The role of public health managers in a border region: a scoping review

Abstract
Objective: To examine and map scientific evidence on the role of public health managers in a border region.

Methods: Scoping Review, based on the procedures recommended by the Joanna Briggs Institute. This method aims at mapping the main concepts, clarifying and identifying knowledge gaps, and achieving the significance and adequacy of the health care practice. Based on these perspectives, the guiding question was: “What is the scientific evidence on the role of managers towards the management of public health in border regions?” Eight national and international databases were searched for papers published by August 2017. Of the 188 studies found, 13 were selected for their full reading, resulting in a final sample of seven studies analyzed.

Results: The seven publications analyzed were published from 2005 to 2017. Selected studies on the subject are national and international and of quantitative, qualitative or qualitative-quantitative approaches. The subjects of the studies were similar, considering most of them covered cross-border patient care and increased public health expenditures in these regions.

Conclusion: The results of this review showed a shortage of national and international studies on the role of managers in health in border regions. The relevance of the theme and its complexity evidence the need for research on managers in these regions.

Keywords
Health manager; Border health; Public health; Health administration

Descritores
Gestor de saúde; Saúde na fronteira; Área de fronteira; Saúde pública; Administração em saúde

Resumen
Objetivo: Examinar y mapear las evidencias científicas sobre el papel del gestor de salud pública en región de frontera.

Métodos: Scoping Review, basado en los procedimientos recomendados por el Instituto Joanna Briggs. Este método tiene el fin de mapear los principales conceptos, clarificar e identificar lacunas del conocimiento, e obtener una significación y adecuación de la práctica de los cuidados de salud. Con base en estas perspectivas, se estableció la pregunta orientadora: “¿Cuáles son las evidencias científicas sobre el papel del gestor en la gestión de la salud pública en las regiones de frontera?”. Se realizaron búsquedas en ocho bases de datos nacionales e internacionales, seleccionándose 13 de los estudios encontrados para su lectura completa, resultando en un total de siete estudios analizados.

Resultados: Los siete trabajos analizados fueron publicados de 2005 a 2017. Los estudios seleccionados en la temática son de ámbito nacional e internacional y de abordajes cuantitativo, cualitativo o cual-quantitativo. Los objetos de los estudios fueron semejantes, una vez que la mayoría trataba sobre el atendimento al paciente transfronterizo y el aumento de los gastos públicos en salud en estas regiones.

Conclusión: Los resultados de esta revisión muestran un escasez de estudios nacionales e internacionales sobre el papel del gestor de salud en la frontera. La relevancia del tema y su complejidad evidencian la necesidad de investigaciones sobre el gestor en estas regiones.

Keywords
Gestor de salud; Salud fronteriza; Salud pública; Areas de fronteriza; Gestor de salud; Salud en las fronteras; Areas de salud en las fronteras

Descritores
Gestor de salud; Salud fronteriza; Salud pública; Administración en salud
Introduction

Management is known as the management of the set of strategic actions in institutions, in a holistic way, aiming to achieve the objectives of each institution. Thus, being a manager requires continuous professional, social and cultural learning, besides demanding a state of alert, so to avoid changes from involving this professional in a negative way and without prior notice. (1)

Therefore, occupying a management position within the Brazilian Unified Health System (SUS) requires constant conflict management and negotiations, always aiming for quality and consolidation of the principles of the system (2): 1) Universality: guaranteeing health for all, regardless of color, race, gender and religion; 2) Equity: treating inequalities unequally, that is, increasing health investments where needs are greater; 3) Comprehensiveness: considering individuals as a whole; 4) Insurance of prevention, treatment and rehabilitation of health according to intersectoral care. (1)

Given this context, management means dealing with the set of strategic actions, in an integrated way, seeking to achieve the institution’s objective. Being a manager demands continuing professional learning, and knowing beforehand about the changes in the social and cultural contexts. (3) However, to be a manager in SUS, knowledge and practices in health are essential to fulfill the functions and duties. It is important to have some defined skills, knowledge and experience in public administration. In addition, governance, planning and health care are indispensable to adequately address public health care policies. (4)

Brazil is the only country in South America that has a public health system and international borders with nine countries: French Guiana, Suriname, Venezuela, Colombia, Peru, Bolivia, Paraguay, Argentina and Uruguay. (5) The Southern Common Market (MERCOSUR) was created in 1991, as from the Treaty of Asunción, and consists mainly of bilateral economic agreements between Argentina, Brazil, Paraguay and Uruguay. (6)

Particularly in Brazil, as to the management in health in border regions, the municipalities that belong to them, although being different from other regions, they also share common characteristics, such as a large-scale service to a floating population of foreigners, deficits in public expenditures related to the care of patients, lack of professionals to serve due to the increase in demand, among others. (7,8)

Despite the challenges, the composition of part of the SUS management teams continues to be a political position, and these positions are assigned to commissioned employees who, for the most part, do not have the knowledge and ability to carry out such a function, and may lead to losses in health management. (2) Thus, it is necessary to understand in greater depth the magnitude of this topic in national and international scope, since it involves the managerial role of public health in border region.

