Access to health services: territory, flows and borders of riverside populations of Boa Vista do Ramos, Amazonas, Brazil

Acesso aos serviços de saúde: território, fluxos e fronteiras das populações ribeirinhas de Boa Vista do Ramos, Amazonas

Nicolás Esteban Castro Heufemann[a]
https://orcid.org/0000-0002-6601-6158
E-mail: nheufemann@uea.edu.br

Alcindo Antonio Ferla[b]
https://orcid.org/0000-0002-9408-1504
E-mail: ferlaalcindo@gmail.com

Júlio Cesar Schweickardt[c]
https://orcid.org/0000-0002-8349-3482
E-mail: julio.ilmd@gmail.com

Fernanda Rodrigues Fonseca[c]
https://orcid.org/0000-0002-0035-1033
E-mail: fernanda.fonseca@fiocruz.br

[a] Universidade do Estado do Amazonas, Curso de Medicina. Manaus, AM, Brasil

[b] Universidade Federal do Pará. Faculdade de Psicologia. Programa de Pós-Graduação em Psicologia, Belém, PA, Brasil

[c] Instituto Leônidas e Maria Deane, Fiocruz. Manaus, AM, Brasil

Abstract

Access to health services is a banner defended by social movements and informs the flow for seeking care in the urgent and emergency (UE) network. This article analyzes this access in the municipality of Boa Vista do Ramos, Amazonas, and reflects on the flow of UE riverside users. A descriptive study was conducted based on qualitative and geographical data. Research steps consisted of gathering geographic information on the locations of interest; interviewing local actors; organizing and analyzing secondary and primary data; and generating thematic maps. Removal of UE patients in Boa Vista does not follow any fixed pattern, or even a similar one. Establishment of full riverside teams and their uninterrupted stay in the area has consolidated these locations as health care points. The drought and flood of the rivers determine paths, approaching or distancing spatially. Given the complexity of the life scenario, decisions regarding care itineraries are linked to previous experiences with the local health system. User flow has much to inform about the unpredictability of everyday choices and options.

Keywords: Access to Health Services; Amazon Region; Rural Population; Geographic Mapping.

Correspondence
Nicolás Esteban Castro Heufemann
Rua Carlos Vasquez, n. 12, Qd. C, Condomínio Murici, Pq. 10 de Novembro, Manaus/AM, Brazil. CEP 69050-408.

1 Funded by Fundação de Amparo à Pesquisa do Estado do Amazonas (FAPEAM).

Resumo

O acesso aos serviços de saúde é bandeira de luta dos movimentos sociais, e compõe o fluxo pela busca de cuidados na rede de urgência e emergência (UE). O objetivo deste artigo é analisar esse acesso no município de Boa Vista do Ramos e elaborar reflexões sobre o fluxo de usuários ribeirinhos em situação de UE. Trata-se de um estudo descritivo baseado em dados qualitativos, no qual o espaço foi incorporado à análise. As etapas consistiram em: levantamento de informações sobre a localização geográfica de lugares de interesse; entrevistas com os atores locais; organização e análise dos dados secundários e primários; e geração de mapas temáticos. A remoção dos pacientes em situação de UE em território boavistense não segue um padrão fixo, ou sequer similar. A fixação de equipes ribeirinhas completas e a sua permanência ininterrupta em área vem consolidando essas localidades como pontos de atenção à saúde. A seca e a cheia dos rios determinam caminhos, aproximando ou distanciando espacialmente. Frente à complexidade do cenário de vida, as decisões dos itinerários de cuidado estão atreladas às experiências prévias com o sistema de saúde local. O fluxo dos usuários diz muito sobre a imprevisibilidade das escolhas e das opções cotidianas.

Palavras-chave: Acesso aos Serviços de Saúde; Região Amazônica; População Rural; Mapeamento Geográfico.

Introduction

Universal access to health services, as well as being a constitutional guarantee, is a key cause championed by social movements and has become one of the fundamental rights of citizenship (Jesus; Assis, 2010). In this study, flow is inseparable from access and represents the search for care in the formal health sector, as well as the path taken by the user and the person responsible for the patient in search of care and resolution in the Urgent and Emergency Care Network (UECN). Here, we agree with Oliveira, Mattos and Auta (2009); the user is an active subject in defending their interests and that, despite being aware of the rules of the health system based on territorial logic, hierarchization, and the concept of the gateway through primary care, they may look for other alternatives with better offer of access in their search for assistance.

In this search, they grasp their historical experience with the offered health services, with all their norms and rules, and depending on their need for access, they reinterpret the norms and look for ways that may provide care experiences in line with their demands.

Recognizing the territory is a basic step towards characterizing the population and their health problems, as well as assessing the impact of services on their health levels (Monken; Barcellos, 2005). In the context of the Amazon region, the territory of interest in this study is an aqueous one, highlighted by the riverside way of life, where the health-disease-care process is expressed. This territory goes beyond the waterways and has more accentuated variations in spatial and human geography, with very broad combinations of population concentration/dispersion and very adverse conditions of distance and access (Schweickardt; Lima; Ferla, 2021), causing management, research, teaching-learning and, above all, equity challenges for these populations.

