

## Transforming practices into models: paths towards a Health Care Network for the Homeless Population

1  
THEMATIC ARTICLE

Ana Carolina de Moraes Teixeira Vilela Dantas (<https://orcid.org/0000-0001-8499-9429>)<sup>1</sup>

Luísa da Matta Machado Fernandes (<https://orcid.org/0000-0002-5440-7928>)<sup>1</sup>

Ana Luísa Jorge Martins (<https://orcid.org/0000-0001-5634-9023>)<sup>1</sup>

Rafaela Alves Marinho (<https://orcid.org/0009-0007-6577-9325>)<sup>1</sup>

Diadorim Maria Rodrigues (<https://orcid.org/0009-0004-1812-9707>)<sup>1</sup>

Gabriela Drummond Marques da Silva (<https://orcid.org/0000-0002-1145-3940>)<sup>1</sup>

Anelise Andrade de Souza (<https://orcid.org/0000-0002-2408-7054>)<sup>1</sup>

Rômulo Paes-Sousa (<https://orcid.org/0000-0002-3384-6657>)<sup>1</sup>

**Abstract** *The Homeless Population (HP) has grown exponentially in the last decade, causing different challenges for the Brazilian Unified Health System, especially during the COVID-19 pandemic. A cross-sectional, descriptive, and exploratory study, with triangulated quantitative and qualitative methods, was conducted from 2020 to 2022, exploring care practices geared to the HP in Belo Horizonte. The quantitative stage adopted official datasets from the health and social assistance secretariats, and 48 semi-structured interviews and four focus groups were conducted in the qualitative stage, totaling 86 participants. The results point to the need for implementing a polyarchic and multidisciplinary Healthcare Network (RAS-PSR) with intersectoral support, guided care territorialization and longitudinality integrated with information systems to address the complex approach and based on the logic of the expanded clinic. Updating HP records in health systems and qualifying services is needed to achieve RAS-PSR efficacy. Understanding the dynamics of actions developed or broadened by the municipality and lessons learned locally can assist the development of effective social care and health policies that can be upscaled to the national level.*

**Key words** Continuing Health Care Network, Homeless Population, Public Policies

<sup>1</sup> Instituto René Rachou/  
Fundação Oswaldo Cruz  
(Fiocruz Minas). Av.  
Augusto de Lima 1715,  
Barro Preto. 30190-002  
Belo Horizonte MG Brasil.  
[caroldantas.to@gmail.com](mailto:caroldantas.to@gmail.com)

## Introduction

The homeless population (HP) has grown exponentially in Brazil over the last decade. In 2022, there were an estimated 281,472 people experiencing homelessness in the country, representing a 211% increase against 2012, while the general population grew by 11% in the same period<sup>1</sup>. This increase affected the Brazilian Unified Health System (SUS), especially during the COVID-19 pandemic. However, the municipal response had varying scope and effectiveness levels. In Belo Horizonte, the actions developed for the general population were recognized for their satisfactory performance in managing the health emergency and the multidimensional responses to new challenges<sup>2</sup> during this period. The Imperial College London<sup>3</sup> highlighted that Belo Horizonte had the lowest in-hospital mortality rates due to COVID-19 among the 14 capitals analyzed. It estimated that more than 300,000 deaths could have been avoided if the trend observed in Belo Horizonte had occurred across Brazil<sup>3</sup>, which reveals a history of investment in public policies before the pandemic, by also structuring the SUS and the Unified Social Assistance System (SUAS) in the municipality<sup>2,4</sup>.

Another concern in addressing the pandemic in Belo Horizonte was related to the homeless population (HP). Mitchell *et al.*<sup>5</sup> pointed out that the HP differs from the general urban population in that they are exposed to worse physical and mental health conditions, tending to higher use of health services and elevated mortality rates. As this is a vulnerable population, unable to comply with social distancing and other recommendations that would reduce the risk of illness from COVID-19, the city drew up a specific monitoring plan for people experiencing homelessness, including restructuring the pre-existing health network and creating new services.

Recognizing people experiencing homelessness as a population group that requires special attention is defined nationally by the National Policy for the Homeless Population (PNPSR)<sup>6</sup>, which aims to ensure broad access to several public policies, including those related to healthcare. Due to the difficulties in effectively implementing the PNPSR nationwide, the Judiciary has highlighted the need and urgency of meeting the specific demands of people experiencing homelessness. In July 2023, the Superior Court of Justice ordered the Federal Executive Branch to formulate an Action and Monitoring Plan to implement the policy mentioned above

effectively<sup>7</sup>. In December of the same year, the federal government launched the action and monitoring plan for implementing the PNPSR. Among the lines addressed are the health policy actions that include strengthening the Street Clinic (CnaR) teams and training professionals to serve people experiencing homelessness, among other goals<sup>8</sup>.

Thus, in order to support the foundations of a Health Care Network for the Homeless Population (RAS-PSR) through empirical evidence, this article aims to explore the foundations, technologies, and strategies based on the experience of Belo Horizonte during the COVID-19 pandemic in order to identify the possible challenges and potential for its implementation. This study considered the possibility of evaluating the experience of this city based on its cycle of production of public policies and responses in the health emergency to induce the elaboration of a national RAS model.

## Methods

This descriptive, exploratory, and cross-sectional study adopted triangulated methods, including collecting primary data in the qualitative stage and analyzing secondary databases for the quantitative stage from 2020 to 2022<sup>9</sup>. The research was financed by the INOVA Call for Proposals from the Oswaldo Cruz Foundation (FIOCRUZ), approved by the Ethics Committee of the René Rachou Institute, under CAAE No. 43259221.6.0000.5091 and Opinion No. 4.610.014.

Qualitative data were through in-depth interviews with five managers and 11 workers from the SUS; six managers and six workers from SUAS; two managers of intersectoral equipment coordinated by the Municipal Health Secretariat (SMS) and the Social Assistance, Food Security and Citizenship Secretariat (SMASAC); three managers and two workers from the National *Pastoral do Povo da Rua* (*Pastoral de Rua*); two leaders of social movements linked to the HP; one worker from the Public Defender's Office; and 13 people experiencing homelessness or people who have overcome this situation. Moreover, four focus groups were held with 35 people experiencing homelessness. In total, 86 people participated. The primary data were collected from June 2021 to June 2022, and participants were identified by their connection with actions aimed at people experiencing homelessness in the municipality and the social movement,

also based on indications from the Research Monitoring Committee, which counted on the representation from all sectors involved in the study. We employed semi-structured scripts developed under the specificities of each group interviewed and the research objectives for the interviews and focus groups. All participants signed the Informed Consent Form. The focus groups and interviews with the HP were held in locations easily accessible to the HP, with the support of the National People Experiencing Homelessness Movement (MNPSR) and the Organized Civil Society (OCS), represented by the *Pastoral de Rua*.

