growth %
Prejudice	$y=7214.17 - 3.53x$	0.9321	0.0077	<b>Descending</b>	-8.90
Propaedeutic findings	$y=-1226.29 + 0.65x$	0.2622	0.3780	Ascending	-
Absenteeism in consultations	$y=-2359.53 + 1.21x$	0.0349	0.7640	Ascending	-
Family history of TB	$y=7984.82 + -3.92x$	0.7309	0.0649	Descending	-
psychosocial aspects	$y=-8139.63 + 4.07x$	0.6379	0.1050	Ascending	-
Home visit	$y=-1299.60 + 0.68x$	0.0188	0.8260	Ascending	-
Exam assessment	$y=-3765.18 + 1.90x$	0.3674	0.2786	Ascending	-

Indicators	Model	R <sup>2</sup>	P-value	Trend	Growth %
Lifestyle and living conditions	$y = -6612.27 + 3.31x$	0.9258	0.0088	<b>Ascending</b>	14.58
Social and family support	$y = -673.12 + 0.36x$	0.0183	0.8280	Ascending	-
Treatment	$y = -270.18 + 0.16x$	0.0032	0.9280	Ascending	-
Physical examination	$y = -9630.87 + 4.79x$	0.8171	0.0352	<b>Ascending</b>	104.89
Use of other health services	$y = 630.80 - 0.30x$	0.0025	0.9360	Descending	-
Clinical manifestations	$y = -8989.74 + 4.46x$	0.6905	0.0813	Ascending	-

## DISCUSSION

The study identified that the predominance of indicators related to records of nurses in TB care in PHC is in unsatisfactory completeness throughout the years studied. This finding diverges from what is recommended by the resolution of the profession's code of ethics<sup>16</sup>, which provides for the record of professional actions in patients' records and in other nursing documents. Despite this, surveys<sup>5,11</sup> also show that there is a low completeness of nurses' records in medical records; thus, it is necessary to identify the priority points and their temporal trends to target the intervention, aiming at improvements.

The Pareto Chart made it possible to systematize the frequencies of indicators related to non-compliance, recognizing prejudice, preliminary findings, absenteeism in appointments, family history of TB and psychosocial aspects as indicators responsible for more than 50% of the incompleteness of records of nurses in care to TB in PHC.

The results showed that, although Prejudice is categorized as an indicator with a very bad completeness classification, in 91.1% of records, and is responsible for the highest non-completion index in the Pareto Chart, its non-completion trend was significantly significant. descending. Even though timidly, there was progress, over the years, in the notes in medical records regarding the stigma in relation to the disease.

The literature indicates that one of the possible causes for this divergence between the results may be linked to the disease historicity, due to the deep social roots caused by the labels that people with TB received<sup>17</sup>. Even with the evolution in coping with the disease, stigma is still present, requiring special attention from nurses, as this problem can distance users from the service and treatment<sup>18</sup>.

Stigma and prejudice in relation to the disease are linked to psychosocial factors, and must be taken into account during the nursing process in the care of TB in PHC and thus recorded in the medical record<sup>19</sup>. Stigma associated with patients with TB in this area of health care hinders early diagnosis, treatment and continuity of care, being characterized as an increasingly important concern<sup>20</sup>. In 2020, stigma was highlighted as a theme in the 10 priority recommendations for progress by the United Nations, aiming at the progress of TB management worldwide<sup>1</sup>.

A study carried out in public health units in southwestern Ethiopia pointed out that stigma among patients with TB was reported by more than half of participants<sup>21</sup>, lacking measures that favor the reduction in the level of suffering associated with the disease, in order to promote psychological well-being to users.

Furthermore, there are Psychosocial aspects, which mentions feelings reported during the nursing consultation, such as anxiety, depression, irritability, mental disorders, denial of the disease, among others. This indicator showed an increase in the absence of records in the medical record over the years and a very bad completeness classification.