In this sense, this study aims to examine and map the scientific evidence on the role of public health managers in a border region.

Methods

This is a Scoping Review study, according to the review method proposed by the Joanna Briggs Institute (JBI). This method allows mapping the main concepts, clarifying research areas and identifying knowledge gaps. (9)

To define the research question, the Population, Concept and Context (PCC) strategy was used for a scoping review. (9) The following were defined: P - managers; C - public health management; and C - in a border region, as long as it considers management in public health in border regions. Studies that addressed only public health management or public health managers, without addressing the border region topic were excluded. Based on these definitions, the guiding question was: “What is the scientific evidence on the manager’s role in public health management in border regions?”. 

Seen this, bibliographic survey was carried out from August to October 2017, firstly, with the keywords health manager and health in border regions in the Scientific Electronic Library (SCIELO) and National Library of Medicine (PubMed) databases. Initially, the words contained in the titles, abstracts...
and descriptors were analyzed. The selected studies that responded to the guiding question of this review were read in full and their references were analyzed to find more studies.

Subsequently, searches were also conducted in the Latin American and Caribbean Literature in Health Sciences (LILACS), The Cochrane Library, The Cumulative Index to Nursing and Allied Health Literature (CINAHL) (via EBSCO platform), Academic Search Premier (via EBSCO platform), Web of Science and Embase. For suitability with other databases and platforms, the Health Sciences Descriptors (DeCs) were also used for the bases in Portuguese: gestor de saúde and saúde na fronteira; for LILACS, they were: gestor de salud and salud fronteriza; and for the English databases the descriptors of the Medical Subject Headings (MeSH) were used: health manager and border health.

Along with the descriptors, Boolean operators were used: AND, OR and NOT\(^{10-12}\) to compose the search keys for searches in the databases. As for Gray Literature,\(^{10}\) it was researched on dissertations and national theses through the thesis bank of CAPES and Google Scholar. The references listed in the studies found were also researched to identify additional potential documents.\(^{9,11}\)

From the studies found, those included were in English, Spanish and Portuguese; with quantitative, qualitative and quantitative approach; primary studies; systematic reviews, meta-analyses and/or meta-syntheses; books; and guidelines, published or made available by October 2017.

This study is part of the master’s thesis entitled “Mapping of competencies of managers of public health care in border municipalities”, of the master’s Program in Public Health in a Border Region of the State University of Western Paraná (Universidade Estadual do Oeste do Paraná).

**Results**

Of the 188 studies found, after exhaustive reading of the titles and abstracts of articles, 13 were selected because they met all the established inclusion criteria. Among those selected, three were excluded because they were published in more than one database and eight because they did not fully address the issue, referring only to public health management or to border health. The remaining two studies were analyzed and included in the study. After the analysis of references, five studies were added. In this review, the final sample totaled seven selected studies.

The process of searching and selecting the studies of this review is presented in the flowchart below (Figure 1), according to the recommendations by JBI and the adapted checklist of the Preferred Reporting Items for Systematic Reviews and Meta-Analyses (PRISMA).\(^9\)

![Figure 1. Flowchart of the process of study selection, adapted from PRISMA](image)

The seven studies included in this review were published and/or made available between 2005 and 2017. Three of them were scientific articles, two manuals and two master’s dissertations (Chart 1). Studies on the subject covered quantitative, qualitative or qualitative-quantitative studies, and similar study subjects on cross-border patient care and increased public spending in these regions. In
this sense, chart 2 presents the difficulties found by managers and the resolutions presented by the authors to improve the situation of the role of public health managers in the border region.

Among the selected studies, health policies discussed as universal health rights, accessibility for patients in border regions, and comprehensiveness of access to services are also highlighted. From the Manuals of the Brazilian Ministry of Health found, guidelines discussed financing these patients’ health care and possible bilateral agreements between bordering countries of Brazil. The government program reported in the studies was SIS-Fronteira, one of the solutions Brazil found to solve the problem of the border population.