The interviews and focus groups were conducted remotely or in person, recorded, and transcribed in full for subsequent content analysis<sup>10</sup>. In the end, 35 categories of analysis were defined, including health. The excerpts presented in the results are identified by acronyms EGT to refer to the statements of managers or workers indicating the sector of origin, EPSR for people experiencing homelessness, and GF for a focus group, all followed by a number that represents the order of the interview in the research database. The acronyms and numbering were developed to guarantee the participants' anonymity in disseminating the research results.

In the quantitative analysis, we adopted epidemiological statistical methods to assess the HP profile and the care provided in health units by geographic location. A probabilistic linkage was performed to identify the unique person in the two databases evaluated. The descriptive health analyses were performed using the databases of the services selected for this analysis, namely, the official SMS and SMASAC databases.

The SMS database included information on PHC services (PHC Units/UBS and CnaR), besides information on mental health care, using an analysis window from 01/03/2019 to 28/02/2021 that allowed comparing information from one year before and one year after the start of the pandemic (01/03/2020 to 28/02/2021). The extraction method was conducted through electronic medical records that contained the user's identification as a homeless person. We used the Single Registry for Social Programs (*CadÚnico*) to assess social assistance information, with information from September 2021, the last date the registry was updated within the assessment scope of the current study. This database complemented the assessment of the HP sociodemographic profile in Belo Horizonte obtained from health data.

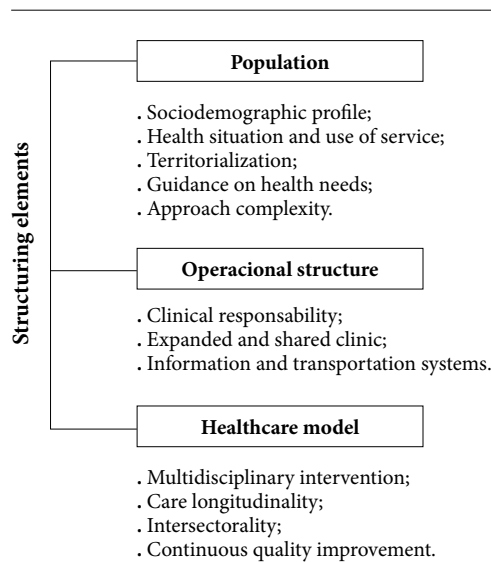
The variables selected for quantitative analysis to describe the HP profile in Belo Horizonte and the profile of health and social assistance services were: (i) Health: total number of services provided; services for respiratory symptoms, by category and professional team; number of people experiencing homelessness served and diagnoses confirmed by the PHC for COVID-19; most frequent conditions identified by the International Classification of Diseases (ICD-10); gender at birth; ethnicity and age; (ii) *CadÚnico*: gender at birth; ethnicity and age; schooling; time spent on the streets; per capita income (PC); remuneration; contact with relatives outside the street situation; *Bolsa Família* (family allowance) and regional office of residence. The factors associated with time spent on the streets for up to one year for people with data updated up to 18 months ago in *CadÚnico* (during the pandemic) were identified via logistic regression. Simple analysis (significance of 20%) preceded the estimation of the Odds Ratio (OR) through the multiple model. Continuous variables were tested in logarithmic form, and the best model selection was based on the ROC Curve. The Variance Inflation Factor assessed the multicollinearity of the final model. Education was not part of the multiple model due to the observed multicollinearity.

## Results and discussion

The results of this study will be presented based on the organization proposed by Mendes<sup>11</sup>, considering the three constituent elements of the RAS, namely, *the population* under RAS health and economic responsibility, which must be registered and recorded per their socio-health risks and territorial dynamics; *the operational structure*, consisting of the nodes that communicate through material and immaterial connections and the healthcare model that organizes RAS functioning per the epidemiological situation, besides its foundations, technologies and strategies<sup>11-13</sup> (Figure 1).

### Healthcare Network for the HP: proposing a model based on the Belo Horizonte experience

The justifications for establishing a RAS transcend the generalized search for better economic, epidemiological, and comprehensive health care results. They also include the recognition



**Figure 1.** Structuring elements of the RAS for the HP.

Source: Adapted from Mendes<sup>11</sup> and Ouverney and Noronha<sup>12</sup>.

that some population groups require continued care strategies in singular health networks to guarantee comprehensiveness and economies of scale and scope<sup>14</sup>. The study of Belo Horizonte's experience during the COVID-19 pandemic in caring for the HP showed that the structural barriers and difficulties for this population to access care were exacerbated during the health crisis and could be addressed with well-coordinated intersectoral action and the development of specialized services focused on the HP demands<sup>9</sup>.

A survey of the national literature on the HP identified some studies discussing lines of care and therapeutic itineraries for this group, but no article proposing a structured RAS for the HP<sup>15-20</sup>. Thus, the composition of the RAS-PSR represented in Figure 2 is proposed. Figure 2a presents the units and services comprising a polyarchic, multidisciplinary RAS-PSR integrated with support and logistics systems. Figure 2b shows the intersectoral characteristics of the RAS-PSR, indicating the articulation of health units and services with other stakeholders and other policies geared to the HP. These constituent elements and characteristics are the foundation for the national structuring of a RAS specific to the HP.

A structured RAS gives concreteness to the comprehensiveness principle through the materialization of connections in the different territories with supra-municipal coordination<sup>14</sup>,

which would enhance the reach of this population group that moves territorially. Developing integrated health service networks is a central strategy of health systems focused on primary care to offer quality and efficient care to population groups with specific health demands and needs<sup>21</sup>. Implementing the RAS-PSR in the SUS represents the confrontation of health inequalities, expanded access, and healthcare qualification.

### The Homeless Population in the COVID-19 Pandemic in Belo Horizonte

This research evaluated information related to 13,885 unique people experiencing homelessness who received healthcare and 8,659 registered in the *CadÚnico* during the analyzed periods. These data show a significant growth in the number of people experiencing homelessness in the 2013 municipal census<sup>22</sup>, following a trend similar to the growing HP observed in the last decade in Brazil<sup>1</sup>. The Health Information Systems (SIS) and *CadÚnico* have been the most widely used sources to characterize the HP profile. However, public authorities are invisible to those who do not access these networks, which reflects in difficulty in outlining an accurate sociodemographic profile, a gap found in the data in this article.

