Managing care for older adults with tuberculosis in Primary Care: an integrative review

Abstract

Objective: to analyze the available knowledge on the management of care for older adults with tuberculosis in primary care. Method: an integrative literature review was performed in the following databases, based on articles from 2008 to 2017: the Latin American and Caribbean Health Sciences (LILACS), International Health Sciences Literature (MEDLINE) and the Cumulative Index to Nursing and Allied Health Literature (CINALH). The sample consisted of six scientific articles, considering the established inclusion and exclusion criteria. Data collection took place in June 2018, using an instrument with information relevant to the proposed objective. Results: the selected studies identified weaknesses and challenges in primary health care health services regarding professional skills and knowledge, the entry point to the diagnosis of tuberculosis, the link between professionals and patients, and the logistics of health services. Conclusion: a health policy that expands the response of the government and health professionals to the needs of older adults with tuberculosis is recommended, in line with the principles of the Brazilian National Health Service. This health policy would support improving the skills and knowledge of professionals at the entry point to the diagnosis of the disease and enhancing the link between professionals and patients, and the logistics of health services. Health technology could be used to accompany the nursing team in the management of care in geriatric and gerontological research and practice.

1 Universidade Federal da Paraíba (UFPB), Programa de Pós-Graduação em Enfermagem João Pessoa, PB, Brasil.
2 Instituto Federal de Educação, Ciência e Tecnologia da Paraíba- Campus Avançado, Curso Técnico em Cuidados de Idosos. João Pessoa, PB, Brasil.
3 Universidade Federal de Campina Grande; Unidade Acadêmica de Enfermagem. Cuité, PB, Brasil.

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Correspondence
Edna Marília Nóbrega Fonseca de Araújo
edna_marilia@hotmail.com

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INTRODUCTION

The aging process has had an impact on society, especially in relation to health problems, one of which is tuberculosis (TB)\(^1\). Older adults are vulnerable to developing this disease due to the decreased effectiveness of their immune system, age-related functional deficits, and dysfunction in mucociliary clearance and pulmonary functioning arising from senescence\(^2\).

In view of the prevalence of tuberculosis in Brazil, the preferred gateway to health services for older adults with the disease are those falling within the scope of Primary Health Care (PHC)\(^3\). This situation therefore requires a greater commitment from researchers and managers in the area of health to put into practice health policies in these care spaces\(^4\).

In the care strategies applied in PHC, and among health workers who make up the team, nurses have an important role in the control of TB and are at the forefront of the process of fighting the disease. Such health professionals perform their role in a systematic manner to care for patients with the disease. They deal with the control of those who come in contact with the disease, active searches, monthly consultations, medication requests, exams, and when necessary, perform visits at home or in other community spaces. Another fundamental task is the monitoring of the treatment of patients diagnosed with the disease, thus highlighting the importance of nurses in the PHC work process\(^5\).

Considering care management as an essential tool for the performance of actions to control TB in the older population and nurses as one of the main actors who produce this care, this literature review aimed to analyze the knowledge available on the management of care for older adults with tuberculosis in Primary Care.

METHOD

The integrative literature review method was chosen as it allows the insertion of evidence in clinical practice based on the foundation of scientific knowledge, with quality results achieved through evidence-based practice. Therefore, the end product is the state of knowledge of the investigated topic: the implementation of effective interventions in the provision of care and the identification of weaknesses that may lead to the development of future investigations\(^6\).

The steps followed in preparing this review were: definition of the research question, literature search, identification of eligible studies, critical analysis of the included studies, interpretation of results and presentation of the review\(^8\).

The guiding question of the study was: what was published in Brazilian and international literature between 2008 and 2017 regarding the care management of older people diagnosed with TB in PHC services?

The search was carried out in June 2018, in the following databases: Latin American and Caribbean Health Sciences Literature (or LILACS), International Health Sciences Literature (MEDLINE), Cumulative Index to Nursing and Allied Health Literature (CINALH), accessed through the journals portal of the Coordination for the Improvement of Higher Education Personnel (or CAPES).

Descriptors in Portuguese and English were used, extracted from the Health Sciences Descriptors (DeCS/Bireme), from the Virtual Health Library, and from the Medical Subject Headings (MeSH), from the National Library or Medicine: Tuberculose/Tuberculosis, Idoso/Older Adult, Gestão em Saúde/health management, Cuidados de Enfermagem/nursing care, Atenção Primária à Saúde/Primary Health Care.
A priori, applied research was carried out through an advanced subject search. To delimit this, the Boolean AND operator was used together with the following descriptors: *idoso* AND *tuberculose* and older adult AND tuberculosis; *idoso* AND *tuberculose* AND *gestão em saúde* and older adult AND tuberculosis AND health management; *idoso* AND *tuberculose* AND *cuidado de enfermagem* and older adult AND tuberculosis AND nursing care and *idoso* AND *tuberculose* AND *atenção primária à saúde* and older adult AND tuberculosis AND primary health care.

