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ACESSO, REGIONALIZAÇÃO E ESTRATÉGIAS DE GESTÃO PARA AVANÇAR NA ELIMINAÇÃO DAS HEPATITES VIRAIS

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ABSTRACT

The objective was to analyze the distribution of cases of viral hepatitis and health services to care for this evil from the perspective of regionalization, identifying state management strategies to favor access. This is typified as evaluative research, with sequential mixed method, developed in the state of Mato Grosso, Brazil. Secondary data analyzed by descriptive statistics and georeferencing were used. Managers of the technical area and reference services were interviewed by means of a semi-structured script. The content was analyzed from the thematic analysis. The highest frequency of notifications is due to hepatitis B, while the highest frequency of deaths is due to hepatitis C, both in the North Center macro-region. There are 26 specialized services, with higher concentration in the South macro-region. One health region (RS) does not have a reference service. There are 119 services that offer rapid testing, with higher concentration in the East and North Center macro-regions and in the RS of Garças Araguaia and Baixada Cuiabana. There is no collection of viral loads in the West macro-region and in three RS. It is noteworthy that five RS do not offer treatment. The thematic analysis gave rise to the category "Strategies to advance in coping with viral hepatitis", which groups devices that concern the participation of state management in health surveillance and in the analysis of the user's care trajectory for actions related to planning, investment, and organization of the health care network. Management should consider governance to overcome resource asymmetries and enhance the organization of the care network through regionalization, in order to agree actions that strengthen the achievement of the goals of the 2030 Agenda.

Keywords: Human Viral Hepatitis. Health Management. Health Services. Comprehensive Health Care. Unified Health System.

RESUMO

O objetivo foi de analisar, na perspectiva da regionalização, a distribuição dos casos de hepatites virais e dos serviços de saúde para atenção a esse agravo, identificando estratégias de gestão estadual para favorecer o acesso. Trata-se de uma pesquisa avaliativa de método misto sequencial, desenvolvida no estado de Mato Grosso, Brasil. Utilizaram-se dados secundários analisados por estatística descritiva e georreferenciamento. Gestores da área técnica e de serviços de referência foram entrevistados, por roteiro semiestruturado. O conteúdo foi analisado a partir da análise temática. A maior frequência de notificação é por hepatite B, enquanto a de óbitos é por hepatite C, ambas na macrorregião Centro Norte. São 26 serviços especializados, com maior concentração na macrorregião Sul. Uma região de saúde (RS) não possui serviço de referência. São 119 serviços que ofertam teste rápido, com maior concentração nas macrorregiões Leste e Centro Norte e nas RS Garças Araguaia e Baixada Cuiabana. Não há coleta de carga viral na macrorregião Oeste e em três RS. Destaca-se que cinco RS não ofertam tratamento. Da análise temática, emergiu a categoria "Estratégias para avançar no enfrentamento das hepatites virais", que agrupa dispositivos que dizem respeito à participação da gestão estadual na vigilância em saúde e na análise da trajetória assistencial do usuário para ações de planejamento, investimento e organização da rede de atenção à saúde. A gestão deve considerar a governança para superar assimetrias de recursos e potencializar a organização da rede de atenção por meio da regionalização, a fim de pactuar atuações que fortaleçam o alcance das metas da Agenda 2030.

Palavras-chave: Hepatite Viral Humana. Gestão em Saúde. Serviços de Saúde. Assistência integral à Saúde. Sistema Único de Saúde.

INTRODUCTION

Viral hepatitis is among the diseases with the highest morbidity and mortality in the world, with around 257 million people living with chronic hepatitis B virus infection and 71 million people with hepatitis C virus infection, but unaware that they have the infection (PAHO, 2020). In the region of the Americas, approximately 3.9 million people are estimated to be living with chronic hepatitis B, while 7.2 million live with chronic hepatitis C, of which only 14% are diagnosed and less than 1% have access to treatment due to the high cost (WHO, 2017). In 2018 alone, around 125,000 people in this region died from liver cancer and hepatic cirrhosis (PAHO, 2020).

In Brazil, from 2000 to 2022, 750,651 cases of hepatitis were confirmed, with a higher frequency of hepatitis B and C cases, with the Northeast region having a concentration of hepatitis A cases, the Southeast region hepatitis B and C, and the North region hepatitis D (Brazil, 2023). From 2000 to 2021, 85,486 deaths were recorded from underlying causes and those associated with types A, B, C and D

hepatitis, with hepatitis B and C being responsible for the highest frequency (Brazil, 2023). The state of Mato Grosso ranks fifth in the incidence of hepatitis A and B cases, and tenth for hepatitis C (Brazil, 2023), but the regional organization of the network of services, testing and referral to treatment, aligned with geographical issues and demographic aspects, which include indigenous people, riverside dwellers, and slave descendants (known as quilombolas), make the state a peculiar scenario with regard to viral hepatitis (Gleriano, 2021).

Since the publication of the Sustainable Development Goals (SDGs), viral hepatitis has gained prominence, with the World Health Assembly emphasizing efforts to reduce new infections by 90% and decrease mortality by 65% (WHO, 2016). In Brazil, the National Program for the Prevention and Control of Viral Hepatitis (PNHV, as per its Portuguese acronym), created in 2002, articulates state coordinations to guarantee access to hepatitis care. Over the more than twenty years of the program, progress has been made, marked mainly in the last decade by the expansion of services to provide access and prevention through vaccination, but a conversation with regional governance incentives is urgently required to strengthen guidelines that qualify the Health Care Network (RAS, as per its Portuguese acronym) while respecting the principles of the Brazilian health system (Gleriano *et al*., 2023).

The concept of access is polysemic, not always consensual, and it is understood in this study that access to health services involves the supply and availability of resources as the possibility of obtaining necessary services, at the right time and place, in sufficient quantity and at a reasonable cost (Vuori, 1991). It is understood that management is not about a position or a person, but about the interactions, relationships, and institutional agreements of a group of stakeholders with the power to make decisions about health policy agendas (Gleriano, 2021).

In order to guarantee access, management needs to invest in the regionalization process, which is intrinsic to political forces, ideological rearrangements and aspects that lead to the introduction of technologies and care that go beyond political structures (Mello *et al*., 2017).

Health permeates the concept of driving and conditioning development in the regional dimension (Gadelha; Costa, 2013), even more so in a country with continental territorial expansion, historically marked by socioeconomic territorial inequalities, which entail urgent management action to strengthen social and economic cohesion, through adjustments to provide social security, an elementary factor of

citizenship and inherent to the social dimension of development. Accordingly, health and development are intertwined in a dynamic process that combines economic growth with technological innovation and improved living conditions for those who live in the territory (Gadelha; Temporão, 2018).

In this sense, based on the concept that health in the territory has influence on the regional development, the act of advancing in decentralization and regionalization to qualify access and forms of management in the Brazilian Unified Health System (SUS, as per its Portuguese acronym) shows that it plays an essential role in inducing development on a regional scale. Regional and territorial peculiarities, epidemiological and health conditions, the socioeconomic-cultural profile of the population, the availability of health services, conditions of access to and use of health services, among others, have repercussions on different management strategies for the prevention, diagnosis and treatment of viral hepatitis, when placed in a regionalized management perspective.

This study is justified by the fact that difficulties in accessing care represent a weakness in combating viral hepatitis in countries with high prevalence and social vulnerabilities (Lemoine; Nayagam; Thursz, 2013). In this sense, the objective of this study was to analyze the distribution of viral hepatitis cases and health services for this condition from the perspective of regionalization, identifying state management strategies to promote access.