Studies on access and population flows in the health sector (with numerous methodologies) have been increasingly common (Pacheco; Silva; Ramos, 2017; Galvani et al., 2021; Antonacci et al., 2013; Roese, 2005; Freire, 2021), with a strong concentration in metropolitan urban areas. Flows in health networks as a management component

are also found in the literature (Brasil, 2013; 2014; 2015; 2017) as inducers for states and municipalities. However, there is a scarcity of studies involving the riverside population (Queiroz et al., 2018; Reis, 2021).

In view of the above, this article aims to analyze access to health services in the municipality of Boa Vista do Ramos (BVR), in the state of Amazonas, and to reflect on the flow of riverside users in urgent and emergency situations.

Methodology

This is a descriptive study based on qualitative data. Space was incorporated into the analysis, preceded by an exploratory phase, with visual presentation of the data in the form of graphs, tables, and cartographic maps.

The stages of the study consisted of (1) Gathering information on the geographical location of the communities, admissions and removals of patients at the general hospital, the basic health units, the communities and the municipal health department of the municipality of Boa Vista do Ramos; (2) Interviews with the local actors of interest in this study; (3) Organization and analysis of the secondary (tables and graphs) and primary (speech of local actors) databases; and (4) Generation of thematic maps (representation of the study area and patient removal flows).

Qualitative research came in as a methodological option, especially cartography, which allows for countless forms of narration. Photographic compilation, field diaries, participant observation, and conversations with local actors made up the first approach to the field of study. This stage helped to delimit the study's territorial base, with the following factors being taken into account: the inseparable recognition of the territory as the interaction of objects and actions; the demarcation of the territory of health work, as it is the work of the teams—reports from managers, health professionals, and users; and the delimitations used that are established and recognized by the local population.

The interviews helped to consolidate the previous stage, which was also qualitative, using a semi-structured script that was "applied" in various scenarios of interest to the study. Narrative interviews respond to the desire to "tell a story about an important event in one's life and social context," and are considered a form of unstructured, in-depth interview (Jovchelovitch; Bauer, 2008), from which the analysis sought to highlight the meanings that guided choices, flows, and paths during urgent and emergency situations.

The open questions referring to these situations were applied to the interviews in the different groups of local actors, as in the examples:

Users

How is a referral to the municipal hospital carried out? Does anyone from the Family Health team accompany users during transportation or to the hospital?

Health workers

Report on how people access the Urgency and Emergency Network in the municipality. How do patients get to the municipality's hospital?

Managers

How is the Urgency and Emergency Network structured in the municipality? How do patients enter the hospital? How are patients from the municipality's riverside area admitted?

The testimonies of the local actors were recorded and transcribed in full, and the observation notes were duly categorized and ordered according to the themes prioritized in this research. This choice, after approximations, made it possible to analyze and grasp the meanings attributed to the UECN, its access and the surrounding Amazonian context. In order to protect the interviewees' anonymity, each one was given a code, recorded with their initials and by the category they belonged to. Voice intonation and silences between statements were also taken into account, as well as the emphasis of words or expressions (Gomes et al., 2005). These procedures were used to reveal how the program's actions worked, the incongruities between what was said and what was practiced in the routines of the health units, the subjects' understanding of this context and the social relations that took place within it (Minayo, 2004).

The secondary data was collected and organized collaboratively by researchers and employees of the Boa Vista do Ramos-Clóvis Negreiro Hospital Unit. The staff involved work directly in the process of transferring patients to other municipalities. To this end, a database of transferred patients treated/hospitalized at the hospital from June 2017 to December 2019 was jointly designed. The data collection period was chosen at the suggestion of hospital employees, considering a change in municipal and hospital management; in addition to improving the organization of data by the sector responsible for transfers. The data was tabulated and analyzed using Microsoft Office Excel 365.

To draw up the thematic maps, geographical coordinates of the communities in the Curuçá and Paraná do Ramos River channels were collected using a Global Positioning System (GPS) receiver; then the geographical database of BVR removals to other municipalities in urgent and emergency situations was organized, with a focus on manual intervention to adjust coordinates and remove records with incompleteness and inconsistencies. Finally, the spatial distribution of the communities and municipalities of interest to the study was carried out. The tool used to produce the maps was the free and open-source program QGIS, version 3.20.3. Maps of patient transfers flows were produced, showing the route taken by users in search of health care through the formal network and based on their origin-destination patterns.

As for the ethical and legal aspects, this study was approved by the Research Ethics Committee (CEP) under CAAE registration 99460918.3.0000.520.

Results and discussion

The transfer of patients in urgent and emergency situations within the Boa Vista territory, represented on the map (Figure 1), markedly does not follow any fixed or even similar pattern over the period analyzed. In 2018, even with the increase in transfers, the flow to the municipal headquarters had a smaller range of displacements in the regional areas. There are factors listed in the interviews and participant observation that allow us to problematize the findings of intra-municipal transfer in BVR.