This finding suggests the need to change the culture of not recording events in the medical record, as this practice converges with the need for nurses to understand the importance of notes on this disease and include values that can be added to health and work. Thus, there must be encouragement from the health, political and labor sectors, as the lack of an adequate record masks users' real situation of vulnerability and interferes in the production of care from the perspective of comprehensiveness, contributing to ineffective decision-making.

It is worth noting that there are limitations in published studies exploring prejudice/stigma and other psychosocial factors related to TB from the perspective of completeness of documentation, especially regarding records of nurses in PHC. The findings of this study are consistent and differ from those reported in the literature in contexts that permeate PHC services<sup>10</sup> and in the hospital environment<sup>22</sup>.

The record of the propaedeutic methods of inspection, percussion, palpation and auscultation, in the present study, presented a very bad completeness classification and a trend towards ascending non-completion. However, despite the identified findings, on the one hand it cannot be said that nurses do not implement this method in their care practice. On the other hand, there is a gradual increase in the absence of records for this information as the years go by. This result is equivalent to the findings of another research carried out with nursing records in southeastern Brazil, in which the propaedeutic methods were incomplete in 95.3% of patients' clinical records<sup>22</sup>.

Pulmonary auscultation assessment is essential, as it covers the clinical presentation with the highest prevalence according to the literature, which was corroborated in the present study by the rate of 87.89% of the total cases<sup>23</sup>. The absence of records of diagnostic methods regarding TB management in PHC by nurses hinders the proper identification of problems that users present, in addition to hindering the recognition of diagnoses and interventions compatible with the real state of health. This information requires scientific knowledge from nurses, requiring the development of permanent education actions, in addition to their documentation in nurses' records<sup>24</sup>.

It is known that the application of diagnostic methods is contained in the physical examination; however, it was found that this indicator had a bad completeness classification, presented a percentage of 34.2% incompleteness in the records and a significant upward trend in terms of non-completion. The findings show that the documentation of physical examination tended more towards anthropometric measurements and vital signs than towards the application of the propaedeutic methods itself, which presented a worse completeness classification.

A study points out the importance of systematizing anthropometric techniques aiming at a good design to identify related factors or defining characteristics of diagnoses and correct implementation of nursing care plans in PHC<sup>17</sup>. The monitoring of vital signs in patients with TB should be performed by nurses so that the ideal care for each patient can be traced, highlighting the need for a correct record of this information<sup>25</sup>.

Absenteeism in appointments refers to the act of not attending scheduled appointments, without prior information. As for this, this study presented a very bad completeness classification, with a trend of non-completion ascending in the researched time range regarding absenteeism in consultations. The documentation of this indicator in the management of patients with TB in PHC

services is important due to the high rate of treatment dropout and the need to monitor medication intake in the implementation of DOT, in which the conduct adopted by professionals in the face of absenteeism must also be registered<sup>19</sup>. No scientific articles were identified in the literature dealing with the record of absenteeism in nursing consultations focused on TB care in PHC services.

Indicators on family history of TB and home visiting are closely linked. A study highlights the importance of home visits at the FHU as a family monitoring tool, favoring family history indices<sup>26</sup>. The findings show a very bad completeness classification for both indicators, with equivalent percentages. However, when it comes to the non-completion trend, the Family history of TB indicator has improved over the years, while home visits continue in the opposite direction.

This result may be linked to the increased awareness of nurses in the process of detecting contacts during their practice in PHC services, favoring the record of this information, even if timidly. However, in the case of home visits to monitor patients and their families, it is possible to identify an ascending trend of non-completion of the record of this information, causing harm to the organization of care, as the exercise of this activity favors the understanding of the needs and difficulties related to the optimization of the construction of care for patients with TB - care that needs even more policies aimed at encouraging the record of these activities.

That said, the literature points to the identification and treatment of contacts of users with TB (family/residence, work colleagues, leisure activities or other types of contacts) as important strategies in TB management, as they favor early diagnosis and considerably reduce the risk of illness<sup>27</sup>. Despite this, TB surveillance presents some challenges in its implementation, such as low investigation of contacts, increased proportion of treatment dropouts, deficiency in the completeness of the fields of the notification form and diagnosis information, closure and follow-up of cases<sup>28</sup>. The incompleteness of this information in nurses' records weakens the TB management of these possible contacts, causing, among others, an interference in the direction of care, which can be understood as an obstacle to the goals for TB management<sup>8-9</sup>.

