







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

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## 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.

**Keywords:** Health of the Elderly. Tuberculosis. Health Management. Public Health Policy.

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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)<sup>1</sup>. 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<sup>2</sup>.

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)<sup>3</sup>. 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<sup>4</sup>.

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<sup>5</sup>.

However, to implement a qualified and effective management system, it is necessary to understand the meaning of care management, which refers to the form in which health technologies are offered, taking into account the needs of each individual and the situation in which they currently live<sup>6</sup>. Care management occurs in several dimensions: individual, family, professional, organizational, systemic and corporate. In this study, the professional dimension was chosen, which emerges from the meeting between healthcare workers and users. This means having specific professional technical competences, namely the ability, experience, training and ethical posture required, and being able to meet the needs of and build bonds with the population<sup>6</sup>.

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<sup>7</sup>.

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<sup>8</sup>.

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 of 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

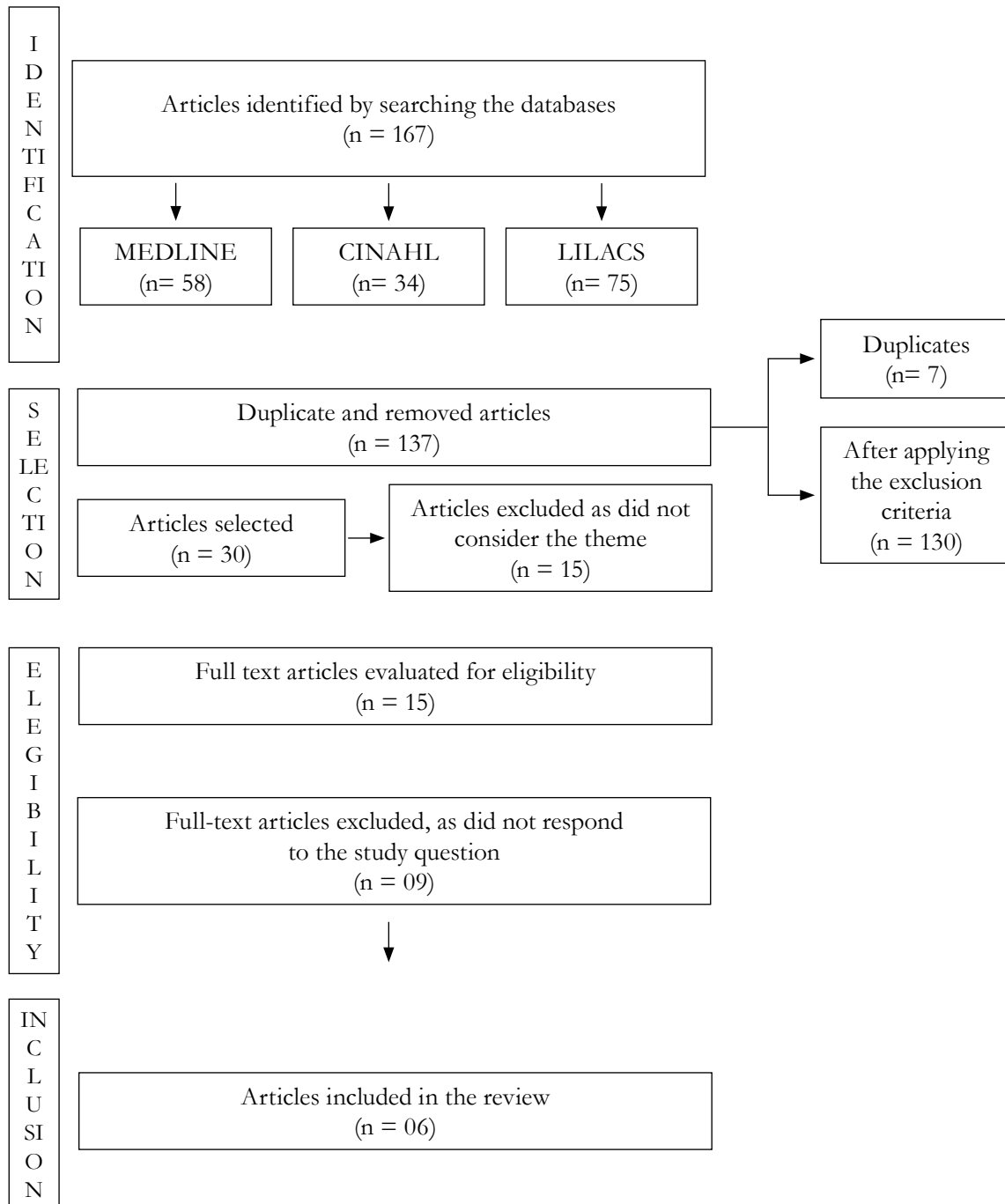
Reviews and Meta-analyzes (PRISMA) were considered, as shown in Figure 1.

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-Analyzes (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.