The following inclusion criteria were defined: original articles with full texts that described the proposed theme, in the last ten years (2008 to 2017); with an online version available for free and written in Portuguese, English or Spanish. Works such as theses, dissertations, monographs, review articles, duplicate articles and those that did not respond to the research question were excluded.

For the selection of studies, the recommendations of the Preferred Reporting Items for Systematic Reviews and Meta-analyses (PRISMA) were considered, as shown in Figure 1.

To characterize the selected studies, a semi-structured data collection instrument was used, developed by the researchers, containing items such as: title, journal, authors, database, language, year of publication, topic addressed, academic qualifications of authors, most used methodological method, and data collection instrument/form, in order to extract the main information from the manuscripts.

The evidenced results were analyzed and presented in a descriptive manner, presenting the synthesis of each study included in the review, as well as comparisons between the surveys.

**RESULTS**

In this review, six scientific articles were included, which were available in the following databases: LILACS (01), MEDLINE (03), CINALH (02).
Figure 1. Flowchart of the selection process for primary studies adapted from the Preferred Reporting Items for Systematic Review and Meta-Analyses (PRISMA). Paraíba, 2019.
### Chart 1. Selected articles in the databases regarding the management of care for older adults with tuberculosis in Primary Care. Paraíba, 2019.

<table>
<thead>
<tr>
<th>Database</th>
<th>Authors</th>
<th>Country/Type of study</th>
<th>Objectives</th>
<th>Related to …</th>
<th>Weaknesses faced by PHC service nurses</th>
<th>Consequences of weaknesses</th>
<th>Challenges faced by nurses</th>
<th>Outcomes of the challenges</th>
</tr>
</thead>
<tbody>
<tr>
<td>Medline</td>
<td>Romera, A.A, et al (2016)^4</td>
<td>Brazil / Qualitative</td>
<td>Analyze the discourse of nursing managers related to the conditions that facilitate or hamper TB control in older adults.</td>
<td>Related to professional training:</td>
<td>Training of professionals only if necessary</td>
<td>Professionals unprepared for care</td>
<td>Qualifications of professionals</td>
<td>Continuing Health Education</td>
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<td></td>
<td>Educational practice based on vertical knowledge transmission</td>
<td>Lack of reflection by professionals on TB care actions for older adults</td>
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<td>Qualification process is the sole responsibility of management</td>
<td>Lack of organization and failures in care</td>
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<tr>
<td>Cinahl</td>
<td>Sá, L.D. et al (2015)^4</td>
<td>Brazil / Qualitative</td>
<td>Analyze the factors associated with the gateway to health systems in Brazilian municipalities for the diagnosis of TB in older adults</td>
<td>Related to professional qualification:</td>
<td>Lack of professional competence to assign diagnostics and transfer responsibilities to users for diagnostic confirmation</td>
<td>Delays in diagnosis</td>
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<td></td>
<td>Related to the gateway for TB diagnosis:</td>
<td>Primary health care services are not the first point sought by TB patients, nor the first to prove effective for diagnostic confirmation</td>
<td>Lack of trust on the part of patients and families and delayed diagnosis</td>
<td>Standardization of Primary Health Care services as the first service for suspected TB users.</td>
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<td></td>
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<td></td>
<td>Related to the bond between professional and patient:</td>
<td>Failings in intake actions and the bond between health service professionals in primary health care and users</td>
<td>Seek other services</td>
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<td></td>
<td>Related to the logistics of health services:</td>
<td>Unsuitable hours of functioning for family health units</td>
<td>Distancing from users</td>
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<td></td>
<td>Lack of specific actions to identify respiratory symptoms</td>
<td>Increase in cases</td>
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<td></td>
<td>Difficulty in managing spontaneous demand and low resolutive capacity</td>
<td>Lack of TB control</td>
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<td>Lack of knowledge on the part of users about the location of the family health unit</td>
<td>Low disease coverage</td>
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*to be continued*
### Management of care for older adults with TB

<table>
<thead>
<tr>
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</tr>
</thead>
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<tr>
<td>Cinahl</td>
<td>Andrade, S.L.E. et al (2016)</td>
<td>Brazil / Qualitative</td>
<td>To analyze the factors related to delayed diagnosis in older adults in a municipality in the metropolitan region of João Pessoa, Paraiba, evaluating them as part of the gateway process.</td>
<td>Related to the TB diagnosis gateway</td>
<td>Primary health care services are not the first sought</td>
<td>Delays in diagnosis</td>
<td>Building of bonds</td>
<td>Closer professional relationship with users and home visits</td>
</tr>
<tr>
<td>Medline</td>
<td>Yellappa, V. et al (2017)</td>
<td>India / Qualitative</td>
<td>Understand the factors that influence the therapeutic itinerary of the TB patient for the National Revised Tuberculosis Control Program of India (RNTCP) and the practices of patient cross-referencing linked to private practices</td>
<td>Related to the professional qualification:</td>
<td>Lack of health education by professionals</td>
<td>Limited awareness of patients about tuberculosis</td>
<td>Non-adherence of user to treatment</td>
<td>Understanding of patients about the particularities of the disease</td>
</tr>
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</table>

Continuation of Chart 1 to be continued
In relation to the type of journal that made up the sample, four of the articles were published in Brazilian journals in the category of nursing, and the other two articles consisted of studies carried out in Taiwan and India.