Users can enter the hospital by free will or by referral. Users in urgent and emergency situations from the riverside communities may go there on their own initiative, without any member of the health team, or they may be accompanied by members of the riverside health team, with the respective referral and initial possible care for the situation that triggered the transfer. In the first case, there is a strong tendency for the user or the person responsible for the patient to inform the main city as the address of origin, either because they have family ties in the city or because they are looking for faster care. When asked how they came to the hospital, everyone identified themselves as being from their community of origin. Although we were unable to reliably measure hospital admission data, this practice may be being reproduced in BVR.

In 2018 and early 2019, two Riverside Basic Health Units were opened in two regions, Curuçá and Lago Preto. The establishment of complete riverine teams and their uninterrupted stay in the area has been consolidating these locations more and more as points of health care in the search for care by the population. The interviewees' recognition of the improvement in access to local health services can be seen in some of the interviews:

> *So, when there wasn't a health center in Santo Antônio, they did go there, to Itacoatiara and Urucurituba a lot, after the health center opened and really worked, we only take them there, it's very difficult now to have a case that they need to take to Itacoatiara* (A04).

> *It has, it has helped a lot, this part has improved, if someone needs their teeth fixed they go there and get them fixed, if they need a consultation they go there and there's a nurse, a doctor, this part has improved a lot* (L01).

The consolidation of strategies to retain health professionals in riverine areas has gradually redirected the flow of users towards a clear link with the local health team. The work of the riverine teams is fundamental to improving the quality of the health services provided (Santos et al., 2021), including urgent and emergency care.

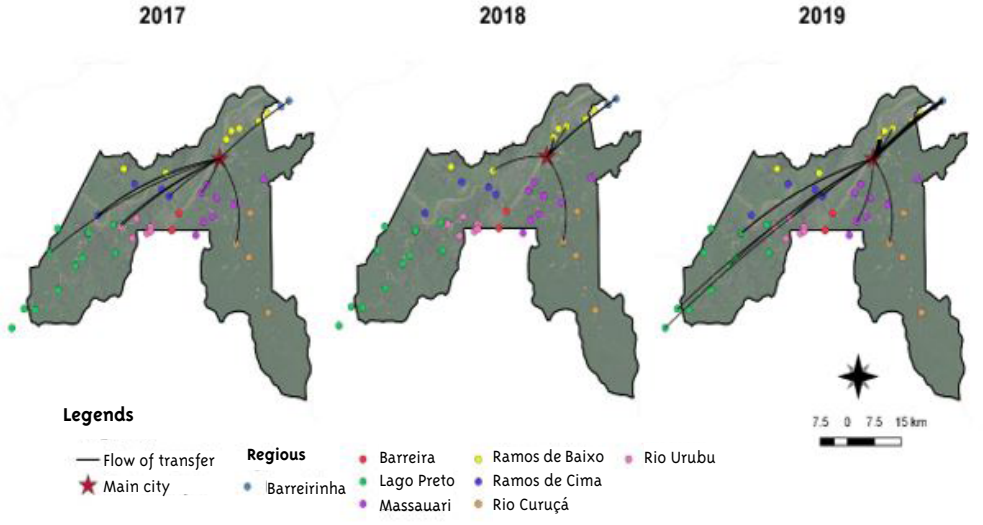
Figure 1 also shows a continuous flow of users living in communities belonging to the municipality of Barreirinha. In addition to the map, when asked

about the flow from other municipalities to the BVR health network, the management explained:

> *Sometimes Barreirinha (BAE), we receive... because we have a community very close to here, which is Cametá* (G01).

> *We receive them from Barreirinha, right, and... it's because it's closer to them than their own municipality, so there are many villages there that are on the road to Boa Vista, so it's much easier for them to come here than to go to Barreirinha* (G03).

Figure 1 – Flow of removal of riverside communities to the municipal headquarters of Boa Vista do Ramos



Datum Sirgas 2000 (EPSG 4674) Date of update: 07/04/2022

Source: SEMSA - BVR, Google Earth.

Another reflection coming from the users, a "counterflow" to the previous reflection, refers to the movement of riverine users from BVR to other municipalities in search of care, especially residents of communities located at the headwaters of the rivers. Flows that are not counted as official removal data occur at certain times of the year (mainly during river floods), with or without the participation of the Community Health Agent.

> [...] *and the other woman who also had a problem, but her son was sick, so I took her to the clinic, then she came back, but it was on her own, she wanted to go to Maués, then from Maués her son died while traveling. I wanted to take him to Boa Vista, but she wanted to take him to Maués, I don't work in Maués, I work in Boa Vista, so she lost her son, he died. Yes, Maués is closer to us during flood season, now it's far away, but during the flood it's close, closer than Boa Vista, through the shortcuts too* (A02).

> *Look, it's about my case, one day I had a problem with my prostate hernia, I had an operation... I went there for help, because I thought it was closer, but I almost bled out... so I had to go to Manaus (U01)*

> [...] *because before it was done in Urucurituba, Maués because it was closer to them, because if you go to Arrozal you enter there you already go to Urucurituba, so for them accessibility would be more for Urucurituba and not Boa Vista, especially Betel* (T02)

Living in a community, of a certain social and cultural life, is part of the complex game of care. The context is not just a framework of social determinants but forms a complex scenario that

is difficult to represent theoretically because it is, first and foremost, experienced (Heufemann; Lima; Schweickardt, 2016). The context of life in these statements marks the choices for care and, consequently, the flow of urgency and emergency. The drought and the flood determine paths, open or close ways, bring health care points closer or farther apart. In addition to these choices, which are also financial, it became clear in the research field that there are family ties between community members in the most different municipalities, which also influences the choice of destination transfer. There is no allowance to guarantee accommodation and/or food for the person responsible for the patient, except within the hospital unit itself and during hospitalization.