### Chart 1. Studies found according to year of publication, authorship, journal/institution, title, country of study and type of publication, 2018

<table>
<thead>
<tr>
<th>Study</th>
<th>Year</th>
<th>Authorship</th>
<th>Journal/Institution</th>
<th>Title</th>
<th>Country of Study</th>
<th>Type of publication</th>
</tr>
</thead>
<tbody>
<tr>
<td>2</td>
<td>2007</td>
<td>Giovanella L, et al</td>
<td>Caderno de Saúde Pública</td>
<td>Border health: access and demands of foreigners and non-resident Brazilians to the SUS in border cities with MERCOSUR countries, from the perspective of municipal health secretaries</td>
<td>Brazil</td>
<td>Article</td>
</tr>
<tr>
<td>3</td>
<td>2013</td>
<td>Ugoski DR</td>
<td>Programa de Pós-Graduação em Política Social</td>
<td>Challenges and boundaries of “SUAS” in twin cities from the border of Rio Grande do Sul State</td>
<td>Brazil</td>
<td>Dissertation</td>
</tr>
<tr>
<td>5</td>
<td>2014</td>
<td>Silva NR</td>
<td>Programa de Pós-Graduação em Política Social</td>
<td>Possibilities and limits for access to citizens’ social rights for cross-border citizens</td>
<td>Brazil</td>
<td>Dissertation</td>
</tr>
<tr>
<td>6</td>
<td>2016</td>
<td>Ministry of Justice and Citizenship (Ministério de Justiça e Cidadania)</td>
<td>Diário Oficial da República Federativa do Brasil</td>
<td>Mapping of federal public policies in the border area: Interfaces with the strategic border plan and the national strategy of public security at the borders</td>
<td>Brazil</td>
<td>Manual</td>
</tr>
<tr>
<td>7</td>
<td>2017</td>
<td>Silva VR, Ugoski DR, Dravanz GM</td>
<td>Textos &amp; Contextos</td>
<td>Denial of social rights for undocumented transboundary people: challenges for twin cities</td>
<td>Brazil</td>
<td>Article</td>
</tr>
</tbody>
</table>

### Chart 2. Description of the difficulties found by public health managers in the border region

<table>
<thead>
<tr>
<th>Study</th>
<th>Description of the research problem</th>
<th>Suggestions given by the authors</th>
<th>Neighboring countries</th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td>In the triple northern border (Peru, Colombia and Brazil) there is a demand for resources by the population of both countries. The search for access to the Brazilian health system is high, considering that bordering countries have private health systems. The constant complaint is the overload of the system in these regions, by both Brazilians and foreigners. Another situation is related to facilitated access to Brazil, through dry borders or access by bridges, which facilitate the arrival of citizens from other countries in search of SUS care. However, a lot of foreigners are still giving birth on the Brazilian side, to guarantee later care, a measure that municipal managers do not support.</td>
<td>Bilateral agreements between Brazil and its neighboring countries have proven to be increasingly efficient in solving border region problems. However, these agreements are local and do not cover all borders, such as the agreements made in the Southern Arc composed of the states of Paraná, Santa Catarina and Rio Grande do Sul.</td>
<td>Brazil, Peru and Colombia.</td>
</tr>
<tr>
<td>2</td>
<td>There is free access to goods and labor through MERCOSUR, but there is a restriction on access to Brazilian health services for foreigners. However, cross-border citizenship is still being questioned, but urgent and emergency care is still being provided for this population, causing the overload of SUS related to labor and financial deficits in Brazil’s public expenditures.</td>
<td>To reduce the overload of the system, the best solution would be the integration of countries, since border municipalities are sometimes distant from large health centers. Even Brazilians need to displace to these places; however, foreign municipalities often have centers of specialties and with greater accessibility than in Brazilian capitals.</td>
<td>Brazil, Uruguay, Argentina and Paraguay.</td>
</tr>
<tr>
<td>3</td>
<td>There are no effective physical barriers on these borders, and when coupled with the precariousness of social services in countries bordering Brazil, there’s migration of this population to the country, overloading social and health programs in Brazil. It is emphasized that these patients are faced with bureaucracies that often prevent them from receiving care. However, an increase in Brazilian expenditures occurs due to a floating population.</td>
<td>Displacements, initiatives, discussions, specific agreements of this territory must be recognized, at the local, regional and MERCOSUR level.</td>
<td>Brazil and Uruguay.</td>
</tr>
<tr>
<td>4</td>
<td>The search for specialized care in other countries causes discomfort to patients, due to the distance of displacement, worsening of health status, treatments in unknown places, away from family and friends. In addition, these patients tend to stay a long period outside their homes and their country causing large financial deficits for these families, for example, parents may lose their family income by having to accompany their children in long treatments, just as is the case of cancer patients.</td>
<td>At the Malta-UK border, bilateral agreements are already in place since the 1990s. The country serves up to 180 Maltese patients for free per year. If this number is exceeded, treatment payment is collected from Malta. What is seen, however, is Maltese crossing the border only when necessary, because they use their country’s services whenever they can, such as periodic exams, and even care in specialized clinics. This way, care in the United Kingdom is only performed when there are no other alternatives.</td>
<td>Malta and the United Kingdom.</td>
</tr>
<tr>
<td>5</td>
<td>There is a search for cross-border service as to the benefits that Brazil offers to its citizens. Federal government makes the financial transfer only to the population from municipalities, which generates major problems in the public expenditures of the Brazilian Twin cities Artigas (Uruguay) and Guainal (Brazil); Rivera (Uruguay) and Santana do Livramento (Brazil); Acogeú (Uruguay) and Acogeú (Brazil); Rio Branco (Uruguay) and Jaguariú (Brazil); Chuy (Uruguay) and Chui (Brazil) and Bella União (Uruguay) and Barra do Guani (Brazil).</td>
<td>There have been attempts to establish social cooperation with the Uruguayan border; however, Uruguay has a public policy centralized only in the federal government. Consequently, municipal managers do not have autonomy for decision making, hindering the trans-border relations.</td>
<td>Brazil and Uruguay.</td>
</tr>
</tbody>
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Continue...
Discussion