After careful reading of the studies included in the review, we sought to group the results extracted from the articles together to allow a more detailed interpretation, discussing weaknesses in the care management of older adults with tuberculosis in PHC services and the challenges for management of tuberculosis care in this population in such services.

**DISCUSSION**

The production of articles related to the management of care for older adults with TB in PHC is limited, but the publications identified demonstrated the weaknesses and challenges faced by health teams in the management of care for the older population.

Among the weaknesses identified in the management of care for older adults with TB in PHC, the present review highlights: the lack of professional qualification, the fact that PHC services are not seen as a gateway by users, the lack of nurse-user interaction and the logistical problems of the health services.

Corroborating these findings, a study in Divinópolis (Minas Gerais) sought to analyze the implementation of the Tuberculosis Control Program, interviewing health professionals working in PHC. Such research revealed that, although professional training is carried out, the situation is consistent with a lack of knowledge about surveillance actions, a lack of diagnostic tests and the failure to perform Directly Observed Treatment (DOT)

In this context, with a focus on older adults, recognizing cases in which these individuals do not fit the classic symptoms of TB demands a high level of understanding of professional diagnosis, taking into account the physiological changes of aging,
which can represent mechanisms of confusion at
the time of diagnostic confirmation\textsuperscript{9}. Therefore,
professional training is essential, especially in the
context of older adults, who have particularities that
must be understood and clarified.

A study developed in a municipality in the state
of Paraíba\textsuperscript{10} agreed with the findings of this research,
by demonstrating that PHC is not the first service
sought by TB patients. This may be associated with
the fact that the services evaluated in the municipality
are embryonic in relation to the diagnosis and control
of TB, and so older adults seek other options that they
believe to be more effective, such as, for example,
seeking referral units. The results of this study
suggest that the FHS does not act as an ordering
agent for the care network, since specialized care is
directly accessed by the user, indicating the fragile
organizational structure of the service network.

Another survey found that TB patients sought
health services several times. There were a number
of trips to health care networks before the correct
diagnosis was reached, resulting in the use of
unnecessary antibiotics, delayed diagnosis and
difficulty in seeking specialized services\textsuperscript{8}.

The logistics and the new dynamics of health
services, in the form of the Family Health Strategy
(FHS), are differentiating factors in relation to
conventional programs. This is based on the fact
that the FHS aims to reorient the standard of care,
with the goal of reinvigorating aspects related to
prevention, promotion and health education, in
addition to recognizing obstacles, identifying risks
and providing comprehensive care\textsuperscript{5}.

To ensure quality care, care management for
older adults with TB must adapt to the shared
management model, in which there is an exchange
of knowledge, a multidisciplinary team and distance
from the hegemonic model, enabling treatment and
providing indispensable resources for prevention
and disease control actions\textsuperscript{4}.

In relation to the dimensions of care management,
the professional dimension of the nurse’s work
process stands out\textsuperscript{11}, representing the junction
between professionals and users, supporting the
extension of the micropolitics in health. This
dimension is controlled by three main elements:
the technical skill of the professional according to
their experience and training, since they are able to
respond to the problem experienced by the user,
 aspects of professional ethical, and the creation of
bonds with another. This perspective goes against the
analyzed studies, which describe a lack of nurse-user
interaction, resulting in non-adherence to treatment\textsuperscript{6}.

One of the factors that can cause the absence of
this bond is the turnover of nurses and other health
professionals within the PHC services. The bond is
essential for the realization of TB control, especially
in the older population. To ensure adherence to
treatment, professionals should seek strategies, such
as home visits, that help to construct this link. In
addition, the work burden of professionals can make
it difficult to organize services and build the bond\textsuperscript{12}.

International studies describe the importance
of putting in place appropriate approaches to
perform diagnosis and treatment, such as, for
example, carrying out educational actions on TB,
and providing time for dialogue and the clarification
of doubts (aimed at health promotion), in order to
perform more Directly Observed Treatment (DOT)\textsuperscript{13}
of older adults.