Given all the complexity of the life scenario, decisions on care itineraries are linked to previous experiences with the local health system and the "community work" itself, when faced with urgent and emergency situations. In the words of Oliveira, Mattos, and Auta (2009):

> Users, in their daily lives, thanks to a reflexive monitoring of their experiences, establish value judgments about the various services that are presented to them in the health system, in other words, the user makes a daily evaluation of the health services, which is not formal or technical, but rather an evaluation that is not perceived by them at the discursive level, although it is at the level of their practical awareness (2009, p. 1932, free translation).

This informal assessment of everyday life is the first "hole in the wall" of urgent and emergency care, which does not take into account the borders drawn on maps, the limits of municipal jurisdictions or the divisions of a fragmented health system. The search for care re-signifies the border beyond a line of separation, transforming it into a space/place that is, above all, welcoming and effective. Clearly, the holes in the wall are appearing because there is a distancing from the flows of the traditional UECN and those idealized by local health management, as well as from health care models centered on medical practice and hard technologies.

Models of care need to consider the territory, community initiatives, the work of the health workers and, above all, the user of the health network. In order to fulfill the promise of a single system organized for comprehensiveness and humanization, it is essential that it works as an uninterrupted health "care mesh," and not as a bureaucratic and depersonalized system (Silva Junior; Alves, 2007). Furthermore, in relation to the living territory, it makes no sense to maintain a dichotomy between the geographical territory and its people, since it is made up of established relationships.

As the expected results show, the distribution of the origins of the removals is strongly centered on users coming from the urban area (85%) in relation to the rural area (15%), which can be seen in Table 1. Of the rural removals, 3.5% come from communities located in another municipality (Barreirinha).

Another result was the identification of the main causes of transfer from BVR to other municipalities, as shown in Figure 2. Parintins (PIN) is the reference municipality in the Lower Amazon Health Region (Resaba) for urgent and emergency situations that go beyond the care of the municipalities in the Region. Of the five main causes of transference in the period studied, leaving BVR, all have the municipality of Parintins as their point of care. A more detailed analysis of the maps reveals that the main reasons for the flow towards the municipality of reference are external causes and those related to pregnancy, childbirth, and the puerperium. The presence of doctors specializing in trauma and orthopedics, general surgery and gynecology/obstetrics increases this flow.

> *PIN is our hub, so the patient who needs to be referred is sent to PIN, but we have a big problem... because if we call PIN and say: look, we're referring a newborn like this, they say there's no bed, there's never a bed, there's never a specialist, never, never, never... and sometimes when we send them there, most of the cases go unresolved, so even though Itacoatiara* (ITC) *isn't our hub, what do we do? When the patient is more serious, we know he has to go to Manaus and that even Parintins won't solve it, what do we do? We send the most serious patients to ITC. Why is that? Because we know that transportation to Manaus is easier from there, because it's overland, there's an ambulance, so we end up doing something like this: very serious patient, ITC; serious patient, PIN* [...] (G01)

Table 1 – Distribution of user transfer, by place of origin of the user, in the municipality of Boa Vista do Ramos (AM), carried out between June 2017 and December 2019.

Rural locations	Region	Transfers
Santo Antônio do Lago Preto	Lago Preto	1
N.S. Perpetuo S. da Enseada	Lago Preto	2
Cristo Bom Pastor do Pari	Lago Preto	1
Com. Divino Espírito Santo – Arrozal	Lago Preto	1
Bom Jesus I	Lago Preto	1
Betel Bom Jesus II	Lago Preto	1
Subtotal		**7 (2%)**
Vila Fátima igarapé Açú	Massauari	1
Santa Ana	Massauari	1
Subtotal		**2 (0,5%)**
Vila Candida	Other municipality	3
Cametá	Other municipality	9
Subtotal		**12 (3,5%)**
Vila Manaus	Ramos de Baixo	6
São Raimundo do Taracuá	Ramos de Baixo	3
São José do Quati	Ramos de Baixo	1
República de São Benedito	Ramos de Baixo	9
Subtotal		**19 (5.5%)**
N. S. das Graças	Ramos de Cima	2
Cristo Rei	Ramos de Cima	2
Subtotal		**4 (1.2%)**
Menino Deus do Curuçá	Rio Curuçá	3
Subtotal		**3 (0.9%)**
São Pedro do Tamuatá	Rio Urubu	1
N.S. de Fátima Terra Preta	Rio Urubu	1
Subtotal		**2 (0.5%)**
Sede BVR	Main city	298
Subtotal		**298 (85.9%)**
Total		**347 (100)**