The health sector recorded a prevalence of males (57.7%), with a mean age of 33.9 years, with Black or brown people (69.0%). This pattern was repeated regardless of the type of service in which the care was provided (Figure 3). In the *CadÚnico*, most registered individuals were also male (89.6%), with a mean age of 42.4 years, with Black or brown people (83.6%), and incomplete primary education (51.8%). The HP sociodemographic profile in these two databases followed the national trend<sup>23</sup>.

However, the effects of the pandemic were reflected in relative changes in the sociodemographic profile in Belo Horizonte. The professionals and managers interviewed reported a perception that the HP profile changed during the pandemic with a growing number of homeless older adults, women, and entire families.

*The number of older adults, too. I saw it growing. The LGBTQIA+ population, especially young people experiencing homelessness, was something visible too, you know? So, yes, there was growth, right? (EGT19\_Social Assistance).*

The *CadÚnico* assessment revealed a greater likelihood of time spent on the streets for up to one year among white people (OR=1.43), wom-

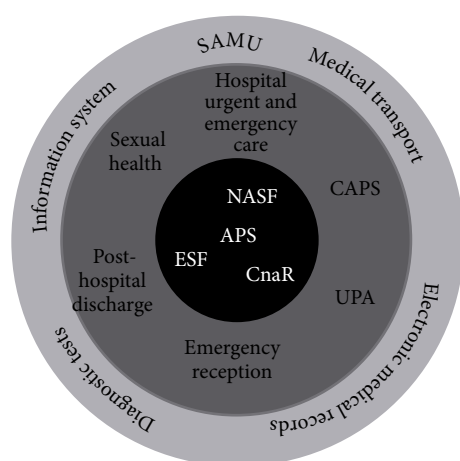


Figure 2a

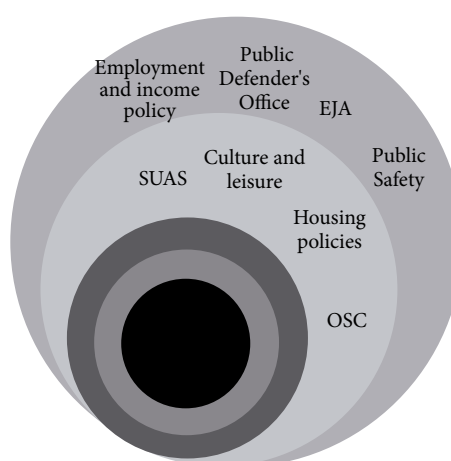


Figure 2b

Figure 2. RAS-PSR.

Source: Authors.

en (OR=1.28), with a per capita income of BRL 89.01 to half a minimum wage (OR=1.48), without a *Bolsa Família* allowance (OR=0.54) and outside the Central-South region (OR=1.36). This likelihood increases with the lower age logarithm (OR=0.25) (Table 1). The area under the ROC curve (0.674) was low. However, the results largely corroborate the information from the qualitative analysis by suggesting an increase in people with an atypical HP profile during the pandemic.

Regarding the assessment of *territorialization*, a greater concentration of services for people experiencing homelessness was observed in the central-south and eastern regions of the municipality. These regions are marked by the greater availability of health and social assistance services and a larger supply of public and commercial structures that allow survival in everyday life (bathroom, food, and work). The Central-South regional office stood out with 32.97% (n=3,949) of people served in the PHC, with the Carlos Chagas Health Center registering the highest number (n=2,536) due to its history of reference for the HP. This result is corroborated by the study by Temponi *et al.*<sup>24</sup> in Belo Horizonte, which links the use of the territory by homeless women and larger concentration in the central region due to the supply of goods and services, need for self-protection, and sociability.

Despite this concentration, all UBS in the municipality registered services for the HP in

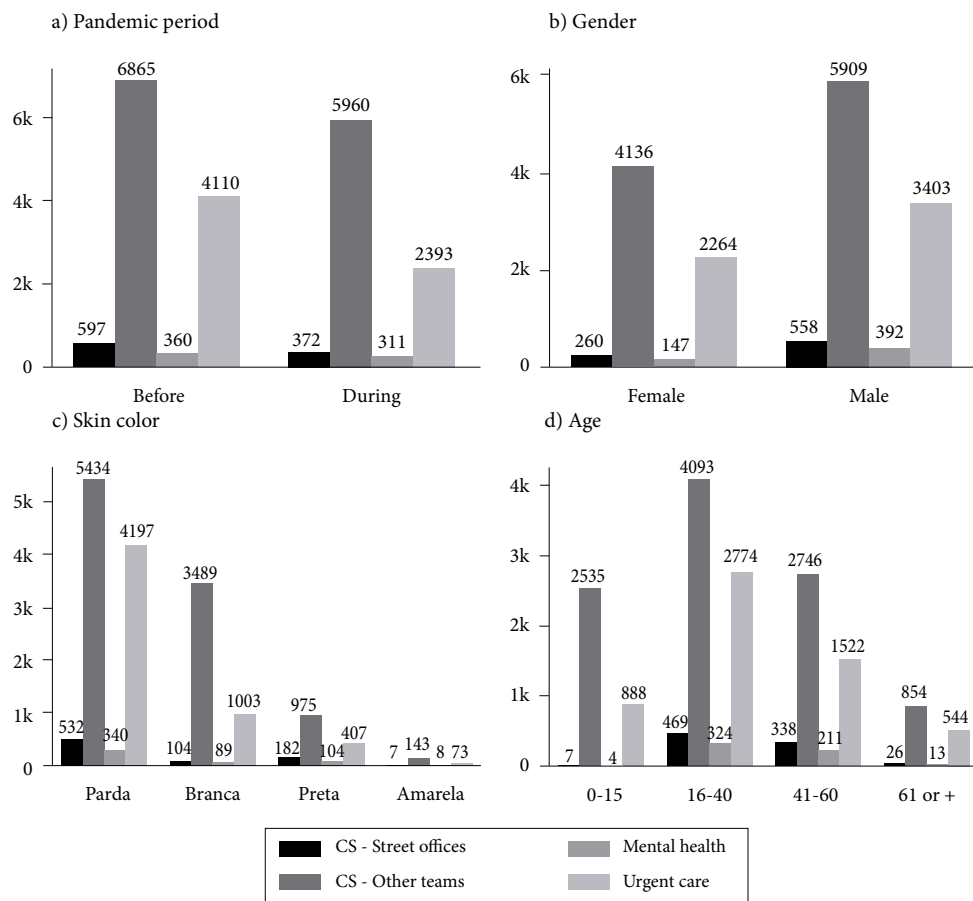
the period analyzed, which simultaneously denotes the relative urban mobility of individuals and different fixation points. These data trigger the need for the RAS to work from a territorialization with more fluid characteristics, where access to services is not geographically restricted. Due to this dynamic, the HP is sometimes prevented from obtaining care in a specific health service because they do not belong to that territory or due to the lack of personal documentation or a fixed address, despite municipal regulations guaranteeing this right.