METHODOLOGY

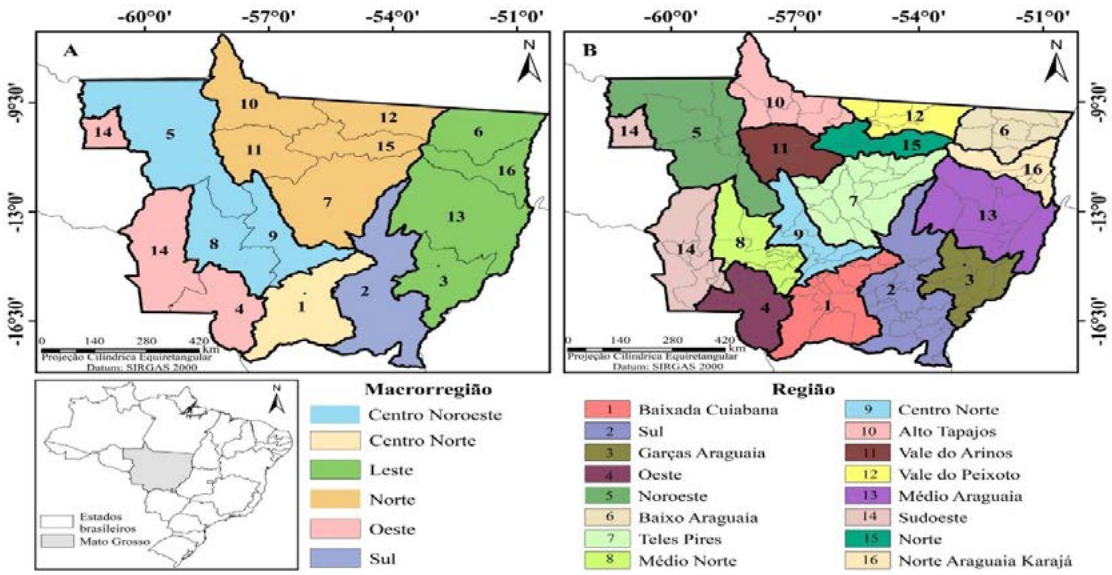
This is evaluative research, considered to be the heart of evaluation, as it has a utilitarian and practical nature so that the recommendations can actually be applied (Creswell; Plano Clark, 2011), based on scientific evidence that can help to improve the performance of systems and services (Wachholz; Lima; Boas, 2018). The QUAN-quali sequential mixed method was adopted, considered a new research paradigm, applied separately or concomitantly, collaborating in the data collection process to turn the results into robust knowledge that can lead to recommendations (Fetters; Curry Creswell, 2013). In health, it is recommended to start an evaluation with a quantitative approach, but this alone is not enough to understand the phenomenon. Thus, interlocution with a qualitative approach enriches the meaning of the relationships in the context being evaluated and can broaden the recommendations (Tanaka, 2017).

In this study, the four elements of mixed-methods research are respected, namely: the distribution of research time, the weight given to data in the choice of procedure, the combination of data collection, and theorizing (Creswell, 2010).

The research was held in the state of Mato Grosso, the third largest state in the country in terms of land area, with 141 municipalities covering an area of 903,202,446 km², bordering Bolivia and six other Brazilian states, with an estimated population of 3,567,234 inhabitants in 2021 and a population density of 3.36 inhabitants/km² (IBGE, 2023).

The state is divided into five health macro-regions and sixteen Health Regions (RS, as per its Portuguese acronym) (Figure 1), and has peculiarities in its process of decentralization of health management, geographical limitations and regional inequality in the distribution of health services that can limit access to health (Gleriano *et al*., 2021), a situation that has repercussions on the distribution, composition and movement of the population, in addition to the topographical, hydrographic and road network conditions that imply geographical access limitations, as well as epidemiological aspects and conditions for dealing with viral hepatitis resulting from the lack of availability of care for viral hepatitis throughout the territory.

Figure 1 | Spatial distribution of municipalities in the state of Mato Grosso according to macro-regions and health regions



Source: Extracted from Gleriano *et al*., 2021

For the quantitative approach, we used secondary data from the Brazilian Institute of Geography and Statistics (IBGE, as per its Portuguese acronym) on the number of inhabitants and population density; data from DATASUS on the Notifiable Diseases Information System (SINAN, as per its Portuguese acronym) on notified cases of viral hepatitis (1999 to 2019) and deaths (2000 to 2018); and data from the National Register of Health Facilities (CNES, as per its Portuguese acronym) on services offering testing, diagnosis and treatment, the number of points offering rapid testing, collection of material for molecular biology (viral load) and genotyping.

The data was collected in the first two months of 2020, stored in Microsoft Excel 2010 spreadsheets, analyzed using descriptive statistics through SPSS 24.0 for Windows software and georeferenced. For the health services, the coordinates, latitude, and longitude (decimal format) of the addresses of each establishment were used, obtained individually from Google Maps, and the notified cases of viral hepatitis were coded by municipality of residence and georeferencing. Thematic maps were designed using the cartographic base in the Geocentric Reference System for the Americas.

After mapping the reference services in the RS, in order to conduct the qualitative approach, we decided to select the RS in the south of Mato Grosso, also classified as a health macro-region, because it has the highest population density and supply in terms of quantity and heterogeneity of reference services. This RS has seven services, six of which took part in the study. The exception was the service intended for the population deprived of liberty (Brazil, 2014).

In this study, the integration of the qualitative approach in the selection of key stakeholders recognized a careful analysis to enhance the understanding of the meanings and relationships expressed in the context of the investigated scenario (Creswell, 2010).

Participants in the interviews were those responsible for managing the viral hepatitis area of the State Health Department of Mato Grosso (SES-MT, as per its Portuguese acronym), the State Reference Center for Medium and High Complexities of Mato Grosso (CERMAC, as per its Portuguese acronym) and professionals responsible for service technicians, namely: Testing and Counseling Center (CTA, as per its Portuguese acronym) and/or Specialized Care Service (SAE, as per its Portuguese acronym) of a RS. The inclusion criterion for participants was that they had

been working in the service for at least six months, while the exclusion criteria were applied to professionals who were absent from the service for any reason and those who, after five attempts to invite them to the interview, did not respond.

Participants were contacted via e-mail and phone call, after making their acceptance official by e-mail and sending a signed Free and Informed Consent Form (FICF), the interview was scheduled on a date, digital platform (WhatsApp, Google Meet or Zoom) and time indicated by the participant. For data collection, an interview guided by a semi-structured script was used, composed of two parts: one relating to professional characterization and the other asking the participant, based on situations experienced in his/her daily management, to report aspects that would enhance the network organization and integration, as well as user access to viral hepatitis care services. The script was subjected to face validation and pre-test application.

The interviews were digitally recorded, lasted an average of 50 minutes and were conducted by the researcher in charge between August 2020 and February 2021. A vignette was used to consolidate a strategy to establish the main points of approach of the triggering questions (Braun; Clarke; Gray, 2019), in addition to presenting the distribution of hepatitis care services in the state. The material was transcribed, identified by the letter P (participant code) and the Arabic numeral, according to the increasing chronological order of the interviews. The data was systematized, and thematic analysis was used (Minayo; Assis; Souza, 2010). The corpus of the analysis was organized into the category: “Strategies to advance in coping with viral hepatitis”. The discussion was developed according to the proposal made by Kessner, Kalk and Singer (1973) for the tracer condition, as it allows the evaluation of the articulation of the different levels of care and favors the sequential analysis of access to care for viral hepatitis.

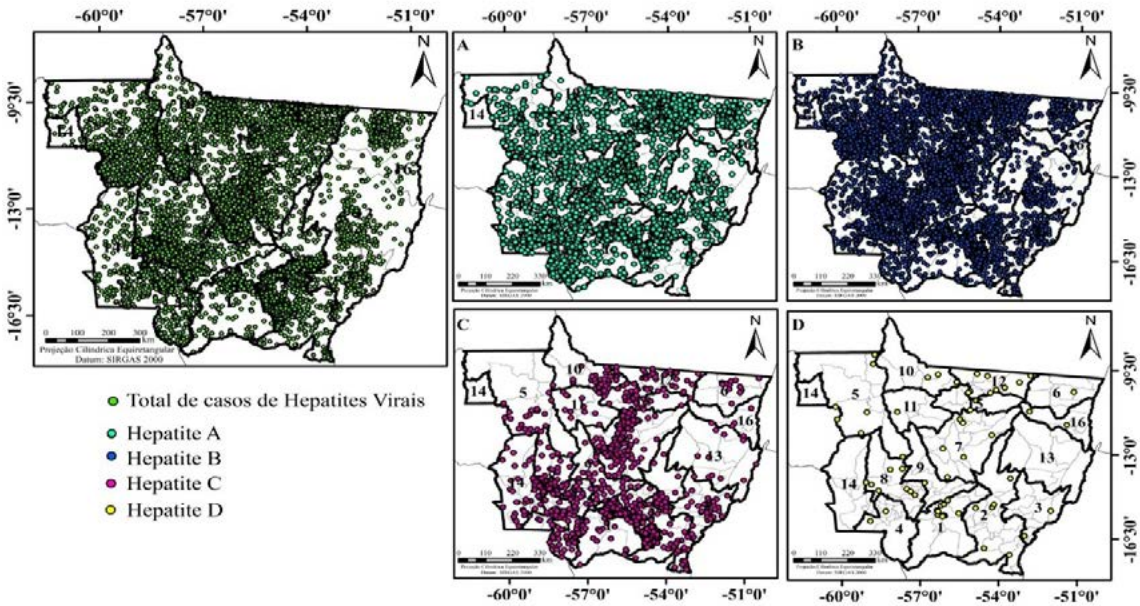
This study was approved by the Research Ethics Committee (REC) CAAE n.º 01481918.0.0000.5393 and complied with the guidelines for conducting research during the Covid-19 coronavirus pandemic (Brazil, 2020).