The Lifestyle and living conditions indicator is not among the main responsible for the non-completion of records, according to the Pareto Chart; however, it obtained a very bad completeness classification and a significant trend of ascending non-completion during the researched time range. This indicator was associated with variables related to the record on the dietary pattern, living conditions of patients with TB and use of alcohol/illicit drugs or other substances.

A scoping review identified the direct influence of lifestyle and living conditions on TB care, addressing the increased risk of transmission in people who use alcohol as a consequence of social behavior patterns (greater exposure in congregational environments such as bars), which weakens the immune system and enhances the chances of contamination. Patients with TB who use alcohol/illicit drugs or other substances are more likely to externalize risky behavior and are more likely to contract HIV<sup>29</sup>. Thus, it is necessary for PHC nurses to implement guidance activities that favor positive health attitudes and the proper documentation of the care provided, aiming at the full continuity of care<sup>19,26</sup>.

Research carried out in Denmark observed, in patients' medical records, the influence of the lack of focus on nutrition in PHC services, interfering with daily work and the quality of care provided<sup>30</sup>, even more for patients with TB, which has weight loss as one of its clinical symptoms, denoting the importance of monitoring this factor.

In general, filling out the record in the medical record sufficiently completely and legibly is vital for sharing information, legal evidence and auditing, quality assurance, permanent reporting, teaching and research, constituting alternative sources of information or, in some situations, the main data source<sup>6</sup>.

By performing the temporal trend analysis and the Pareto Chart, one can effectively recognize the indicators related to nurses' records in TB management in PHC that most need attention. These demand initiatives and incorporation of global trends such as the implementation of electronic patient records, which are capable of grouping more accurate information, facilitating collection and favoring a better index of completeness of information.

Therefore, this investigation contributes to the field of public health by geneclassification fundamental data related to the TB record, showing how much the documentation of nurses in patients' medical records, in the context of PHC, needs improvement so that the production of care be more effective. The record weaknesses identified point a way for coordinators/management to plan strategies that will reduce this reality. Thus, the practice of recording care provided is a challenge in nurses' routine. It should be noted that nurses' records cannot be perceived solely as a bureaucratic need: it is essential to understand the importance and outcomes resulting from their absence or incompleteness.

As a limitation of this research, there is the organization of medical records in the FHUs, which sometimes did not follow a logical order, a problem found mainly in older records. Another limitation was illegible handwriting in some records, which may have overestimated the percentage of incompleteness related to the indicators, since it was not possible to analyze or infer the data, which needed to be legible enough to be considered in the study. However, these limitations do not invalidate the findings, which can support the practice of nurses regarding the strengthening of policies aimed at assessing the quality of records in TB care in PHC.

## CONCLUSION

This study showed an unsatisfactory completeness of the record of nurses in the medical record regarding TB, in PHC, highlighting the indicators Prejudice, Diagnostic findings, Absenteeism in consultations, Family history of TB and Psychosocial aspects. The only indicator with a significant trend of descending incompleteness was Prejudice, while those with a significant trend of ascending incompleteness were Lifestyle and living conditions and Physical examination, even if they did not have a good completeness classification.

Other studies should be carried out in order to measure and compare factors that influence the quality of records of nurses in PHC in TB management. It is hoped that this can be verified in loco, through observational and qualitative studies with nurses, favoring the understanding of the barriers and potentialities linked in this process.

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## NOTES

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### CONTRIBUTION OF AUTHORITY

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Data analysis and interpretation: Silva Júnior JNB, Nogueira MF, Barrêto AJR.

Discussion of results: Silva Júnior JNB, Nogueira MF, Barrêto AJR.

Writing and/or critical review of content: Silva Júnior JNB, Guedes HCS, Nogueira JA Palha PF, Nogueira MF, Barrêto AJR.

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