*Social services asked them to help me, and that's where they helped me without my ID. You won't be helped without documents (GF3\_PSR).*

*Since I don't have an address for a shelter or anything, she didn't refer me for an x-ray. She said, "Oh, you have to be at the shelter so I can serve you" (EPSR4).*

The concept of territory is an essential operator in developing Brazilian health policy. However, it tends to be mischaracterized and understood only as a geopolitical demarcation, disregarding elements such as the circulation of users, economic activities, and the community's potential<sup>25</sup>. This distortion can compromise the care of the HP, which constantly moves around the territory as a subsistence strategy. The rigid territorial logic, especially for registering users in the PHC, can compromise care access and longitudinality for the HP.

*We need longitudinal monitoring. If we just see patients and turn our backs and don't think*



**Figure 3.** People served by some health services. a) Pandemic service period, b) Gender, c) Skin color, d) Age group. CS = Health Center.

Source: Authors.

*about what will happen next, the patient does not show up, and we say “Thank God”, they will only show up worse (EGT10\_Health).*

In this sense, thematic networks in the SUS must be implemented per the epidemiological priorities, allowing for financing, training of professionals, and developing new health equipment geared to the needs of each population group, considering the territorial dynamic nature<sup>26</sup>. Therefore, the need to structure the RAS-PSR based on a broader understanding of the territory is reinforced.

Regarding guidance on health needs, the COVID-19 pandemic led to establishing two specific HP facilities in Belo Horizonte. Both were developed with an intersectoral approach, and there was a consensus among the respondents on the need for continuity after the pan-

demie, as they met recurring and pre-existing HP health demands aggravated by the pandemic.

The first facility is the Emergency and Provisional Shelter Service, known as Emergency Shelter. This service offered accommodation, food and the possibility of isolating people with suspected/confirmed COVID-19 cases. It was a service managed by the Organized Civil Society (OCS) affiliated with the SMASAC and integrated with the health sector, considering the need for medication management, COVID-19 testing, and mental health management during the isolation period. The service had some barriers, hindering users' access or permanence in the service due to their location, the rules on not using alcohol and other drugs, and compliance with the required isolation period. Integrated management between health and social assis-

**Table 1.** Odds ratio of having lived on the streets for up to one year estimated in simple and multiple logistic regression models.

Variable/Category	Living on the streets - n (%)		OR (95%CI, p-value) of the model	
	Over 1 year	Up to 1 year	Simple	Multiple
Skin color/Ethnicity				
Non-white	1,747 (65.7)	911 (34.3)	1.0	1.0
White	306 (60.1)	203 (39.9)	1.27 (1.05-1.54, p=0.015)	1.43 (1.16-1.75, p=0.001)
Gender				
Male	1,852 (66.0)	955 (34.0)	1.0	1.0
Female	201 (55.2)	163 (44.8)	1.57 (1.26-1.96, p<0.001)	1.28 (1.01-1.62, p=0.044)
Regional office of permanence				
Central-South	1,207 (67.8)	572 (32.2)	1.0	1.0
Other	846 (60.8)	546 (39.2)	1.36 (1.18-1.58, p<0.001)	1.36 (1.16-1.58, p<0.001)
PC Income				
Up to 89	1,890 (65.0)	1,018 (35.0)	1.0	1.0
89.01 to 1/2 MW	41 (43.6)	53 (56.4)	2.40 (1.59-3.65, p<0.001)	1.48 (0.92-2.39, p=0.109)
>1/2 MW	122 (72.2)	47 (27.8)	0.72 (0.50-1.00, p=0.057)	0.49 (0.33-0.73, p=0.001)
Contact with parents outside the street situation				
Never	859 (65.3)	457 (34.7)	1.0	1.0
Rarely	490 (66.7)	245 (33.3)	0.94 (0.78-1.14, p=0.524)	0.95 (0.78-1.16, p=0.635)
Every year	121 (79.6)	31 (20.4)	0.48 (0.31-0.72, p<0.001)	0.51 (0.33-0.77, p=0.002)
Every month	302 (64.3)	168 (35.7)	1.05 (0.84-1.30, p=0.691)	0.93 (0.74-1.18, p=0.563)
Every week	206 (57.7)	151 (42.3)	1.38 (1.08-1.75, p=0.008)	1.20 (0.93-1.54, p=0.153)
Every day	75 (53.2)	66 (46.8)	1.65 (1.16-2.35, p=0.005)	1.25 (0.86-1.82, p=0.235)
Log (Age)				
Mean (SD)	3.8 (0.3)	3.6 (0.4)	0.22 (0.17-0.29, p<0.001)	0.25 (0.19-0.33, p<0.001)
Bolsa Família Program				
No	529 (55.2)	430 (44.8)	1.0	1.0
Yes	1,524 (68.9)	688 (31.1)	0.56 (0.48-0.65, p<0.001)	0.54 (0.45-0.64, p<0.001)
Remuneration previous month				
Mean (SD)	21.3 (115.9)	41.3 (171.0)	1.00 (1.00-1.00, p<0.001)	<b>1.00 (1.00-1.00, p=0.012)</b>
Schooling				
Illiterate	181 (70.7)	75 (29.3)	1.0	-
Primary incomplete	1,113 (69.7)	483 (30.3)	1.05 (0.79-1.41, p=0.754)	-
Primary complete	297 (65.6)	156 (34.4)	1.27 (0.91-1.77, p=0.161)	-
Secondary incomplete	176 (55.2)	143 (44.8)	1.96 (1.39-2.79, p<0.001)	-
>Secondary Incomplete	286 (52.8)	256 (47.2)	2.16 (1.58-2.98, p<0.001)	-

Obs.: NW = Minimum wages, SD=Standard Deviation, OR=Odds Ratio.