RESULTS

The results are presented based on the distribution of hepatitis cases in the RS, specialized outpatient services and the expanded panel of services that carry out rapid testing, collection of material for viral load, genotyping, and treatment. Based on the diagnostic analysis, strategies issued by managers to advance in combating hepatitis in the regional scenario are described.

Figure 2 shows the distribution of notified hepatitis cases in the RS.

Figure 2 | Distribution of viral hepatitis cases (1999-2019), total and by type in the state of Mato Grosso, MT, Brazil, 2020



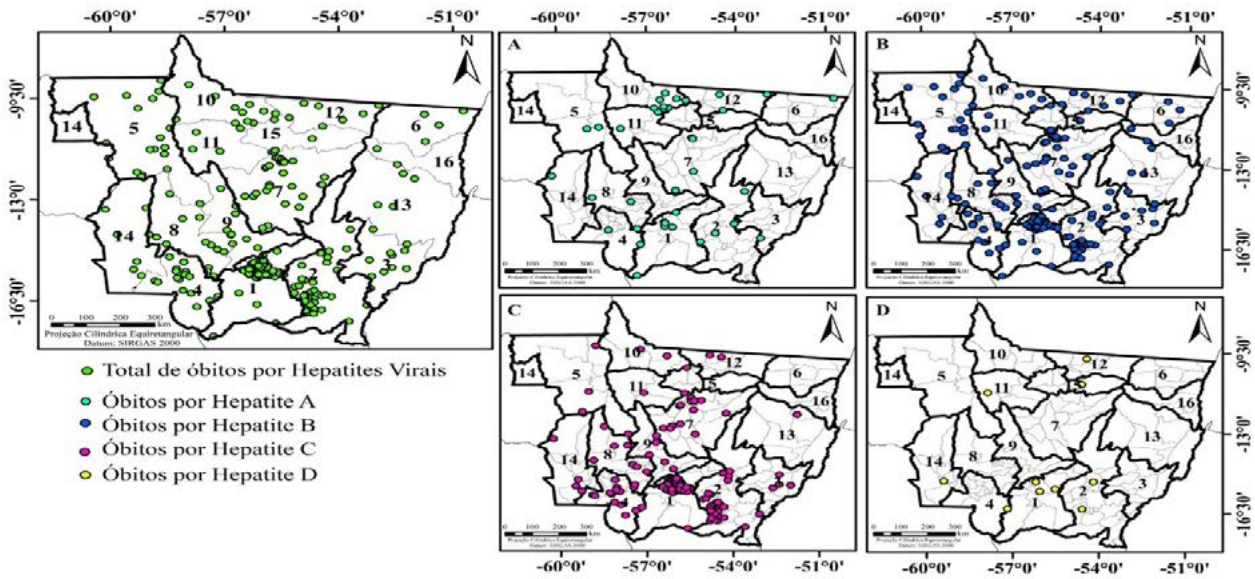
Source: designed based on data from SINAN/DATASUS

The highest frequency of notified cases is in the North Center and North macro-regions, and the distribution according to RS in Baixada Cuiabana (1), Teles Pires (7) and Southern Mato Grosso (2). In relation to the types of hepatitis, there is a higher frequency of hepatitis B, followed by A, C and D; however, this distribution differs between macro-regions and RS. The highest frequency of hepatitis A cases occurred in the North Center macro-region and in the RS of Baixada Cuiabana (1), Western Mato Grosso (4) and Teles Pires (7); hepatitis B in the North macro-region and in the RS of Teles Pires (7), Baixada Cuiabana (1) and Southern Mato Grosso (2); and hepatitis C and D in the North Center macro-region, but the analysis by RS

shows that, for hepatitis C, the highest frequencies were in Baixada Cuiabana (1), Southern Mato Grosso (2) and Teles Pires (7). In relation to hepatitis D, it was in the RS of Baixada Cuiabana (1), Middle Northern Mato Grosso (8) and Middle Araguaia (13).

Figure 3 shows the distribution of the total number of deaths from hepatitis (2000-2018) and the total number of deaths by type of hepatitis in the macro-regions and RS of that state.

Figure 3 | Spatial distribution of the total number of deaths from hepatitis (2000-2018) and the total number of deaths by type of hepatitis in the macro-regions and health regions of the state of Mato Grosso, Brazil, 2020

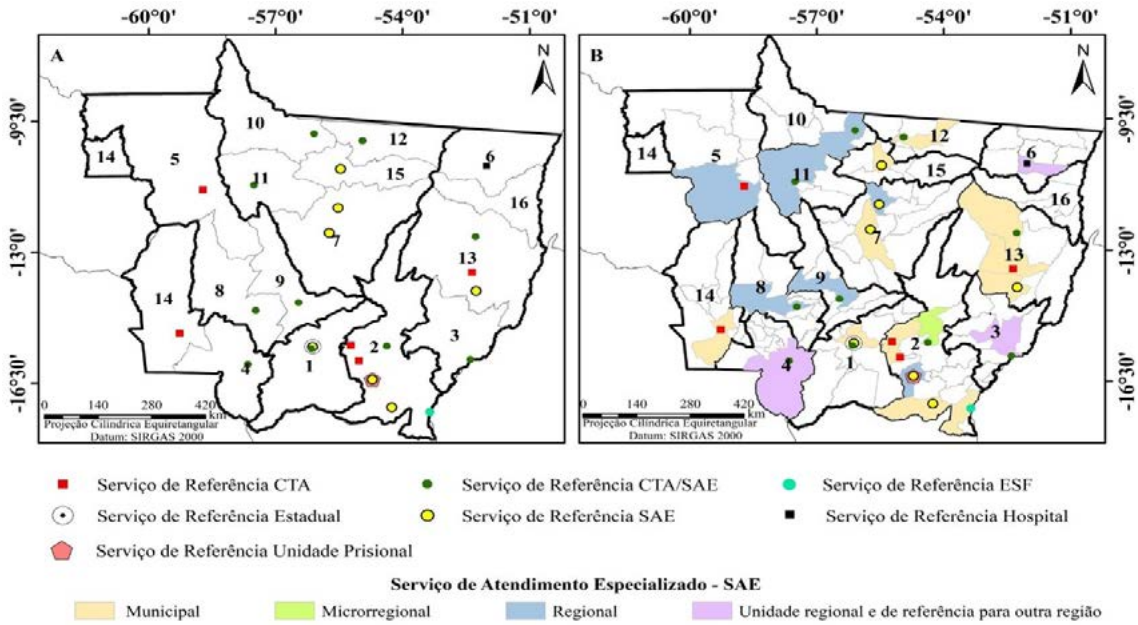


Source: designed based on data from SINAN/DATASUS

In the analysis of deaths from hepatitis, hepatitis C stands out, followed by hepatitis B, A and D, respectively. In the analysis by macro-regions and RS, deaths due to hepatitis A are more frequent in the North and North Center macro-regions and in the RS of Western Mato Grosso (4) and Southern Mato Grosso (2). Due to hepatitis B, C and D, they occur more constantly in North Center and North health macro-regions; however, between the RS, hepatitis B and C are more frequent in Baixada Cuiabana (1), Southern Mato Grosso (2) and Teles Pires (7), while hepatitis D is more common in Baixada Cuiabana (1) and Southern Mato Grosso (2).

Figure 4 shows the distribution of specialized outpatient services for viral hepatitis.