Management of care for older adults with TB						
Database Authors Country/Type of study	Objectives	Related to ...	Weaknesses faced by PHC service nurses	Consequences of weaknesses	Challenges faced by nurses	Outcomes of the challenges
Medline Romera, A.A, et al (2016) <sup>4</sup> Brazil / Qualitative	Analyze the discourse of nursing managers related to the conditions that facilitate or hamper TB control in older adults.	Related to professional training:	Training of professionals only if necessary	Professionals unprepared for care	Qualifications of professionals	Continuing Health Education
			Educational practice based on vertical knowledge transmission	Lack of reflection by professionals on TB care actions for older adults		
			Qualification process is the sole responsibility of management	Lack of organization and failures in care		
Cinahl Sá, L.D. et al (2015) <sup>14</sup> Brazil / Qualitative	Analyze the factors associated with the gateway to health systems in Brazilian municipalities for the diagnosis of TB in older adults	Related to professional qualification:	Lack of professional competence to assign diagnostics and transfer responsibilities to users for diagnostic confirmation	Delays in diagnosis		
		Related to the gateway for TB diagnosis:	Primary health care services are not the first point sought by TB patients, nor the first to prove effective for diagnostic confirmation	Lack of trust on the part of patients and families and delayed diagnosis	Standardization of Primary Health Care services as the first service for suspected TB users.	Qualified and trained professional to diagnose the disease, easy access and specific actions to identify symptomatic patients
		Related to the bond between professional and patient:	Failings in intake actions and the bond between health service professionals in primary health care and users	Seek other services		
		Related to the logistics of health services:	Unsuitable hours of functioning for family health units	Distancing from users		
			Lack of specific actions to identify respiratory symptoms	Increase in cases		
			Difficulty in managing spontaneous demand and low resolute capacity	Lack of TB control		
			Lack of knowledge on the part of users about the location of the family health unit	Low disease coverage		

to be continued

Continuation of Chart 1

Management of care for older adults with TB						
Database Authors Country/Type of study	Objectives	Related to ...	Weaknesses faced by PHC service nurses	Consequences of weaknesses	Challenges faced by nurses	Outcomes of the challenges
Cinahl Andrade, S.L.E. et al (2016) <sup>10</sup> Brazil / Qualitative	To analyze the factors related to delayed diagnosis in older adults in a municipality in the metropolitan region of João Pessoa, Paraíba, evaluating them as part of the gateway process.	Related to the TB diagnosis gateway	Primary health care services are not the first sought	Delays in diagnosis		
		Related to the logistics of health services:	Passive search for respiratory symptoms	User seeks treatment from other services and diagnosis is delayed		
			Searching for cases is not a priority within the reality of primary care services			
		Related to the bond between professional and patient:			Building of bonds	Closer professional relationship with users and home visits
Medline Chen, C. et al (2015) <sup>17</sup> Taiwan / Quantitative	To analyze the temporal pattern of delays in the health system among 3,117 TB patients between 2003 and 2010, in Taiwan.	Related to professional qualification:	Little awareness of doctors and the general public about TB	Low efficiency of disease diagnosis		
		Related to the gateway to TB diagnosis:	Seeks private or specialist services	Delays in diagnosis		
		Related to the logistics of health services:	Reduced case tracking	Delayed diagnosis	Seek to reduce delays in health services	Contact tracing
Medline Yellappa, V. et al (2017) <sup>19</sup> India / Qualitative	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	Related to professional qualification:	Lack of health education by professionals	Limited awareness of patients about tuberculosis		
		Related to the bond between professional and patient:	Lack of effective communication	Non-adherence of user to treatment	Understanding of patients about the particularities of the disease	Health education and effective communication and clarification

to be continued

Continuation of Chart 1

Management of care for older adults with TB						
Database Authors Country/Type of study	Objectives	Related to ...	Weaknesses faced by PHC service nurses	Consequences of weaknesses	Challenges faced by nurses	Outcomes of the challenges
Lilacs Oliveira, A. A. V. et al. (2013) <sup>15</sup> Brazil / Qualitative	Analyze barriers to TB diagnosis in older adults related to health services in the city of João Pessoa, Paraíba.	Related to professional qualification:	FHS professionals are not responsible for tuberculosis diagnosis, implying a lack of professional qualification and knowledge.	Poor service and failures to identify diagnoses		
		Related to the TB diagnosis gateway:	Patients believe that the services offered by other levels of care have greater resolutive capacity	Lack of trust on the part of patients		
		Related to the bond between professional and patient:	Lack of nurse-user interaction.	Care does not take into account the patient's individual characteristics		
		Related to the logistics of health services:	Absence of responsibility of professionals when diagnosing TB	Poor service and failures in identifying diagnoses		
					Work from the perspective of integrality.	Target care towards those with TB.

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)<sup>8</sup>.

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<sup>9</sup>. 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<sup>10</sup> 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<sup>8</sup>.

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<sup>8</sup>.

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<sup>4</sup>.

In relation to the dimensions of care management, the professional dimension of the nurse's work process stands out<sup>11</sup>, 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<sup>6</sup>.

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<sup>12</sup>.

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) of older adults<sup>13</sup>.

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<sup>14</sup>.

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<sup>15</sup>. 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<sup>16</sup>, 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<sup>17</sup>.

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<sup>18</sup>.

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<sup>19</sup>.

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<sup>17</sup>.

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<sup>10,14</sup>.

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<sup>19</sup>.

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<sup>10</sup>. 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<sup>10</sup>.

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.

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