Source: Hospital Clóvis Negreiros (AM), 2020

From the words of the municipal management, the collaboration of another reference municipality in the Médio Amazonas Health Region is evident: Itacoatiara. The capital's "power of attraction" for transfer cannot be overlooked, not only because it has the highest density (hard technology) in the state, but also because it is the only municipality to have Intensive Care Unit (ICU) beds available in the public network, offers an important range of complementary laboratory and imaging tests, and concentrates a diverse spectrum of specialist doctors. In addition, land access to the capital from Itacoatiara is a determining factor in increasing the BVR-ITC flow, the choices of removals and the agreements between the municipalities. It should be noted that when removing the user to the Resaba reference municipality, the distance from the capital Manaus is greater and access is by waterway or air. A study analyzing regionalization in Amazonas highlighted the "cornerstone" of the health reality in the state: an insufficient network of health services and difficulties in securing human resources, especially in small municipalities (Garnelo; Sousa; Silva, 2017).

The municipality of Itacoatiara, contrary to regional agreements, is the main city attracting BVR removals for the five main causes (Figure 3) highlighted in this study. The severity (greater or lesser/urgency or emergency) of the user activates choice devices for the user's removal: to which municipality will this removal be directed? In addition to severity, it involves prior coordination and decisions, such as medical referrals and contacts between Regional (PIN) or Extra-Regional (ITC) hospitals. In addition, the severity of the user determines which professional should accompany them in the *ambulancha* (water ambulance): when it is more serious, a nurse; when it is less serious, a nursing technician.

The local and (extra) regional arrangements are aligned with a flow already established by the very user in distress and go beyond the local regional agreements. In addition, they demonstrate the weaknesses of the "formal, meeting, minutes" agreements and highlight the "manager-manager, director-director agreements" centered on the clinical needs of the moment, seeking to remove barriers to access and circumvent the inequities imposed not only by local geography, but also by the limitations of the Resaba health systems.

The maps show that, in addition to Parintins and Itacoatiara, Barreirinha (BAE) and Maués (MBZ) are, to a lesser extent, references for BVR for some transfers. Absent in the managers' initial statements, these signal a common weakness in many small hospitals in the Amazon, which is the lack of doctors. When hospital management by another health professional, not a doctor, is exhausted, these users, most of whom are at maternal and fetal risk during labor and other complications during pregnancy, are transferred to MBZ or BAE with doctors in their hospital units and closer to the municipality of BVR. The following speech highlights an additional "extra-regional" agreement and represents the second "hole in the wall" of the formal agreements.

> [...] *really, it's that situation... with regard to BAE and MBZ, it's more a question of support, you know, because sometimes the municipality of BVR ends up without a doctor in the hospital, but it's due to reasons of displacement/absence/some problem, so we need this part, the specialized care, in the case of the hospital, and we end up asking for the support of these municipalities to provide this care for us; it's not a transfer like we do for PIN or ITC* (G04)

Travel time is a crucial factor in situations involving urgency and emergency; in rural riverside realities, it is linked to periods of drought and flooding of the rivers, inclement weather, the power of the boat's engine, the purchase of fuel and the presence or absence of fixed riverside teams in the communities. It clashes with the striking aspects mentioned by a user from the Guajará Community, who, as a Community Health Agent (ACS), used to accompanying people on the move and providing initial local care, found himself in an urgent and emergency situation.

> [...] *first it was when I started to get sick, when they took me ill, when I got sick, I left my house, it was "like a beach," there was just a little canal here... all beach, all beach, all land here* [pointing]*... then we left home at half past seven in the morning, arrived in Cavado, they picked me up, put me in the cart, pulled me to the other side 'cause I couldn't walk... me in the cart, when I got that shock I screamed and screamed with so much pain... they stopped the cart... then we arrived in Boa Vista, it seems like two o'clock in the afternoon* (CODENAME U03).

Figure 2 – Flow of patient transfer from Boa Vista do Ramos headquarters to external municipalities