Figure 4 | Spatial distribution of reference services for viral hepatitis care, according to macro-regions and health regions of the state of Mato Grosso, Brazil, 2020



Source: prepared based on data from CNES/ Health Department of the State of Mato Grosso. SAE: responsible for outpatient care for people living with HIV/AIDS and Viral Hepatitis (Brazil, 2017) CTA: focus on offering testing, health education and counseling actions as approaches aimed at reducing risk and situations of social vulnerability (Brazil, 2017)

In the state of Mato Grosso, 26 outpatient services are available for the care of viral hepatitis, as displayed in Figure 4, namely: ten (38.7%) CTA/SAE, seven (26.9%) SAE, six (19.2%) CTA, one (3.8%) State Reference Center that makes up the CERMAC structure, one (3.8%) Prison Outpatient Clinic, one (3.8%) Family Health Unit (FHU) and one (3.8%) Hospital. CERMAC is located in the North Center macro-region, RS of Baixada Cuiabana (1), and is a reference for medium and high complexity care, in addition to providing specialized outpatient services to municipalities that are distributed throughout the state and that do not have reference health care services for diagnosis and treatment in the area covered by the RS.

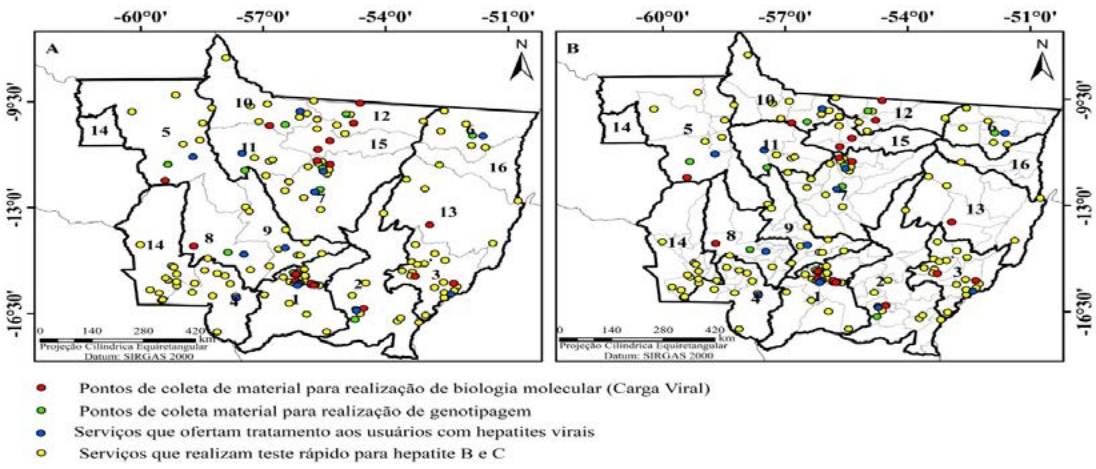
The greatest supply and heterogeneity of services is concentrated in the South macro-region, which is also a RS (2). The RS has a regional SAE, a CTA/SAE type service that meets a micro-regional agreement and four municipal services, as well as a service in a prison unit. This gives this macro-

region and RS the largest care structure in the state of Mato Grosso.

The highest concentration of CTA/SAE services is condensed in the East macro-region, RS of Low Araguaia (6) and Garças Araguaia (3). In the North Center macro-region, RS of Baixada Cuiabana (1), North Center of Mato Grosso (9) and Middle North of Mato Grosso (13). The SAEs are more present in the North macro-region and in the RS of Teles Pires and Vale do Peixoto. Other types of services are distributed heterogeneously throughout the state. The West macro-region has the smallest number of services. Although the state is divided into sixteen RS, not all of the services that provide reference care for viral hepatitis have regional coverage. Seven services have regional coverage, three are regional units that offer care to other regions, fifteen have only municipal coverage and one has micro-regional coverage, considering that these services have a state reference.

Figure 5 shows the expanded panel of services that carry out rapid testing, collection of material for viral load, genotyping and treatment.

Figure 5 | Spatial distribution of services that carry out rapid testing, viral load collection, genotyping and services that carry out treatment in the state of Mato Grosso, Brazil, 2020



Source: prepared based on data from CNES/State Health Department of Mato Grosso

Family health units, the headquarters of municipal health department programs and health centers/primary health care units have the largest supply of rapid tests; CTA/SAEs and hospitals have the largest supply of material collected for viral load; and SAEs represent the majority of services that collect material for genotyping. Treatment is offered in greater numbers in CTA/SAE type units.

From an organizational perspective of the health system, it is important to underline that the decentralization of rapid tests to Primary Health Care (PHC), both because of its low cost and because of the greater reach of the health teams' territorial work, strengthens the micro-elimination proposal. The evaluation of viral load and genotyping in reference centers, with support for treatment at specific points, corroborates the logic of organizing care in health service networks by levels of care, optimizing the use of SUS resources, which requires analyzing flows and paths, given the territorial dimension between the RS and the macro-region.

The highest concentration of rapid test offerings occurs in the East and North Center macro-regions and in the RS of Garças Araguaia (3) and Baixada Cuiabana (1). The highest concentration of services for collecting viral load and material for genotyping is in the North Center macro-region and in the RS of Baixada Cuiabana (1). There is unavailability of material collection services for viral load in the West macro-region and in the RS North Center (9), Low Araguaia (6), Northern Araguaia Karajá (16), Western Mato Grosso (4) and Southwest Mato Grosso (14). There is no collection of material for genotyping in the West macro-region and in seven RS (3, 4, 8, 9, 14, 15 and 16). The treatment is available in all macro-regions; however, RS of Northern Mato Grosso (15), Vale do Peixoto (12), Middle Araguaia (13), Northern Araguaia Karajá (16) and Southwest Mato Grosso (14) do not offer treatment.

After this diagnosis of the RAS in relation to hepatitis in the state of Mato Grosso and the selection of the RS with the greatest potential to guarantee access, technical professionals from the state management of the SES hepatitis program, those responsible for the hepatitis care service and program at CERMAQ and the reference services in the south RS of Mato Grosso were invited to participate in the interview, totaling fourteen participants, but only eleven agreed to participate in the study. The highest frequencies of participants were female, eight (72.7%); white, eight (72.7%); aged between 30 and 39 years, four (36.4%); with nursing training, five (45.4%); Lato Sensu graduate degree, at specialization level, ten (90.8%); employment link under statutory regime, eight (72.7%); and with more than three years of work in the service, ten (90.8%).

The analysis of the context of the distribution of cases, deaths and health services in macro-regions and RS allows us to highlight geographic spaces to be prioritized in strategic actions. From a planning point of view, the analyses consider the need for different initiatives, on the part of managers, for RS, in addition to a proposal to ensure the organization of flows in the macro-region dimension, enhancing this discussion in the organization from a regional perspective.

Based on the analysis of the interviews, focusing on the strata of statements that highlight strategies to advance in combating viral hepatitis relevant to the regional scenario, Table 1 was synthesized and designed.

Chart 1 | Strategies drawn up based on managers' statements to advance in combating viral hepatitis, Mato Grosso, 2021

Strategy	Participants' main speech strata
To recognize priority groups in the territory, expand partnerships with health departments in order to adopt appropriate approaches to approach and welcome, so that the actions of the health services reach the user.	"We need to pay more attention to sex workers in the municipality, we have partnerships, but I think we can move forward, both for them and for drug users." (P7) "We need to go into the environment where hepatitis can be found, in sex nightclubs, street dwellers, drug users, beauty salons." (P8) "To promote a partnership with health surveillance to help establishments and salons". (P10) "To make a situational diagnosis and set targets to reach the audience". (P4)
To prevent and monitor vertical transmission of hepatitis.	"Prenatal care and childbirth are strategies that help to control vertical transmission, monitoring is a goal in our region." (P8) "Since the publication of prenatal guidance as a line of care, it has been clear that the responsibilities of services in caring for pregnant women have been organized". (P4)
To improve the integration of actions with the coordination of the technical areas of the SES, including planning capacity, both to organize the expansion of testing and to expand infrastructure points for clinical analysis of laboratory tests in RS.	"We need to increase our coordination with other sectors that are involved in hepatitis care here at SES. It's still very fragmented, so we need to work together. Hepatitis is in a network, and surveillance has the function of looking at notifications, but it cannot solve the problems of care in health services alone". (P1) "The decentralization of exams is essential, as many patients need to travel early in the morning to arrive in time for collection, other regions that do not have services need to send their patients to Cuiabá". (P6)