Source: Authors.

tance was identified as an efficient tool for overcoming these barriers.

The respondents highlighted that, besides the COVID-19 pandemic, there is a need for services for people experiencing homelessness who do not have an indication for hospitalization and cannot be close to their families but need isolation for treatment of diseases such as tuberculosis and continued care for chronic diseases. In the municipality, only the Institutional Post-Hospital Discharge Shelter had a similar purpose, limited to hospital referrals, without covering chronic demands and with insufficient beds.

Creating a RAS-PSR can help secure and direct resources more efficiently, with prioritization of resources by the Ministry of Health, as in the Care Network for People with Disabilities (PCD) and the Stork Network<sup>27,28</sup>. The RAS-PSR can also enhance the creation of new health services specific to the demands of this population and with characteristics aimed at effectively serving this public, as observed in other care networks, such as the creation of Orthopedic Workshops and the *Viver Sem Limite* (Living without limits) program for the PCD<sup>27</sup>. The reconstitution of the Intersectoral Committee for

the Follow-up and Monitoring of the National Policy for the Homeless Population (CIAMP Rua) points to a federal path towards an inter-sectoral policy specific to the HP<sup>8,29</sup>.

Besides the facilities created by the municipal administration, the OCS stands out in providing care to people experiencing homelessness. During the pandemic, hostels were established by the *Pastoral de Rua* of Belo Horizonte and later absorbed by the SMASAC, which became known as guesthouses. Rented houses in the city center were intended to accommodate people experiencing homelessness with reduced autonomy. These guesthouses differed from institutional social assistance units, mainly due to the health demands of residents who received healthcare there. They even had car support for transportation to access health services, ensuring user adherence and continuity of treatment. Besides the nursing team, these facilities include professionals from occupational therapy, psychology, social work, harm reduction, and a driver. This structure can be used as a starting point for discussing and implementing a service in the RAS-PSR similar to the Psychosocial Care Network (RAPS) offering a Therapeutic Residential Service<sup>30</sup>.

Regarding the *approach complexity*, the HP's healthcare has a specific dynamic since this group struggles to realize scheduled health treatments, including care continuity for chronic diseases. Family health teams (eSF) use strategies such as the follow-up of Community Health Workers (ACS) to specialist appointments and scheduled tests and the availability of medical transportation. One persisting barrier in the municipality is the needed adjustments in the regulatory flow with prioritization of appointment scheduling and tests for the HP.

It was possible to schedule appointments on the same day in the regional offices where the CnaR was integrated with the eSF. Moreover, the availability of supplies and rapid tests such as for pregnancy, HIV, and syphilis performed by the CnaR and the *BH de Mãos Dadas contra a AIDS* teams facilitates user adherence. The literature highlights that the CnaR functions as a reference in the HP's healthcare, mediating the connection by understanding the territorial dynamism and HP's specificities<sup>15,31</sup>. Internationally, mobile health services can improve the quality of life and promote equity of access to health<sup>32</sup>. However, a gap is observed in the coverage of this service in the national territory<sup>33</sup>.

## RAS-PSR operational structure

The health situation and use of health services found in the study corroborate PHC's role as the HP care coordinator since it was indicated by all respondents as responsible for the clinical coordination and integration of healthcare for these people. There is, however, a need for care in the territory and greater coordination with other regionalized services such as the Emergency Care Unit (UPA), the Psychosocial Care Center (CAPS), hospitals, and specialized care.

Three diagnoses that could be resolved in PHC stood out in the records of care before and during the pandemic: arterial hypertension (n=618, 5.11%), acute nasopharyngitis (n=372, 3.07%), and influenza from an unidentified virus (n=276, 2.28%). The latter two increased during the pandemic, while care for arterial hypertension decreased (Figure 4). Mental health care also stands out when evaluating other health units' most frequent type of care.

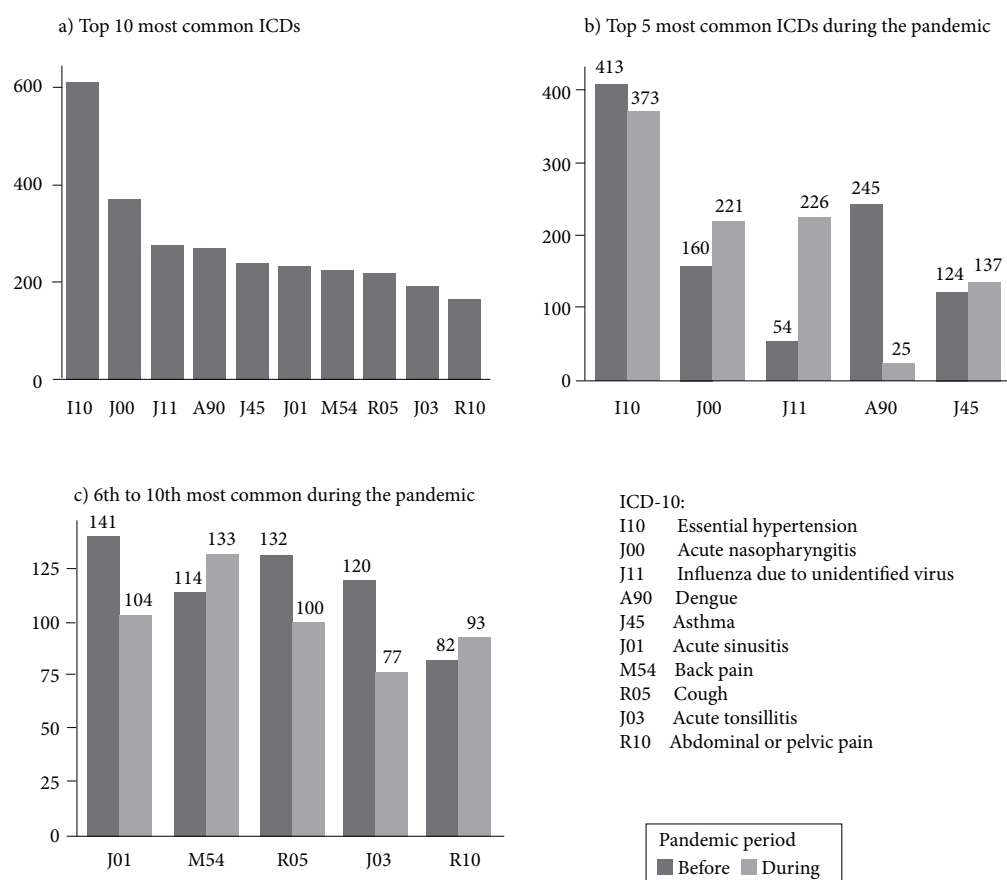
In Belo Horizonte, the CnaR belongs to the RAPS in interface with the APS, acting from the perspective of care in freedom and from harm reduction ethics. This device monitored 597 people before the pandemic and 372 during the pandemic (Figure 3) and was identified in the research as the main link between HP and health.