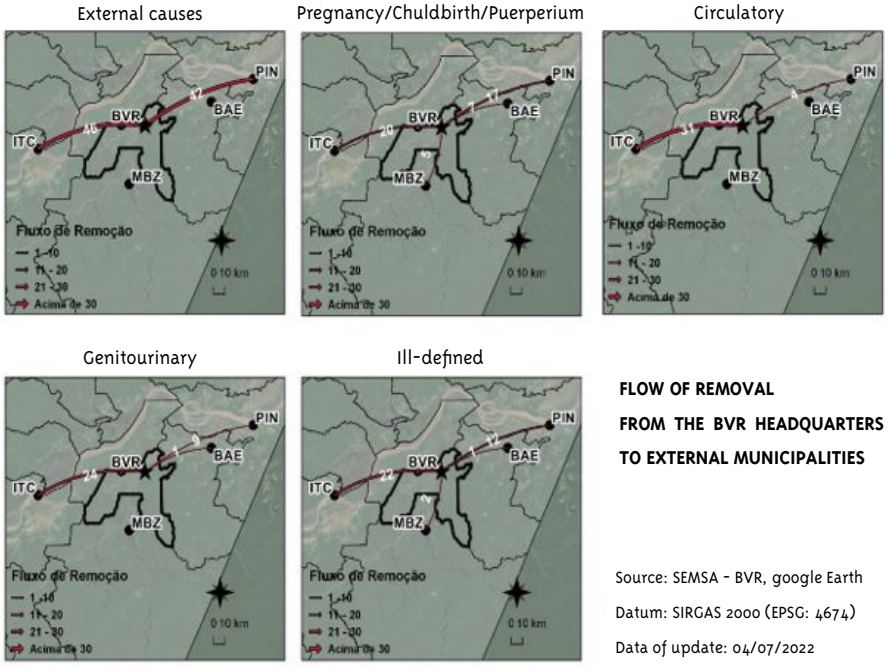
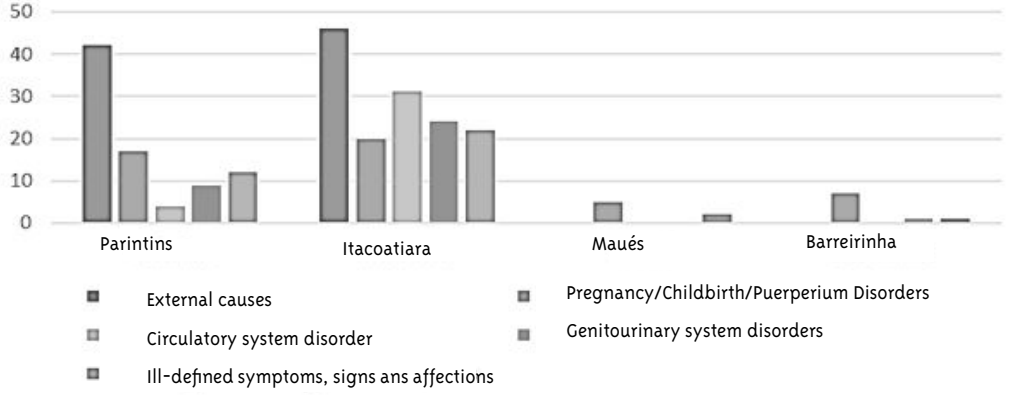


Figure 3 – Transfer of patients from the municipality of Boa Vista do Ramos to regional reference municipalities, 2017-2019



Source: Clóvis Negreiros Hospital, 2020.

Painful journeys involving different routes (lake, river, and forest trail) highlight the dramatic nature of riverine urgency and emergency in times of dry waterways, aggravated by the absence of health teams to support riverine communities. A closer look at the distressing situation highlights other aspects of the local UECN.

> [...] *it was Tuesday, since Saturday... they took me and admitted me there and I went to the hospital, the doctor poked me like this in my belly* [made gestures], *but my appendicitis hadn't burst yet... not yet... when it was about six o'clock, seven o'clock in the afternoon, I started to force* [vomit] *and then it burst... then I spent Tuesday night, Wednesday all day, when it was 5pm on Wednesday they transferred me to Itacoatiara in a speedboat...we arrived at around 9pm in Itacoatiara, I spent the night in Itacoatiara in hospital then the next day the crisis*

came, a crisis that was going to kill me, that crisis was going to kill me... then they took my daughter, she accompanied me, they called the nurse, she got there and she didn't know it, she'd never experienced these things in hospital... hey Lorena, go and call a nurse 'cos I can't take it anymore, come and help me, I can't take the pain, I'm going to die... so call BVR and from here I can't take it anymore and I'm going to die... it's about to burst, a lot of pain, that's when two people came, I don't even know what they were, a nurse or a doctor, I don't even know what they were, seeing my situation there, let's put in a tube... as they put in the tube there was a relief, they put me in the ambulance and sent me to Manaus, at the same time... We arrived in Manaus at two o'clock in the afternoon, Thursday, four o'clock in the afternoon, they put me in for surgery, they operated on me, they opened my belly [showed the incision]*... when I came to I was already there on the fifth floor of the 28th* [a large hospital and a reference in urgent and emergency care in the state of Amazonas] (CODENAME U03).

Clearly, the transfer narrated shows the seriousness of the situation experienced by the user, as well as clarifying and corroborating the findings found in the database in the testimonies of managers and in the thematic maps. The most serious clinical situations are transferred to the city of Itacoatiara, and the Manaus health network is configured as a support and gateway for emergency situations in the state. The binary system (river and air travel) of relations between Manaus and other municipalities establishes a type of organization of care, in which residents in the interior of the state are forced to regularly turn to the metropolis in search of care, with no network of health interactions that resembles what is recommended for a health region (Garnelo; Sousa; Silva, 2017) and reinforcing/deepening the weaknesses of the municipal health systems that make up Amazonas. The narrative sequence shows other points of regional attention.

Then it passed, it passed and when it was going to be 1 year old, two days away, it came back, on this side [he pointed to the spot] *when this disease appeared in me... then, to BVR! I didn't poop anymore, I only vomited, then the food came up...I spent 05 days in BVR, but the doctor only gave me medicine for pain, vomiting, purging... but he gave it to me, and I didn't purge... then I told her to discharge me so I could go to Maués. Until I called Dr. Alexandre and there I wasn't going to give up and from there... it'll get better, if I leave it'll get worse... when he made a document for me to sign, he went there with me and he saw my situation... I'm going to send him to Parintins... and they opened up my belly again* [he spoke and showed the cut]*... two operations on my belly, one in Manaus, the first, and another in Parintins* (CODENAME U03).