To increase the integration of services in health care, with support for evaluating the response to care and a shared therapeutic project to monitor treatment.	"Good communication with the network strengthens care, from primary to tertiary levels, and reduces access difficulties". (P7) "The network needs to be intensified, as it is not possible to remember hepatitis only during the July campaign. It has to be part of the daily routine of health service teams, not just at the CTA or family health unit, at the hospital as well." (P9) "Treatment must be planned with professionals in the network, working with shared therapeutic plans, but this has not yet come to fruition." (P4) "Sectoral meetings would be important. Put up a discussion agenda to better monitor the user within the network, evaluate the network from the perspective of its response to the user". (P10)
To stimulate, through regional coordination with interventions, actions and monitoring aimed at identifying a real profile of hepatitis cases in RS, municipal managers to implement CTA and carry out testing in PHC in all municipalities in RS, especially those that do not have SAE/CTA.	"It is time to promote widespread testing, especially in municipalities that do not have a CTA. Because, here at SAE, our demand is clear, the highest frequency of referrals comes from municipalities that have a specific testing service. Thus, we don't know the real profile of hepatitis in the health region." (P6) "The municipality went after it, we designed the project and implemented the CTA, and it is an opportunity for articulation and access for testing and treatment with greater patient monitoring in our municipality". (P3) "To strengthen the testing offer, we test little. If PHC assumes this demand, it will have the capacity for active search in the territory, especially in municipalities that have high PHC coverage." (P7) "PHC is able to monitor patients who are taking or have abandoned treatment, they know who are the possible patients that will be approached for testing." (P8)
To encourage the decentralization of treatment with support from specialists in RS.	"We expanded care with the implementation of more SAEs in the region, but we were unable to decentralize treatment, due to the lack of trained professionals to deal with hepatitis, consultations, and follow-up for hepatitis, it is still centralized. We have support from the SAE specialist in Rondonópolis, but our doctor has not yet wanted to take on this demand." (P8) "In order to expand treatment and also advance care, it will be necessary to invest in support for teams. The state is large, as it concentrates more professionals here in the south region, so we have to think of a policy that helps the teams that are more fragile". (P7)

To organize the care flow of the hepatitis care service from the perspective of the flow of the Human Immunodeficiency Virus (HIV), considered as examples aspects that facilitate access to treatment.	"It would be easier if attention was paid to hepatitis like HIV. What they did with HIV is a facilitator for the patient. Cutting bureaucracy, it's cheaper for the state and municipality. For example: just the logistics of having to transport the patient to Cuiabá, for him/her to sign a medication form, for him/her to return to the SAE. The decentralization of this medication would greatly benefit patients, especially those who have hepatitis C." (P6)
To increase, in meetings of the Regional Intermanagers Commission (CIR, as per its Portuguese acronym), the dissemination of the functions of the CTA/SAE to encourage greater agreement on actions between health services, strengthen access and improve the flow of care.	"It is necessary to publicize the actions of the CTA/SAE at CIR meetings, so that managers are aware of the actions of this service". (P5) "The CIR is a powerful space to sensitize managers to organize services in their municipalities to combat hepatitis, as it demands coordinated work from both state management and regional supporters". (P8)
To advance the training of professionals for the clinical approach, through continuing education, promoted by the coordination of the state hepatitis program.	"The professional at the end needs to know the symptoms, clinical and investigative reasoning, so as not to delay this potential patient going back and forth to the specialist." (P6) "We offer training for health teams at CERMAC, we have a team that carries out this training, but we still don't have a state program to encourage this practice in the care network". (P11)

Source: designed by the authors based on the study database

DISCUSSION

The context of viral hepatitis is complex, which is why there is a need to understand the spatial distribution, which is heterogeneous, as well as the provision of surveillance actions, which requires continuous monitoring to minimize the problems arising from this disease (Gonçalves *et al.*, 2019). In the world, the World Health Organization (WHO) estimates that only 22% of people living with hepatitis B infection are aware of their diagnosis; and, of these, only 8% receive treatment (PAHO, 2021), and the increase in deaths is one of the main causes of mortality, with a higher incidence of hepatitis B and C cases (Odenvald; Paul, 2022), which means that management actions are urgently required to establish coping strategies in health systems.

In Brazil, the variation in the distribution of notified cases of hepatitis in the five geographical regions represents particularly territorialized relationships, with repercussions on the planning of health actions and the signaling of priority investment sites, as it demarcates actions that should recognize priority populations, namely: slave descendants, indigenous people, riverside communities (Gleriano, 2021; Almeida *et al*., 2019; Farias; Oliveira; Luz, 2019), in addition to the population that is already the focus of this disease, such as, for example, sex workers, gay men, men who have sex with men, transvestites and transsexuals, people who use drugs, people deprived of their liberty and people living on the streets (WHO, 2022).

In the SUS, access to health for sexual care, specifically the approach to Sexually Transmitted Infections STIs/HIV/AIDS, in quilombola communities (Pereira; Mussi, 2020), indigenous population (Borges; Silva; Koifman, 2020), riverside communities (Parmejiani *et al*., 2021), drug users (Friedrich *et al*., 2019), homeless population (Oliveira, M.A. *et al*., 2021) and sex workers (Oliveira, R.R. *et al*., 2021) still it is precarious.

A limitation for decision-making in the formulation of public policies and management action strategies has been the focus of political induction on other health problems, as well as the little support from federal and state managers to coordinate the organization of the RAS (Gleriano; Chaves, 2023), in addition to the lack of data and studies with users from priority groups (Geboy *et al*., 2019). It is recognized that countries are advancing in terms of strategies to meet the agreed targets for the elimination of hepatitis, although not yet at the desirable speed. The countries that have governments engaged in action planning with civil society, that support funding for care and have surveillance and monitoring systems with strong actions to combat hepatitis are the ones that stand out the most (Smith *et al*., 2019). In low- and middle-income countries, the lack of policies, national guidelines and funding are the main problems in organizing hepatitis care services (Reipold *et al*., 2017). In the case of Brazil, the major challenge is to prioritize this disease, especially with regard to the coordination of policies and actions at the federal level (Gleriano, 2021; Gaudino *et al*., 2018).

At the municipal level, for hepatitis, it was found that the transition of managers in the public administration ends up influencing the change in those responsible for services and technical areas, which can contribute to a change in strategic actions and/or a reduction in the supply of services

depending on the profile of the new manager, which reinforces the position of state management and, in the case of health, of the Regional Health Offices, in order to strengthen the action plan by monitoring and encouraging the qualification of access (Gleriano; Chaves, 2023). The strategy requested by the participants to include the matter related to organization of the hepatitis network in the CIR as part of the collegiate decision-making process is an action that corroborates the perspective of regional alignment of access to health, including the analysis of the feasibility of new services in view of care-related gaps.

When analyzing access, social inequality, territorial extension, and the supply of services in the RS require attention. In the state of Mato Grosso, the greatest availability of reference services in hepatitis care is in two macro-regions: the North Center macro-region, which has the highest population concentration, and the Southern Mato Grosso macro-region, which has the highest population density (Gleriano, 2021). When analyzing the factors that interfere with access to health care in relation to hepatitis, the distribution and typification of health care services without a territorial organization of flows and functions connected in an integrated network of health care services has a negative impact on the integrality of care (Dunn *et al*., 2022; Gleriano, 2021), as well as the existence of services may not be widely known by the community, since access to information and/or understanding varies in different population groups (Gulliford *et al*., 2002).

In the state of Mato Grosso, the use of the Intermunicipal Health Consortium as a strategy to speed up access to health services, especially secondary consultations, and examinations, has been recorded for hepatitis, but with the caveat that this offer does not operate a logic of building a robust RAS with monitoring of the response and quality of the patient's therapeutic path (Gleriano; Chaves, 2023). These considerations reinforce the role of regional governance in improving processes for monitoring and evaluating access and the model of organization and management in the health system, with hepatitis as a marker (Gleriano *et al*., 2022).

