Completeness of the tuberculosis information system: a descriptive study

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ABSTRACT

Objective: To assess the completeness of the tuberculosis data in the health

information system regarding the quality of the data and the consistency of the notification form records of a municipality in northeastern Brazil. **Method:** A descriptive and retrospective study based on secondary data from the Notifiable Diseases Information System database. The population will consist of all the tuberculosis cases notified in the period from 2009 to 2019. Data collection will take place during the second semester of 2020, with no link between databases. The statistical analysis will be carried out through the free R software. Completeness will be based on the classification of the Notifiable Diseases Information System. **Expected results:** To provide information that allows knowing the completeness of the data, regarding quality and consistency, about tuberculosis records and notification to aid in decision-making of actions and activities.

Descriptors: Tuberculosis; Information Systems; Neglected Diseases; Health Assessment.

CONTEXTUALIZATION OF THE THEME AND RESEARCH PROBLEM

The completeness of the health information system is understood as a quality indicator of the information with which it is also possible to assess the level of completeness of each field (filled-in and unknown). Among the dimensions that can be analyzed, there is data quality; consistency of the notification form records, and information inconsistencies[1]. In this study, the consistency of the notification form records in relation to tuberculosis (TB) will be assessed.

Thus, for greater organization and control of the data of users with TB, there is the Notifiable Diseases Information System (*Sistema de Informação de Agravos de Notificação*, SINAN), a system fed by the notification and investigation of cases of diseases and health problems included in the national list for mandatory notification diseases. The effective use and updating of the SINAN database allows for the identification of the epidemiological

reality of a certain geographic area, being a relevant instrument to help in health planning, defining intervention priorities, and for the systematic assessment of the quality of typed and collected information[2].

Given the importance of a notification system, it is also important to cite the systematic collection of information that subsidizes decision-making. Likewise, assessing allows knowing the need and response capacity with the objective of improving quality and resoluteness[3].

This study is justified by the high TB burden still present in the current years, both in the national and international scenes. In this context, the need is perceived for the conduction of research studies to incorporate innovative initiatives to confront TB. Therefore, the motivations for this study arose from the conduction of research studies in the health surveillance area, aimed at analyzing TB notification.

GUIDING QUESTION

What is the completeness of the data stored in the Notifiable Diseases Information System regarding tuberculosis, in a northeastern municipality?

OBJECTIVE

To assess the completeness of the tuberculosis data in the Notifiable Diseases Information System regarding the quality of the data and the consistency of the notification form records of a city in northeastern Brazil.

METHOD

This is a descriptive and retrospective study based on secondary data stored in the SINAN. The study will allow knowing the completeness of the TB data dealing with the quality of the data and the consistency of the notification form records.

For collection, the SINAN database will be used, with information coming from the TB notification forms. The population will

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consist of all the TB cases notified in the municipality from 2009 to 2019. No sample calculation will be performed, since the entire universe of notifications was used. The variables will be represented by the sociodemographic, clinical, laboratory, and case conclusion situation variables.

Collection will be during the second semester of 2020, in two stages: survey of all the TB cases notified; identification and categorization of the data. The database will be built in EXCEL, version 2017, to design the descriptive tables and graphs. For descriptive and analytical analysis, the statistical and free R software will be used, version 3.6.1.

In the qualitative variables, a descriptive analysis will be carried out by means of absolute and relative frequency distributions. In the comparison of completeness with the time under study, the analytical analysis will be applied. Subsequently, the assessment of variables according to the completeness criterion will be initiated. The analysis will be based on

the SINAN classification: category 1 (bad), 0% to 25% of completeness; category 2 (fair), between 25.1% and 50%; category 3 (good), between 50.1% and 75%, and category 4 (excellent), between 75.1% and 100%.

To analyze the completeness of the notification forms, the absence of records on the fields, called "blank", was considered, as well as the filling out of the field, although with no knowledge of the information by the notifying professional – called "unknown", and the duly filled-in fields.

The project complied with Resolution 466/2012 of the National Health Council, being approved by the Ethics Committee of the Federal University of Rio Grande do Norte, opinion No. 4,009,967 and CAAE 30793920.1.0000.5537.

EXPECTED RESULTS

To provide information that makes it possible to know the completeness of the data, in terms of quality and consistency,

on TB records and notification, to assist in decision-making of actions and activities to be implemented.

Study limitations: possible information bias due to the use of secondary data; presence of blank and unknown data stored in the SINAN.

REFERENCES

1. Peres SV, Latorre MRDO, Tanaka LF, Michels FAS, Teixeira MP, Coeli CM et al. Melhora na qualidade e completitude da base de dados do Registro de Câncer de Base Populacional do município de São Paulo: uso das técnicas de linkage. Rev. bras. epidemiol. [Internet]. 2016 Dez [cited 2020 out 23]; 19 (4): 753-765. Available from: http://www.scielo.br/scielo.php?scri pt=sci_arttext&pid=S1415-790X2016000400753&lng=en.

2. Sinan. Sistema de Informação de Agravos de Notificação. [Internet]. 2018 [cited 2020 abr 18]. Available from: http://portalsinan.saude.gov.br/.

3. Almeida CAL, Tanaka OY. Avaliação em saúde: metodologia participativa e envolvimento de gestores municipais. Rev Saude Publica. [Internet]. 2016 [cited 2020 out 23]; 50 (45): 1-10. Available from: https://www.revistas.usp.br/rsp/art icle/download/126535/123501.