The cities of Maués and Parintins appear as points of support in the report, through the interlocution of the user himself as the protagonist of his care and in the doctor's decision to transfer to the Resaba reference municipality.

Time and distance in the Amazon are plural. They are not defined by chronological logic or mileage. Time is measured in hours and/or days of travel. There is an intense dynamism that moves all the time, taking on other senses and meanings than just the chronological; health care in this riverside territory incorporates singularities that do not only involve clinical aspects, coinciding with the user's biomedical grammar (Martins et al., 2022).

Final considerations

Boa Vista do Ramos faithfully represents the reality of a large number of small Amazonian municipalities, which have rivers as their roads, and therefore an important and preponderant riverine component. This opens up an important dimension in the process of understanding spatialization in health and its contribution as a complementary tool to health evaluation and planning processes.

There is no denying the importance of the foreign gaze and, above all, the incorporation of the speech of those involved and directly implicated in the transfer of users in acute distress and the patient's guardian, enriching the secondary data, the maps and the quality of the writing. The analytical detachment from the context, as a "third party" in the processing of one's own experience, is fundamental to breaking the naturalization with which the lack of assistance or the omission of public policies operates in the analysis of the production of health in the Amazon territory.

The flow of users from Barreirinha to Boa Vista do Ramos and, above all, the "counterflow" from the latter to Maués, Urucurituba, and Itacoatiara represent the first "hole in the wall" of care, which is intended to be comprehensive and equitable. The protagonism of the community and the users is striking in the speeches and reinforces that health care in the formal network has numerous aspects, but its availability does not recognize maps, municipalities, or institutional flows, and the logic of costs and time, as well as the regime of the rivers and the presence of family members, are essential to delineate the coming and going of the user in a situation of suffering.

The discontinuity of medical care, with the absence of professionals in the hospital network at occasional times, showed a discordance with formal agreements, demonstrating the emergence of the informal support network between managers and how demands mobilize resources, teams, agreements and, above all, creativity in doing health.

The limitations of this study are consistent with the choice of research design, one of them being the impossibility of "tracing" the route from home to the riverside community, given that there are human conglomerations even more dispersed than the "larger community" mentioned that were not part of this analysis, which could help to compose new investigations and deepen the understanding of the dynamics of people's movement in times of acute distress.

The flow of users in this study says a lot about the unpredictability of choices, options in daily life and, most of all, how care can be diversified in the health network. Inequities in access to health services require users to rethink their care and that of the community. It is important that other studies delve deeper into aspects linked to traditional medicine and community care, outlining more clearly the impact that these practices can have in urgent and emergency situations.

Complex territories with complex population flows require complex solutions, signaling the need for re-agreements in collegiate bodies, such as health councils, the Regional Inter-Management Commission and the Bipartite Inter-Management Commission, to further qualify access to the UECN, including valuing the user's path in seeking help in the health network, investing in permanent and continuing training for professionals who directly deal with situations of acute suffering, and allocating material resources that complement care.

References

ANTONACCI, M. H. et al. Estrutura e fluxo da rede de saúde como possibilidade de mudança nos serviços de atenção psicossocial. *Revista da Escola de Enfermagem da USP*, São Paulo, v. 47, n. 4, p. 891-898, 2013. https://doi.org/10.1590/S0080-623420130000400017

BRASIL. Ministério da Saúde. Portaria de Consolidação nº 3, de 28 de setembro de 2017. Consolidação das normas sobre as redes do Sistema Único de Saúde. *Diário Oficial da União*, Brasília, DF, 28 set. 2017.

BRASIL. Ministério da Saúde. *Cadernos HumanizaSUS* - Volume 5: Saúde Mental. Brasília, DF: Ministério da Saúde, 2015.

BRASIL. Ministério da Saúde. *Implantação das Redes de Atenção à Saúde e outras estratégias da SAS*. Brasília, DF: Ministério da Saúde, 2014.

BRASIL. Ministério da Saúde. *Manual instrutivo da Rede de Atenção às Urgências e Emergências no Sistema Único de Saúde (SUS)*. Brasília, DF: Ministério da Saúde, 2013.

FREIRE, K. M. R. *Mapeamento de fluxo dos casos de dengue nos estabelecimentos de saúde no Distrito Federal*. 2021. Dissertação (Mestrado em Geografia) - Universidade de Brasília, Brasília, DF, 2021.

GALVANI, F. B. et al. Fluxo de rede do paciente oncológico no município de Patos de Minas. *Brazilian Journal of Health Review*, Curitiba, v. 4, n. 3, p. 13389-13395, 2021. https://doi.org/10.34119/bjhrv4n3-287

GARNELO, L.; SOUSA, A. B. L; SILVA, C. O. Regionalização em Saúde no Amazonas: avanços e desafios. *Ciência e Saúde Coletiva*, Rio de Janeiro, v. 22, n. 4, p. 1225-1234, 2017. https://doi.org/10.1590/1413-81232017224.27082016

GOMES, R. et al. Organização, processamento, análise e interpretação de dados: o desafio da triangulação. *In*: MINAYO, M. C. S; ASSIS, S. G; SOUZA, E. R. (Org.). *Avaliação por triangulação de métodos*: Abordagem de Programas Sociais. Rio de Janeiro: Editora Fiocruz, 2005. p. 185-221.