The expansion and deconcentration of services, such as the incorporation of rapid tests, training for physicians and raising awareness about the disease can improve access. It also needs to consider the analysis of data from information systems, which makes it possible to identify and report on available services, besides characterizing the affected population to act with greater

assertiveness. In order to guide action, the US Center for Disease Control and Prevention (CDC) recommends that all adults aged ≥ 18 years be screened for hepatitis C at least once in their lifetime, except in places where the prevalence of HCV infection is <0.1%, and that all pregnant women be screened for hepatitis C during each pregnancy (Schillie *et al*., 2020).

The centrality of hepatitis diagnosis and treatment at the level of specialized services is considered one of the points limiting access (Gleriano; Chaves, 2023, Almeida *et al*., 2019; Gaudino *et al*., 2018). Therefore, in order to increase the response capacity of the health system, investment has been required in decentralizing testing to services that specifically cater to the public with a predisposition to this evil (Wong *et al*., 2018).

Ease of access to diagnostic services and support for specialized treatment services are fundamental to the user's commitment to adhering to treatment (Pourmarzi *et al*., 2020). Unrestricted access to treatment and decentralization of care for those notified in terms of hepatitis C have been important strategies adopted in Australia to avoid complications associated with hospital services (Kirby Institute, 2018).

It should be noted that combating hepatitis requires a set of institutional arrangements to ensure equity in the allocation of services in the territory, considering the geographical frameworks of regionalization, as well as collaboration among institutions, organizations, social and political stakeholders for the composition and redefinition of responsibilities for the constitution of the RAS in the regions. In the SUS, the organization of integrated networks can be a possibility for consolidating access through regional planning to advance the regionalization of care and the regulatory capacity of the RAS.

The expansion of intergovernmental agreements, through the regulation of care, becomes an intrinsic function to guarantee the response capacity of the health system. Regionalization in the state of Mato Grosso has been partially implemented (Gleriano *et al*., 2021), which imposes the need to advance in consolidating the SUS from this organizational perspective. In the case of hepatitis care, regionalized and integrated networks favor comprehensive care, besides generating economies of scale and enabling systemic rationality in the use of resources. For this reason, regional governance is crucial in the management of actions and services to advance this regionalized approach, in order to overcome the predominant logic centered on the production of procedures and to emphasize

the production of care based on user needs, as a possible proposal to qualify care. It is understood that this way of reorganizing care represents progress in the fight against viral hepatitis, since it makes it possible to promote access to prevention, diagnosis and treatment, taking into account epidemiological, socioeconomic and population criteria.

It is worth emphasizing that health, among the sectoral policies, was the one that most appropriated the territorial and regional dimension of planning, which is why bringing state management closer to the data in this study provides an opportunity to reflect on reorganization based on a technical study.

An example of decentralized coordination has been the guidelines for a model of care for the prevention of mother-to-child transmission of HIV, syphilis and hepatitis B and C (Brazil, 2021), which supports professionals focusing on care in the RAS. Defining access flows is crucial in terms of guaranteeing continuity of care and effective treatment, which is why management support in providing systems capable of effectively communicating services within the RAS is fundamental in terms of facilitating access to services and engagement in hepatitis treatment (Pourmarzi *et al*., 2020).

Globally, health systems have shown weaknesses in the organization of care flows for hepatitis (Wade *et al*., 2016), both in the referral of the user to the specialist due to the geographical distance to reach the referral services and the low number of professionals with competence to treat this condition (Simpson *et al*., 2019). In this sense, issues relating to political-institutional arrangements, funding and coverage modalities, the service network organization model and the sectoral and economic reforms imposed on health systems and the human resources framework are on the management agenda in the fight against hepatitis (Gleriano, 2021; Cooke *et al*., 2019).

In the SUS, since the creation of the PNHV, there has been an organization of services, with elements of regulation, monitoring, and evaluation of actions (Brazil, 2002). Initially, the CTAs were prepared to carry out counseling and testing/diagnosis and prevention of hepatitis, with a recent publication attempting to organize them in the RAS (Brazil, 2017). Nonetheless, in recent years, there have been few guidelines to guide the work of the CTAs, in a matrix network, and the limited number of professionals to carry out the actions has reduced the power of this service (Gleriano, 2021; Gomes; Galindo, 2017).

The international recommendation to expand testing in PHC is considered important and also expands the possibility of treatment monitoring by physicians at this level of care (Castaneda *et al*., 2021; WHO, 2017). This strategy is defended by the possibility of reducing regional asymmetries in specialized human resources. Its use expands the capacity to use e-health technology through the support of specialists at decentralized points of care.

In Brazil, the capillarity of services and the expansion of the PHC network in the SUS is a potential that can expand actions with a focus on equity of care. Moreover, the differential in having Community Health Workers (CHWs) in the territory should be recognized in the PNHV guidelines, but it is important not to overshadow that perspectives for health are not ensured only by the health sector, which is why it needs to advance with coordination of decentralization. A study conducted in the state of Mato Grosso found resistance on the part of PHC professionals in terms of incorporating hepatitis testing into their work process (Gleriano; Chaves, 2023).

In Mexico (Perez Hernandez *et al*., 2021), Spain (Fernández Rodríguez; Jiménez Galán, 2019) and Australia (Wade *et al*., 2018), the provision of specialized support through technology was used to overcome gaps in access to hepatitis care services. Accordingly, telehealth and telemedicine can be important tools to support professionals in the hepatitis clinical decision-making process and also in the support health services located in communities with limited access, favoring a faster response to the user (Haridy *et al*., 2021).

It is worth emphasizing that the COVID-19 pandemic disorganized the RAS and also caused coordination and regulation difficulties for hepatitis care, which is why there is a pressing need for managers to use this learning to advance regional governance and qualify the health system by defining the planning of measures to reorganize services, strengthening collegiate management and governance over projects in each federated entity in the continuous spaces of institutional support, through conversations with non-governmental organizations and entities fighting for the rights of people with hepatitis (Gleriano; Chaves; Ferreira, 2022).

As a possible strategy to combat hepatitis, it is understood that it is necessary to advance in the construction of regional governance, beyond the territorial field, also including the capacity for conversation, in order to overcome resource and power asymmetries, enhancing arrangements and

possibilities of response, whether public, health or social policies, to combat this evil.

Among the contributions of this study, we can highlight the following items: elements that favor the alignment of health with a view to meeting the SDGs, especially with regard to hepatitis, and the alignment with the National Regional Development Policy (PNDR, as per its Portuguese acronym). The PNDR describes the need to specify which sectoral axes are essential for social development through access to essential public services and strategically strengthen the discussion on structuring the Regional Development Governance System, in order to ensure the sectoral articulation of actions, federative cooperation and social participation (Brazil, 2019). The analysis presented here provides support for the action of a Regional Intelligence Center, given the priority territory of focus of this policy and the development actions of governmental programs for the elimination of hepatitis, such as the Plan for the Elimination of Hepatitis C in Brazil, guided by a type of logic of micro-elimination and analysis of the territorial dimension. Accordingly, the use of evaluation to generate possibilities for promoting equity and social inclusion is a privileged dimension.

FINAL CONSIDERATIONS

The analysis of the distribution of hepatitis care services in the macro-regions and RS of the state of Mato Grosso unveiled segmentation of care and selective conception of services, which strongly contributes to care-related gaps, resulting in poor guaranteed access to welcoming, diagnosis, and treatment of viral hepatitis. Health management in the state of Mato Grosso should broaden its analysis of hepatitis cases and the supply of services, in order to help to organize and restructure the RAS. In this sense, we recommend new management arrangements for the health system, as well as the resumption of institutionality and regional governance, as a locus for effective regional management, with a focus on services targeted at priority populations for hepatitis care.

Prevention, a crucial action as a strategy for the financial sustainability of health systems, has been little explored, an aspect that requires attention in the health surveillance model. Social participation in thinking about resources available in different contexts, moving towards prevention strategies, stopping vertical transmission, and expanding vaccination with extensive monitoring enhances the confrontation in the structure of services that already exist in the SUS.

The contribution of this study is that it provides a situational diagnosis that can help managers to draw up intervention plans capable of improving the organization of services, regulating, monitoring, and evaluating a set of actions, in order to promote the integration of the network of services in RS. It also supports further research with key stakeholders in health management, in order to organize access to care for viral hepatitis in the studied state. This study has limitations due to the use of secondary data, even though it comes from official information systems.