In Brazil, border regions are singular when compared to other regions in relation to health care, because residents of other countries consider Brazilian health care with higher quality than other neighboring countries. This movement brings foreigners to the border regions of Brazil, which causes an overload in Brazilian health establishments. That happens because, in addition to foreigners, there are the Brazilian citizens who live in other countries that come to receive health care in the Brazilian territory. (13)

Among the studies selected in this review, most of them (2, 3, 5 and 7) dealt with border regions between Brazil and its neighboring countries, as well as a study on this situation in the European continent (4), the rest (1 and 6) are manuals related to the theme (Chart 1). As for the review question, it should be noted that the role of public health managers in border regions was not addressed; this was done only for municipal managers. In this sense, the role of municipal managers can be defined as agents of actions in public health services, who participate in the planning and organization of the regionalized and hierarchical networks according to the principles and guidelines by SUS together with the state. In addition, they participate, control, execute and evaluate services of epidemiological surveillance, sanitary surveillance, food and dietetics, basic sanitation and worker health under municipal responsibility. Municipal managers also collaborate with the federal and state government to monitor sanitary surveillance of ports, airports and borders. (1)

In this context, the problems of municipal public health managers in border regions and the difficulties found were similar aspects raised by all studies of this review (Chart 2). The facilitated flow among land borders, for example, causes overloading of the Brazilian public health system, in addition to high deficits in the public expenditures of the municipalities of this region, which are most harmed by this practice. According to Studies 2 and 5, (7, 8) the cross-border population is seeking care in SUS in Brazil, because health care is predominantly private or lacks access for most of this population in neighboring countries.

Due to the logistics and quality of health care in Brazilian territory, foreigners seek first services in Brazil, which harms health services in several ways: work overload, gap in labor provided for both the populations, absence of health programs in border regions, social precariousness of neighboring countries, among others. This large contingent is not accounted by the federal government; that is why public health managers cannot justify providing more money and more employees to these places. On the other hand, in the selected studies, one refers to the European reality of a bilateral health agreement between Malta and the United Kingdom, signed in 1975, updated in 1989 and most recently in 2006. It is based on a quota of Maltese patients who go to the UK to treat rare diseases and specialties and, in exchange, British residents who are temporarily in Malta receive free health care. (14)

Managers who work in border regions serve foreign patients who seek urgency and emergency services in Brazil, and care in basic health and specialized units. In Study 2 of this review, health secretaries report that bilateral cooperation between countries could ensure comprehensive care for Brazilians and foreigners. These regions are far
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from large cities where health centers are located and the closest health care services for Brazilian and foreigners are placed in neighboring countries. (7) A recent review study that addresses the integration of health across international borders concludes that binational agreements between neighboring countries have been minimizing disparities between large urban centers and these regions. (15)