*The CnaR is like a complementary service. It bridges users and services to connect them in the territory because the care provided to the user will be more qualified if they are in the territory, right? So, primary care, the health center, should take ownership of this user (EGT8\_Health).*

The municipality's RAPS has eight Mental Health Reference Centers (CERSAM) and five Mental Health-Alcohol and Other Drugs Reference Centers (CERSAM-AD). Also, the 152 municipal UBS are equipped with mental health teams. Of these services, the most accessed by the HP were the East and West CERSAMs and the Central-South CERSAM-AD.

Regarding HP access to Specialized Care/Supplementary Network services, all units provided care to this population before and during the pandemic. As for the Urgent and Emergency Care Network, the Central-South and Northwest UPAs recorded the highest care volume for HP before and during the pandemic and were the critical gateway to the health network.

The UPA is often the gateway to care for people experiencing homelessness, especially in areas with a challenging connection with the UBS. This situation indicates a need for



**Figure 4.** Number of people served before and during the pandemic in the 10 most frequent ICDs for the homeless population.

Source: Authors.

dialogue between the UPA, UBS, CnaR, and CERSAM teams and other services in the health network. In Belo Horizonte, this integration occurs without the support of information systems and depends on personal contact between workers, which is a hurdle to sharing clinical analysis. Among other barriers, those specific to HP stand out, such as HP's lack of registration in the information system, lack of identification as HP in the electronic medical record, and lack of information systems that integrate SUS and SUAS services.

*We can't have real-time access to the records of those currently in the shelter. They have the list, and we usually ask online, "Look, I'm having trouble finding so-and-so, from such-and-such a health center", for example, who scheduled a test. "Does so-and-so regularly go to the shelter?" One answers "Yes", the other "No, the last time he was seen such-and-such" (EGT5\_Health).*

Integrated information systems are essential for planning, implementing, and evaluating health and social assistance actions and services. They can identify individual and collective issues and assist in management decision-making processes<sup>34</sup>.

Within the expanded and shared clinic, interdisciplinary meetings organized by health districts to discuss cases are strategies adopted to improve care for people experiencing homelessness. Meetings that used to be held in person in Belo Horizonte were now staged remotely during the pandemic, which increased participation and streamlined debates. Also, thematic groups were created to discuss more specific situations, such as those of pregnant women, older adults, and people experiencing homelessness, fostering policies to promote health equity<sup>35</sup>.

As a support and logistics system, health transportation for the HP was identified as

a relevant strategy to guarantee access and a cross-cutting point to the RAS-PSR. In Belo Horizonte, this transportation was facilitated to people with mobility issues, vulnerable people or those who did not have the means to reach the health services. The health professionals interviewed reported that they managed to include the HP as a target audience of this policy.

### RAS-PSR Healthcare Model

The research showed that multidisciplinary teams in the PHC and the RAPS provided care for people experiencing homelessness before and during the pandemic. The multidisciplinary nature of the intervention expresses a broader understanding of the health-disease-care process and meets the principle of comprehensive care in the SUS. The social worker is part of these multidisciplinary teams and a key player in the care flow and the referral and counter-referral work in health and social assistance services, just as the ACS plays a central role in care as a reference for people experiencing homelessness.

The specialized approach of mental health teams in the UBS, including the psychiatrist, was successful in meeting the demands of people experiencing homelessness, allowing coordination with other RAPS care points. In PHC, sharing cases and matrix support between the eSF and specialized services is essential for qualifying mental health care regarding the RAPS<sup>36,37</sup>. However, health workers emphasized the need to qualify the forms of referral and counter-referral to streamline care for people experiencing homelessness, reinforcing how fragile this relationship still is.

Multidisciplinary and especially intersectoral actions are a vital characteristic of specific care for the HP. This approach has been recognized and recommended by the World Health Organization (WHO) since the Ottawa Conference in 1986. It has been taken up again with the One Health Initiative principles and calls for collaboration between governments and different sectors of society in joining efforts to achieve the Sustainable Development Goals (SDGs)<sup>38,39</sup>. Establishing an RAS that enables intersectoral and multisectoral articulation addresses the Social Determinants of Health (SDH) and promotes equity<sup>40-42</sup>.

Intersectorality became even more necessary during the pandemic, indicating the urgency to advance integrated management between health and social assistance policies.

*A positive point is the coordination. We have a vulnerability center in every regional office and a specific technical reference of the HP. Another strength is the meetings, the intra-sector and inter-sector WGs, which conduct case studies and offer support in care in the health center and the integrated networks (EGT27\_Health).*

In Belo Horizonte's experience, the HP demands more significant interaction between housing policies, public defense, public safety, youth and adult education, and employment policies. International experience points to the need for intersectoral coordination, including the potential to reduce healthcare costs for this population<sup>43,44</sup>. Other authors warn of the need to address the gap between developing and implementing intersectoral HP-oriented public policies<sup>45</sup>.

### Conclusion

This study identified a demand for establishing an RAS-PSR consisting of care units and services already existing in the SUS, in intersection with other RAS, and the need for services to meet specific HP demands in the logic of comprehensiveness and continuity of care. By understanding the dynamics of the actions implemented in Belo Horizonte and the lessons learned locally, we proposed to assist in developing permanent policies and actions for HP care at the national level based on the proposal of a RAS-PSR that exceeds the contexts of health emergencies.

The experience developed in Belo Horizonte showed that intersectoral management of services is potentially resolute, which makes intersectorality a fundamental aspect of the effectiveness of a RAS-PSR. This RAS should be structured based on the situational health diagnosis, the selection of reference services for care, an indication of expanded or new services, and the implementation of logistics systems such as integrated information systems, health transport, and electronic medical records.