Finally, the findings of the present review refer
to bottlenecks in the logistics of PHC services, that
weaken the management of care of older people
with TB. These include: inadequate and insufficient
hours of operation for family health units, as they
are expected to include all individuals; the lack
of specific actions for the identification of those with
symptoms suggestive of TB (respiratory symptoms);
the difficulty in managing spontaneous demand; the
low resolutive capacity and the reduction in the tracing
of cases, considerably delaying the diagnosis of TB\textsuperscript{14}.

In addition to these weaknesses, one of the
studies in this review indicates the identification of
barriers to access to TB diagnosis related to health
services, such as, for example, the transferring of
responsibilities, the absence of home visits, the lack of
control of those who come in contact with the disease
(such as individuals living in the same environment
as a patient with active pulmonary TB), the delay in
the health service related to suspected cases of the disease and the need to visit the health service several times to obtain a diagnosis, negatively affecting the health care of older adults with TB in PHC[15]. In this context, when the subject is the management of care for older adults with TB, the need to enable singular actions that allow efficient, rapid access to diagnosis is analyzed, through the individual characteristics and health needs of the older public[16], which requires early diagnosis and appropriate treatment.

Considering the challenges faced by nurses in the management of care for older people with TB in PHC, the following were identified: Continuing Education in Healthcare (CEH), the standardization of PHC services as a gateway, greater proximity between health professionals and users and the quest to favor access from the perspective of integral care. One strategy that should be used to train professionals is CEH especially with regard to PHC. This process encourages the autonomy, technical and interpersonal skills, creativity, quality and humanization that health teams need to develop the planning and management of care for TB patients. However, it is essential that the particular characteristics of TB in older adults, as well as in other vulnerable groups, constitute a component of the design of continuing education activities for these professionals[17].

This understanding is in line with the premises of health care policies for older adults, making it necessary to strive for continuing education in the workplace, which includes a discussion with workers about the new care needs experienced from increasing population aging[18].

Another challenge identified concerns the standardization of PHC services as the first service for users suspected to have TB. It was observed that PHC, as it is considered the preferred gateway for the Brazilian National Health Service (or SUS) and is responsible for the first level of health care, should be the service sought by patients. However, in the studies analyzed, it was noted that older adults sought specialized, private and other health services, with PHC the last option. In other cases, when reaching this level of care, users were unnecessarily referred to specialized services[19].

Although the diagnosis of disease comes under the responsibility of PHC professionals, such individuals are removed from the diagnosis of TB, implying a transfer of responsibility from these professionals to other services, delaying the diagnosis of older adults TB, a phenomenon already observed in PHC[17].

The delay in diagnosis, due to the difficulty health workers face when identifying the symptoms of TB, means the older adult may have the disease for longer. In addition, it allows transmission to other older people with whom they have contact, with the consequence of recurrent hospitalizations and the increase in cases of death among older adults[10,14].

Another challenging factor is how to ensure effective communication during consultations, dialectically or through health education. It is vital that the patient clearly understands their illness, the therapeutic process and that all their doubts are clarified. In addition, it is important that professionals know how to properly target older patients, who may have greater difficulties in understanding due to their age and comorbidities, generating a co-responsibility in the care process[19].

In order to overcome this obstacle, it is necessary to allow greater proximity between healthcare workers and service users, in order to establish a relationship of trust and, consequently, adherence to treatment and the success of TB control[10]. It is believed that the diagnosis of TB among older adults can be affected by the limitations that exist in health services, such as, for example, the transfer of responsibilities between professionals, the lack of home visits, the difficulty of access and the delay in the results of laboratory tests, which, among other factors, result in late diagnosis, a high abandonment of treatment rate and a lack of TB control[10].

By highlighting these challenges and attempting to remedy them, several benefits can arise, such as early diagnosis, the reduction of mortality rates linked to TB, the reduction of costs associated with treatment, the building of bonds and greater protection and control of the disease.

It is evident that studies on the management of care for older adults with TB are scarce and, when carried
out, are superficial and limited in scope. The reduced number of articles found in this integrative review indicates a limitation of the research, which may be associated with the number of databases consulted.

**CONCLUSION**

It was found through the search performed that knowledge produced regarding the theme is scarce. Through the studies analyzed, it is possible to observe certain weaknesses and challenges faced by nurses working at the primary level of health services. Often, these professionals face difficulties when implementing actions for early diagnosis and appropriate treatment for the older population with tuberculosis.

In view of this, it is suggested a health policy that broadens the response of the government and health professionals to the needs of the older person diagnosed with the disease, in line with the principles and guidelines of the Brazilian National Health Service. This health policy would support professional training, the gateway to disease diagnosis, the bond between professional and patient and the logistics of health services, as these were the weakest points found in the studies analyzed in this integrative review. To monitor and evaluate the effectiveness of the designs proposed in the health policy, health technologies that aim to help nursing teams manage care more effectively could be used, both in research and in geriatric and gerontological practice.

**REFERENCES**