In this context, according to chart 2, the solutions pointed out by authors, in general, are binational agreements among countries, which would improve the accessibility of citizens to SUS, for example. They also discuss cross-border citizenship to provide conditions to legally serve them, considering these services occur routinely. However, it is emphasized that money transfer is one of the major problems of bilateral agreements; besides that, both the Brazilian government and that of neighboring countries do not have any public health programs that exclusively meet the demands of these regions. However, a study conducted in a border region with mothers living outside Brazil showed that from 2006 to 2012, of the 34,456 children born in Brazil, 95.7% of the pregnant women reported they lived in Brazil, and 4.3%, in Paraguay. (16) Such data corroborates the results found in this scoping review, considering that patients in border regions migrate to another country to seek scheduled care, especially for urgency and emergency cases. Another study in a border municipality shows that there is a lack of professionals, of centers for specialized care, and means of transportation to outpatient facilities; according to research, these problems are not related with cross-border care, but rather with the lack of organization of local management. (17) Therefore, it is not only possible to attribute the deficits of public expenditures of these municipalities only to foreign patients, because there are also problems regarding municipal management.

The so-called “floating population” is a problem of all municipalities in border regions. Research conducted in the Brazilian municipality of Foz do Iguaçu, Paraná State, points out that besides having a large number of tourists that visit the city, the municipality also has to deal mostly with Paraguayan and some Argentinian people who cross the borders to use the Brazilian health system. The author states that money transfer is made according to the number of inhabitants of each municipality, which does not include the number of visitors in the city. (18)

In this context, one of the solutions for health expenditures with tourists in this region was the program known as Traveler’s Health (Saúde do Viajante) in the state of Paraná, whose main objective is to promote, prevent and rehabilitate the health of foreigners who come tourist cities. (19) However, this program only aims to reimburse health expenditures with tourists, not with cross-border population. This remains a constant problem for the health secretaries of these municipalities, because there are no specific public policies for these border regions, reaffirming the data found in this review.

Regarding public policies by the Brazilian federal government to improve the health situation of these regions, the government implemented a project known as the Unified Border Health System (SIS-Frontera) in 2005, which was in force until 2014. (20) The objective of this project was to expand the service capacity of 121 municipalities located within 10 kilometers from the border, through a financial reimbursement system, since the itinerant population was not accounted for purposes of money transfers from the federal government. The project had three steps of implementation: 1) Performing a situational diagnosis of health, infrastructure, characterization of users and presentation of a local operational strategy, in partnership with the Federal University of the state; 2) Qualifying management, services, actions and implementations of health service networks in border municipalities; 3) Introducing and consolidating initiatives in border municipalities. (21,22)

Nonetheless, managers from fifteen municipalities bordering Paraguay in western Paraná held a meeting, in 2017, to send a proposal for the federal government to reactivate or organize a border project like SIS-Frontera, arguing that there is no way of maintaining this situation in these regions. They also informed that there are thousands of SUS registrations in the name of foreign users in ghost residences in the municipalities of these regions, thus causing the overload of the corresponding public health system. (23)
As for the solutions to this problem, in the triple Brazil-Paraguay-Argentina border, city of Foz do Iguaçu, the team of Itaipu Binacional organized a working group called Working-Health Group (GT-Saúde), which aims to improve the quality of health initiatives at the border, thus favoring an articulation of the managers of these regions. Binational agreements were one of the solutions found in this review. One of the selected studies showed how the bi-national specialized health agreement between Malta and the United Kingdom in the European Union works in an effective way. In the Brazilian context, the government program reported in the studies was SIS-Fronteria, one of the solutions found by Brazil to solve the problem of the border population. It is an exclusively national program with no help from its neighboring countries and definition of the role of health managers. Thus, binational agreements, citizenship of foreigners, and leading programs/policies on cross-border care are ways of improving the effectiveness of health services, building and directing the role of public health managers in the public health region.

In this sense, public health management lacks trained professionals to rationalize health actions, assess expenditures and reduce damage caused by investments. Nurses normally manage with creativity and innovation. These professionals are often required to provide care and have administrative and political skills to perfect their roles in health management processes. These professionals have some sort of undergraduate training to hold managerial positions, however, continuing education courses must be held periodically so that they are always updated within management contexts.

**Conclusion**

Being a manager in a border region becomes a complex task, given the difficulties found in dealing with countries that do not have health agreements or specific programs for the population of such region. The results of this Scoping Review demonstrate that a viable solution for managers of these regions would be bilateral health integration agreements. Such strategies refer to government policies and programs as well as the involvement of health actors, especially the public health manager in the border region. It is noticed that the study field of study is little explored by the national and international literature, reflecting a great gap to be filled with further research.

**References**