The change in the sociodemographic profile and the increase in the number of people experiencing homelessness in the municipality indicate a likely deficit in updating the records of these individuals in the health systems. Filling this gap is an essential condition for qualifying for a RAS. Furthermore, it must be based on a care model with a multidisciplinary perspective, an expanded and shared clinic, and intersectoral work.

Finally, the complexity of the approach to HP in the SUS poses challenges to managers and workers at different levels. PHC's central role in coordinating care across the network is compromised when there is no effective investment in referral and counter-referral mechanisms. Despite the challenges in implementing

the RAS-PSR and overcoming barriers in intra- and intersectoral communication, the research showed the potential of the SUS to respond with quality to the health needs of the HP through PHC, especially when it is coordinated with the SUAS and the OCS.

### **Collaborations**

ACMTV Dantas contributed to the research, manuscript design, methodology, analysis and discussion of results, writing of the manuscript and final review of the text. LMM Fernandes, ALJ Martins, RA Marinho, DM Rodrigues, GDM Silva and AA Souza contributed to the research, methodological definition, analysis and discussion of results and writing of the manuscript. R Paes-Sousa participated in the manuscript design and final review of the text.

### **Funding**

Fundação Oswaldo Cruz - Notice INOVA (PITSS) – Fiocruz.

## References

- Natalino M. *Estimativa da população em situação de rua no Brasil (2012-2022)*. Brasília: Ipea; 2023.
- Bastos L, Magalhães BD, Santos IC, Brasil FPD, Carneiro R. *Governo local, gestão de crise e respostas multidimensionais - uma análise do caso de Belo Horizonte no contexto da pandemia de Covid-19*. Encontro Brasileiro de Administração Pública; 2021.
- Brizzi A, Whittaker C, Servo L, Hawryluk I, Prete C, De Souza W, Aguiar R, Araujo L, Bastos L, Blenkinsop A, Buss L, Candido D, Castro M, Costa S, Croda J, Aruska A, Santos S, Dye C, Flaxman S, Fonseca P, Geddes V, Gutierrez B, Lemey P, Levin A, Mellan T, Bonfim D, Miscouridou X, Mishra S, Monod M, Moreira F, Nelson B, Pereira R, Ranzani O, Schnekenberg R, Semenova E, Sonabend R, Souza R, Xi X, Sabino E, Faria N, Bhatt S, Ratmann O. Report 46: Factors driving extensive spatial and temporal fluctuations in COVID-19 fatality rates in Brazilian hospitals. *Nat Med* 2022; 28(7):1476-1485.
- Andrade MV, Noronha K, Turra CM, Guedes G, Cimini F, Ribeiro LC, Bernardes AT, Domingues E, Ribeiro MM, Botega LA, Carvalho LR, Nogueira D, Calazans JA, Julião NA, Souza A, Silva VA, Andrade JP, Ferreira MF, Santos RO, Silva JA. Os primeiros 80 dias da pandemia da COVID-19 em Belo Horizonte: da contenção à flexibilização. *Nova Econ* 2020; 30(2):701-737.
- Mitchell E, Waring T, Ahern E, O'Donovan D, O'Reilly D, Bradley DT. Predictors and consequences of homelessness in whole-population observational studies that used administrative data: a systematic review. *BMC Public Health* 2023; 23(1):1610.
- Brasil. Decreto nº 7.053, de 23 de dezembro de 2009. Institui a Política Nacional para a População em Situação de Rua e seu Comitê Intersetorial de Acompanhamento e Monitoramento, e dá outras providências. *Diário Oficial da União* 2009; 24 dez.
- Brasil. Supremo Tribunal Federal. *Plenário referendo na medida cautelar na arguição de descumprimento de preceito fundamental 976 Distrito Federal* [Internet]. 2023 [acessado 2024 fev 10]. Disponível em: <https://redir.stf.jus.br/paginadordpub/paginador.jsp?docTP=TP&docID=770954718>.
- Brasil. Ministério dos Direitos Humanos e Cidadania. *População em Situação de Rua. Plano de Ação e Monitoramento para Efetivação da Política Nacional para a População em Situação de Rua*. Brasília: Ministério dos Direitos Humanos e Cidadania; 2023.
- Martins ALJ, Souza AA, Silva GDM, Dantas ACMTV, Alves RM, Fernandes LMM, Oliveira AMC, Magalhães Júnior HM, Paes-Sousa R. Access to health and social protection policies by homeless people during the COVID-19 pandemic: a mixed-methods case study on tailored inter-sector care during a health emergency. *Public Health* 2024; 12:1356652.
- Bardin L. *Análise de conteúdo*. São Paulo: Edições 70; 2011.
- Mendes EV. As redes de atenção à saúde. *Cien Saude Colet* 2010; 15(5):2297-2305.
- Ouverney AM, Noronha JC. Modelos de organização e gestão da atenção à saúde: redes locais, regionais e nacionais. In: Fundação Oswaldo Cruz (Fiocruz). *A saúde no Brasil em 2030: organização e gestão do sistema de saúde*. Vol. 3. Rio de Janeiro: Fiocruz/Ipea/Ministério da Saúde/Secretaria de Assuntos Estratégicos da Presidência da República; 2013. p. 143-182.
- Arruda C, Lopes SGR, Koerich MHAL, Winck DR, Meirelles BHS, Mello ALSE. Health care networks under the light of the complexity theory. *Esc Anna Nery* 2015; 19(1):169-173.
- Tofani LFN, Furtado LAC, Guimarães CF, Feliciano DGCF, Silva GR, Bragagnolo LM, Andreazza R, Chioro A. Caos, organização e criatividade: revisão integrativa sobre as Redes de Atenção à Saúde. *Cien Saude Colet* 2021; 26(10):4769-4782.
- Engstrom EM, Teixeira MB. Equipe "Consultório na Rua" de Manguinhos, Rio de Janeiro, Brasil: Práticas de cuidado e promoção da saúde em um território vulnerável. *Cien Saude Colet* 2016; 21(6):1839-1848.
- Borysow IC, Conill EM, Furtado JP. Atenção à saúde de pessoas em situação de rua: Estudo comparado de unidades móveis em Portugal, Estados Unidos e Brasil. *Cien Saude Colet* 2017; 22(3):879-890.
- Abreu D, Oliveira WF. Atenção à saúde da população em situação de rua: Um desafio para o Consultório na Rua e para o SUS. *Cad Saude Publica* 2017; 33(2):e00196916.
- Hallais JAS, Barros NF. Consultório na Rua: visibilidades, invisibilidades e hipervisibilidade. *Cad Saude Publica* 2015; 31(7):1497-1504.
- Hino P, Santos JO, Rosa AS. Pessoas que vivem em situação de rua sob o olhar da saúde. *Rev Bras Enferm* 2018; 71(Supl. 1):732-740.
- Borysow IC, Furtado JP. Acesso, equidade e coesão social: avaliação de estratégias intersetoriais para a população em situação de rua. *Rev Esc Enferm* 2014; 48(6):1066-1073.
- Pinto D, Máñez MA, Minué S, Pérez-Cuevas R, Regalia F, editors. *Health networks in action: the experiences of Argentina, Brazil, Colombia and Mexico*. Inter-American Development Bank (IDB), Felipe Herrera Library; 2020.
- Duarte F, Ricardo G, Souza CA, Brito CMD, Afonso LN, Castro M, Silva Filho HC. *Terceiro censo de população em situação de rua do município de Belo Horizonte*. Viçosa: Suprema; 2014.
- Brasil. Ministério do Desenvolvimento Social e Combate à Fome (MDS). *Rua: aprendendo a contar: Pesquisa Nacional sobre a População em Situação de Rua*. Brasília: MDS; 2009.
- Temponi SRN, Ribeiro LP, Pinheiro TMM, Carvalho SM. "Tudo é violência, viver é violência!": representações sociais e vivências de mulheres em situação de rua. *RPDS* 2022; 11:e4027.
- Tetemann EC, Trugilho SM, Sogame LCM. Universalidade e Territorialização no SUS: contradições e tensões inerentes. *Textos Contextos* 2016; 15(2):356-369.