This study does not present a formatted list of strategies or an operational protocol to be fully reproduced in different health services, but it does help to analyze viral hepatitis from a perspective of intersectoral repercussions, with health implications, but also social and economic implications, with an impact on regional development. Sharing management strategies that provide access to care for viral hepatitis identified in the state of Mato Grosso helps to encourage health managers and workers from different spheres to propose and implement strategies and actions that can provide access to care for viral hepatitis, according to local and regional peculiarities and specificities, from a perspective of combating and eliminating communicable diseases, as a condition that contributes greatly to social and economic development.

REFERENCES

ALMEIDA, E.C.; GLERIANO, J.S; PINTO, F.K.A; COELHO, R.A.; VIVALDINI, S.M.; GOMES, J.N.N.; SANTOS, A.F.; SERENO, L.S.; PEREIRA, G.F.M.; HENRIQUES, S.H.; CHAVES, L.D.P. Acesso à atenção às hepatites virais: distribuição de serviços na região Norte do Brasil. **Revista Brasileira de Epidemiologia**, v. 22, n. 1, 2019. Disponível em: https://scielosp.org/pdf/rbepid/2019.v22suppl1/e190008/pt. Acesso em: 20 jan. 2023.

BORGES, M.F.S.O.; SILVA, I.F.; KOIFMAN, R. Histórico social, demográfico e de saúde dos povos indígenas do estado do Acre, Brasil. **Ciência e saúde coletiva**, v. 25, n. 6, p. 2237-2246, 2020. Disponível em: https://www.scielo.br/j/csc/a/Q8kQ4PJX98tpmQY7QkKzgyw/?lang=pt. Acesso em: 15 out. 2022.

BRASIL. Ministério da Saúde. Secretaria de Políticas Públicas. **Programa Nacional para a Prevenção das hepatites virais**: **Avaliação da Assistência às Hepatites Virais no Brasil 2002**. Brasília: Ministério da Saúde, 2002. https://bvsms.saude.gov.br/bvs/publicacoes/avaliacao_da_assistencia_hepatites_virais_no_brasil.pdf

BRASIL. Ministério da Saúde. Secretaria de Atenção à Saúde. Departamento de Ações Programáticas Estratégicas. Coordenação de Saúde no Sistema Prisional. **Política Nacional de Atenção Integral à Saúde das Pessoas Privadas de Liberdade no Sistema Prisional.** Brasília: Ministério da Saúde, 2014. Disponível em: http://www.as.saude.ms.gov.br/wp-content/uploads/2016/06/Cartilha-PNAISP.pdf. Acesso em: 15 dez. 2022.

BRASIL. Ministério da Saúde. Secretaria de Vigilância em Saúde. Departamento de Vigilância, Prevenção e Controle das Infecções Sexualmente Transmissíveis, do HIV/Aids e das Hepatites Virais. **Diretrizes para organização do CTA no âmbito da Prevenção Combinada e nas Redes de Atenção à Saúde**. Brasília: Ministério da Saúde, 2017.

BRASIL**. Decreto nº 9.810, de 30 de maio de 2019.** Institui a Política Nacional de Desenvolvimento Regional. Brasília: Diário Oficial da União [2019]. Disponível em: https://www.planalto.gov.br/ccivil_03/_ato2019-2022/2019/decreto/D9810.htm. Acesso em: 12 jan. 2024.

BRASIL. Ministério da Saúde. Secretaria-Executiva do Conselho Nacional de Saúde. Comissão Nacional de Ética em Pesquisa. **Orientações para condução de pesquisas e atividade dos CEP durante a pandemia provocada pelo coronavírus SARS-COV-2 (COVID-19**). Brasília: Ministério da Saúde, 2020.

BRASIL. Ministério da Saúde. Secretaria de Vigilância em Saúde. Departamento de Vigilância das Doenças Transmissíveis. **Fluxogramas para prevenção da Transmissão Vertical do HIV, Sífilis e Hepatites B e C nas instituições que realizam parto**. Brasília: Ministério da Saúde, 2021. Disponível em: http://www.aids.gov.br/pt-br/pub/2021/fluxogramas-para-prevencao-da-transmissao-vertical-do-hiv-sifilis-e-hepatites-b-e-c-nas. Acesso em: 26 out. 2022.

BRASIL. Ministério da Saúde. Departamento de Doenças de Condições Crônicas e Infecções Sexualmente Transmissíveis. **Boletim Epidemiológico Hepatites Virais 2023.** Brasília: Ministério da Saúde, 2023. Disponível em: https://www.gov.br/saude/pt-br/centrais-de-conteudo/publicacoes/boletins/epidemiologicos/especiais/2023/boletim-epidemiologico-de-hepatites-numero-especial-jul.2023. Acesso em: 20 jan. 2024.

BRAUN, V.; CLARKE, V.; GRAY, D. **Coleta de dados qualitativos**: um guia prático para técnicas textuais, midiáticas e virtuais. Petrópolis (RJ): Editora Vozes, 2019.

CASTANEDA, D; GONZALEZ, A.J.; ALOMARI, M.; TANDON, K.; ZERVOS, X.B.. From hepatitis A to E: A critical review of viral hepatitis. **World Journal of Gastroenterology**, v. 27, n. 16, p. 1691–1715, 2021. DOI: doi:10.3748/wjg.v27.i16.1691. Disponível em: https://www.ncbi.nlm.nih.gov/pmc/articles/PMC8072198/. Acesso em: 15 out. 2022.

COOKE, G.S. *et al*. Accelerating the elimination of viral hepatitis: a Lancet Gastroenterology & Hepatology Commission. **Lancet Gastroenterology & Hepatology**, v. 4, n. 2, p. 135-184, 2019. DOI:10.1016/S2468-1253(18)30270-X. Disponível em: https://pubmed.ncbi.nlm.nih.gov/30647010/. Acesso em: 17 jan. 2023.

CRESWELL, J. W. **Projeto de pesquisa: método qualitativo, quantitativo e misto**. 3. ed. Porto Alegre: Artmed, 2010.

CRESWELL, J. W.; PLANO CLARK, V. L. **Designing and conducting mixed methods research**. 2nd. Los Angeles: SAGE Publications, 2011.

DUNN, R.; WETTEN, A.; MCPHERSON, S.; DONNELLY, M.C. Viral hepatitis in 2021: The challenges remaining and how we should tackle them. **World journal of gastroenterology, v.** 28, n.1, p. 76–95, 2022. DOI:10.3748/wjg.v28.i1.76. Disponível em: https://pubmed.ncbi.nlm.nih.gov/35125820/. Acesso em: 20 jan. 2023.

FARIAS, C.S.; OLIVEIRA, R.A.D.; LUZ, M.R.M.P. As hepatites virais no Brasil: uma análise a partir dos seus territórios. **Revista Raega**, v. 46, p. 90 -109, 2019. DOI: 10.5380/raegaeISSN:2177-2738. Disponível em: https://revistas.ufpr.br/raega/article/view/56419/37846. Acesso em: 11 jan. 2023.

FERNÁNDEZ RODRÍGUEZ, C.; JIMÉNEZ GALÁN, G. Telemedicine and specialised consultations in prisons. The example of HCV chronic hepatitis. **Revista espanola de sanidad penitenciaria**, v. 21, n. 2, p. 59–61, 2019. Disponível em: https://www.ncbi.nlm.nih.gov/pmc/articles/PMC6813660/#:~:text=By%20way%20of%20summary%2C%20consultation,environment%20is%20a%20difficult%20process. Acesso em: 18 jan. 2023.

FETTERS, M.D.; CURRY, L.A.; CRESWELL, J.W. Achieving integration in mixed methods designs - principles and practices. **Health Services Research**, v. 48, n. 6, p. 2134-56, 2013. Disponível em: https://dx.doi.org/10.1111%2F1475-6773.12117. Acesso em: 20 jan. 2023.

FRIEDRICH, M.A. *et al*. Barreiras de acesso à saúde pelos usuários de drogas do consultório na rua. **Journal of Nursing and Health,** v. 9, n. 2, 2019. Disponível em: https://periodicos.ufpel.edu.br/ojs2/index.php/enfermagem/article/view/13443. Acesso em:10 jan. 2023.