HEUFEMANN, N.E.C; LIMA, R.T.S; SCHWEICKARDT, J.C. A produção do cuidado em saúde num território amazônico: o 'longe muito longe' transformado pelas Redes Vivas. *In*: MERHY, E.E. et al. (Org.). *Avaliação compartilhada do cuidado em saúde*: surpreendendo o instituído nas redes. Rio de Janeiro: Hexis, 2016. p. 332-335.

JESUS, W. L. A; ASSIS, M. M. A. Revisão sistemática sobre o conceito de acesso nos serviços de saúde: contribuições do planejamento. *Ciência e Saúde Coletiva*, Rio de Janeiro, v. 15, n. 1, p. 161-170, 2010. https://doi.org/10.1590/S1413-81232010000100022

JOVCHELOVITCH, S; BAUER, M.W. Entrevista narrativa. *In*: Bauer, M. W.; Gaskell, G. (Ed.). *Pesquisa qualitativa com texto, imagem e som*: um manual prático. Petropolis: Vozes, 2008. p. 90-113.

MARTINS, F. M. et al. Produção de existências em ato na Amazônia: "território líquido" que se mostra à pesquisa como travessia de fronteiras. *Interface*, Botucatu, v. 26, e210361, 2022. https://doi.org/10.1590/interface.210361

MINAYO, M. C. S. Fase de Trabalho de Campo. *In*: MINAYO, M. C. S. *O Desafio do Conhecimento*: Pesquisa Qualitativa em Saúde. 8a. ed. São Paulo: Hucitec, 2004. p. 105-196.

MONKEN, M.; BARCELLOS, C. Vigilância em saúde e território utilizado: possibilidades teóricas e metodológicas. *Cadernos de Saúde Pública*, Rio de Janeiro, v. 21, n. 3, p. 898-906, 2005. https://doi.org/10.1590/S0102-311X2005000300024

OLIVEIRA, L. H; MATTOS, R. A; AUTA, I. S. Cidadãos peregrinos: os "usuários" do SUS e os significados de sua demanda a prontos-socorros e hospitais no contexto de um processo de reorientação do modelo assistencial. *Ciência e Saúde Coletiva*, Rio de Janeiro, v. 14, n. 5, p. 1929-1938, 2009. https://doi.org/10.1590/S1413-81232009000500035

PACHECO, A. M; SILVA, R. D. M; RAMOS, M. C. Organização do fluxo de atendimento aos usuários abusivos ou dependentes de álcool e outras drogas. *Revista Brasileira de Pesquisa em Saúde*, Vitória, v. 19, n. 1, p. 21-27, 2017. Available from: https://periodicos.ufes.br/rbps/article/view/17712. Access on: Jun. 12, 2024.

QUEIROZ, M. K. S. et al. Fluxos assistenciais e a integralidade da assistência à saúde de ribeirinhos. *Revista Enfermagem UERJ*, Rio de Janeiro, v. 26, e26706, 2018. https://doi.org/10.12957/reuerj

REIS, A. E. S. *Acesso e fluxos da população ribeirinha aos serviços de saúde no município de Parintins-AM*: uma abordagem participativa. 2021. Dissertação (Mestrado em Saúde Coletiva) - Instituto Leônidas e Maria Deane, Manaus, 2021.

ROESE, A. *Fluxos e acesso dos usuários a serviços de saúde de média complexidade no município de Camaquã, RS*. Dissertação (Mestrado em Enfermagem) - Universidade Federal do Rio Grande do Sul, Porto Alegre, 2005.

SANTOS, I. O. et al. Avanços e desafios na saúde das populações ribeirinhas na região amazônica: uma revisão integrativa. *Revista APS*, Juiz de Fora, v. 24, Supl, 1, p. 185-199, 2021.

SCHWEICKARDT, J. C; LIMA, R. T. S; FERLA, A. A. O programa Mais Médicos no território amazônico: acesso e qualidade na atenção básica, travessias de fronteiras e o direito à saúde das gentes. *In*: SCHWEICKARDT, J. C; LIMA, R. T. S; FERLA, A. A (Org.). *Mais Médicos na Amazônia*: efeitos no território líquido e suas gentes. ed. Porto Alegre: Rede Unida, 2021. p. 40-52.

SILVA JUNIOR, A. G.; ALVES, C. A. Modelos Assistenciais em Saúde: desafios e perspectivas. *In*: MOROSINI, M. V. G. C. (Org.). *Modelos de atenção e a saúde da família*. Rio de Janeiro: EPSJV/Fiocruz, 2007.

Contribution of the Authors

NECH participated in the conception of the article, the design and analysis, the writing of the article and the approval of the forwarded version; AAF and JCS participated in the conception and design and analysis of the data, the critical revision of the article, and the approval of the forwarded version; FRF revised the article and made the maps.

Received: 05/15/2024
Resubmitted: 05/15/2024
Approved: 05/28/2024