26. Brasil. Portaria nº 4.279, de 30 de dezembro de 2010. Estabelece diretrizes para a organização da Rede de Atenção à Saúde no âmbito do Sistema Único de Saúde (SUS). *Diário Oficial da União*; 2010.
27. Brasil. Portaria nº 793/GM/MS, de 24 de abril de 2012. Institui a Rede de Cuidados à Pessoa com Deficiência no âmbito do SUS. *Diário Oficial da União*; 2012.
28. Brasil. Portaria nº 1.459, de 24 de junho de 2011. Institui, no âmbito SUS - a Rede Cegonha. *Diário Oficial da União*; 2011.
29. Brasil. Decreto nº 11.472, de 6 de abril de 2023. Altera o Decreto nº 9.894, de 27 de junho de 2019, que dispõe sobre o Comitê Intersetorial de Acompanhamento e Monitoramento da Política Nacional para a População em Situação de Rua. *Diário Oficial da União*; 2023.
30. Brasil. Ministério da Saúde (MS). *Residências terapêuticas: o que são, para que servem*. Brasília: MS; 2004.
31. Franço PA, Mângia EF, Muramoto MT. O cuidado com a população em situação de rua: o consultório na rua nas redes de atenção à saúde e Intersetorial: revisão integrativa da literatura. *Rev Ter Ocupacional USP* 2020; 30(2):124-131.
32. Perna LK, Patterson C, Chairez AA, Lewis J, Jordan J, Komara H, Harris H. Healthcare outcomes for unsheltered persons experiencing homelessness using a street medicine model of care: a pilot program evaluation. *Cogent Soc Sci* 2024; 10(1):2328895.
33. Brasil. Ministério dos Direitos Humanos e da Cidadania (MDHC). *População em Situação de Rua - Diagnóstico com base nos dados e informações disponíveis em registros administrativos e sistemas do Governo Federal*. Brasília: MDHC; 2023.
34. Saraiva LIM, Ramos FAZ, Santos GF, Vetorazo JVP. Sistemas de informação em saúde, o instrumento de apoio à gestão do SUS: aplicabilidade e desafios. *Rev Eletr Acer Enferm* 2021; 9:e6418.
35. Siqueira SAV, Hollanda E, Motta JIJ. Políticas de promoção de equidade em saúde para grupos vulneráveis: O papel do ministério da saúde. *Cien Saude Colet* 2017; 22(5):1397.
36. Brasil. Ministério da Saúde (MS). *HumanizaSUS equipe de referência e apoio matricial*. Brasília: MS; 2004.
37. Hirdes A. A perspectiva dos profissionais da Atenção Primária à Saúde sobre o apoio matricial em saúde mental. *Cien Saude Colet* 2015; 20(2):371-382.
38. World Health Organization (WHO). *Ottawa charter for health promotion* [Internet]. 1986 [cited 2024 fev 10]. Available from: <https://www.who.int/teams/health-promotion/enhanced-wellbeing/first-global-conference#:~:text=The%20first%20International%20Conference%20on,health%20movement%20around%20the%20world>.
39. Queenan K, Garnier J, Nielsen LR, Buttigieg S, De Meneghi D, Holmberg M, Zinsstag J, Rüegg S, Häslar B, Kock RA. Roadmap to a one health agenda 2030. *Cab Review* 2017; 12(4):1-17.
40. Amri M, Chatur A, O'Campo P. Intersectoral and multisectoral approaches to health policy: an umbrella review protocol. *Health Res Policy Syst* 2022; 20(1):21.
41. Amri M. Global health in Canada: Three emerging prospects. *J Glob Health* 2021; 11:03025.
42. Vega J, Irwin A. Tackling health inequalities: new approaches in public policy. *Bull World Health Organ* 2004; 82(7):482.
43. Brown M, Rowe M, Cunningham A, Ponce AN. Evaluation of a comprehensive SAMHSA service program for individuals experiencing chronic homelessness. *J Behav Health Serv Res* 2018; 45(4):605-613.
44. Zaretsky K, Flatau P. *The cost of homelessness and the net benefit of homelessness programs: a national study*, AHURI Final Report No. 218. Melbourne: Australian Housing and Urban Research Institute; 2013.
45. Martins ALJ, Souza AA, Fernandes LMM, Oliveira AMC, Cordeiro JC, Oliveira AF, Magalhães Júnior HM. A interface entre as políticas públicas para a população em situação de rua: revisão integrativa. *Cien Saude Colet* 2023; 28(8):2403-2416.

---

Article submitted 26/02/2024

Approved 25/06/2024

Final version submitted 27/06/2024

---

Chief editors: Maria Cecília de Souza Minayo, Romeu Gomes, Antônio Augusto Moura da Silva