GADELHA, C.A.G.; COSTA, L.S. A saúde na política nacional de desenvolvimento: um novo olhar sobre os desafios da

saúde. In FUNDAÇÃO OSWALDO CRUZ. **A saúde no Brasil em 2030 - prospecção estratégica do sistema de saúde brasileiro:** desenvolvimento, Estado e políticas de saúde. 1. ed. Rio de Janeiro: Fiocruz/Ipea/Ministério da Saúde/ Secretaria de Assuntos Estratégicos da Presidência da República, 2013.

GADELHA, C.A.G; TEMPORÃO, J.G. Desenvolvimento, Inovação e Saúde: a perspectiva teórica e política do Complexo Econômico-Industrial da Saúde. Ciência e Saúde Coletiva, v. 23, n. 6, 2018. Disponível em: https://doi.org/10.1590/1413-81232018236.06482018. Acesso em: 9 jan. 2024.

GAUDINO, A. *et al*. Localized US Efforts to Eliminate Hepatitis C. **Infectious disease clinics of North America**, v. 32, n. 2, p. 293-311, 2018. DOI:10.1016/j.idc.2018.02.009. Disponível em: https://pubmed.ncbi.nlm.nih.gov/29778257/. Acesso em: 15 nov. 2022.

GEBOY, A.G.; NICHOLS, W.L.; FERNANDEZ, S.J.; DESALE, S.; BASCH, P.; FISHBEIN, D.A. Leveraging the electronic health record to eliminate hepatitis C: Screening in a large integrated healthcare system. **PLoS One,** v. 14, n. 5, 2019. DOI:10.1371/ journal.pone.0216459. Disponível em: https://pubmed.ncbi.nlm.nih.gov/31120906/. Acesso em: 15 nov. 2021.

GLERIANO, J.S.; CHAVES, L.D.P.; FERREIRA, J.B.B; FORSTER, A.C. Processo de descentralização e regionalização da saúde no estado de Mato Grosso. In: FRANÇA, R. *et al*. (Orgs.). **Políticas Públicas Regionais:** Diálogos Norte, Centro-Oeste e Nordeste. Curitiba: Editora CRV, 2021. (Col. Políticas Públicas Regionais, v. 2).

GLERIANO, J.S; CHAVES, L.D.P.; KREIN, C.; HENRIQUES, S.H. Contribuições da avaliação para a gestão do sus no enfrentamento das hepatites virais. **CuidArte, Enfermagem**, v. 16, n. 2, p. 176-187, jul.-dez. 2022. Disponível em: https:// pesquisa.bvsalud.org/portal/resource/pt/biblio-1434583. Acesso em: 12 jan. 2023.

GLERIANO, J.S.; CHAVES, L.D.P. Aspectos que fragilizam o acesso das pessoas com hepatites virais aos serviços de saúde. **Revista Escola Anna Nery,** v. 27, p. e20220334, 2023. Disponível em: https://www.scielo.br/j/ean/a/ jNVzTDMSdh5Ld49y7bmH8gJ/?format=pdf&lang=pt. Acesso em: 23 out. 2023.

GLERIANO, J.S.; CHAVES, L.D.P.; PANTOJA, V.J.C.; CAMINADA, S. 20 Anos do Programa Nacional para a Prevenção e o Controle das Hepatites Virais: Processo Histórico e Contribuições para a Gestão. Revista Administração Pública e Gestão Social, v. 15, n.3, 2023. Disponível em: https://periodicos.ufv.br/apgs/article/view/14344. Acesso em: 12 out. 2023.

GLERIANO, J. S. **Avaliação de acesso aos serviços de atenção às hepatites virais no estado de Mato Grosso – MT**. Tese (Doutorado em Ciências da Saúde) - Escola de Enfermagem de Ribeirão Preto, São Paulo. 2021.

GOMES, E.S.S.; GALINDO, W.C.M. Equipes de saúde da família frente à testagem e ao aconselhamento das IST, HIV-AIDS. **Revista Baiana de Saúde Pública,** v. 41, n. 3, p. 628-649, 2017. Disponível em: https://rbsp.sesab.ba.gov.br/index.php/ rbsp/article/view/2376. Acesso em: 18 jan. 2023.

GONÇALVES, N.V. *et al*. Hepatitis B and C in the areas of three Regional Health Centers of Pará State, Brazil: a spatial, epidemiological and socioeconomic analysis. **Caderno de Saúde Coletiva,** v. 27, n. 1, p. 1-10, 2019. DOI: 10.1590/1414-462X201900010394. Disponível em: https://www.scielo.br/j/cadsc/a/VwHymDXTrCSmM4Q7NFtNHmB/ abstract/?lang=en. Acesso em: 12 jan. 2023.

GULLIFORD, M. *et al*. What does 'access to health care' mean? **Journal of Health Services Research & Policy,** v. 7, n. 3, p. 186–188, 2002. DOI: 10.1258/135581902760082517. Disponível em: https://pubmed.ncbi.nlm.nih.gov/12171751/. Acesso em: 12 jan. 2023.

HARIDY, J.; IYNGKARAN, G.; NICOLL, A.; HEBBARD, G.; TSE, E.; FAZIO, T. eHealth Technologies for Screening, Diagnosis, and Management of Viral Hepatitis: A Systematic Review. **Clinical gastroenterology and hepatology: the official clinical practice journal of the American Gastroenterological Association,** v.19, n. 6, p. 1139-1150, 2021. Disponível em: https://pubmed.ncbi.nlm.nih.gov/32896632/. Acesso em: 20 jan. 2023.

INSTITUTO BRASILEIRO DE GEOGRAFIA E ESTATÍSTICA- IBGE**. Base de dados**. 2021. Disponível em: https://ibge.gov.br/. Acesso em: 10 out. 2022.

KESSNER, D.M.; KALK, C.E.; SINGER, J. Assessing health quality--the case for tracers. **The New England journal of medicine,** v. 288, n. 4, p. 189–194, 1973. Disponível em: https://pubmed.ncbi.nlm.nih.gov/4682231/ Acesso em: 6 jan. 2023.

KIRBY INSTITUTE. **Monitoring Hepatitis C Treatment Uptake in Australia (Issue 9).** Sydney, NSW, Australia: The Kirby Institute, 2018. Disponível em: https://kirby.unsw.edu.au/sites/default/files/kirby/report/Monitoring-hep-C-treatment-uptake-in-Australia_Iss10-JUN19.pdf. Acesso em 4 jan. 2023.

LEMOINE, M.; NAYAGAM, S.; THURSZ, M. Viral hepatitis in resource-limited countries and access to antiviral therapies: current and future challenges. **Future Virology,** v. 8, n. 4, p.371-80, 2013. Disponível em: https://www.ncbi.nlm.nih.gov/pmc/articles/PMC3646239/. Acesso em: 12 jan. 2023.

MELLO, G.A.; PEREIRA, A.P.C.M; UCHIMURA, L.Y.T; IOZZI, F.L.; DEMARZO, M.M.P.; VIANA, A.L.D. O processo de regionalização do SUS: revisão sistemática. **Ciência e Saúde Coletiva,** v. 22, n. 4, 2017. Disponível em: https://www.scielo.br/j/csc/a/ML5vsyD9WccNyD93RmJtJRH/abstract/?lang=pt. Acesso em: 23 dez. 2022.

MINAYO, M.C.S.; ASSIS, S.G.; SOUZA, E.R. (Org.). **Avaliação por triangulação de métodos**: Abordagem de Programas Sociais. Rio de Janeiro: Fiocruz, 2010. pp. 19-51.

ODENWALD, M.A.; PAUL, S. Viral hepatitis: Past, present, and future. **World journal of gastroenterology,** v. 28, n. 14, p. 1405–1429, 2022. Disponível em: https://pubmed.ncbi.nlm.nih.gov/35582678/. Acesso em: 14 dez. 2022.

OLIVEIRA, M.A.; BOSKA, G.A.; OLIVEIRA, M.A.F.; BARBOSA, G.C. O acesso à saúde pela população em situação de rua da Avenida Paulista: barreiras e percepções. **Revista Escola Enfermagem USP,** v. 55, 2021. DOI: 10.1590/S1980-220X2020033903744. Disponível em: https://www.scielo.br/j/reeusp/a/J5B4q6h6HFm5rCmjCJMZF8x/. Acesso em: 10 nov. 2022.

OLIVEIRA, R.R.; SILVA, K.H.; TAVARES, S.S.; GONZAGA, M.F.N; ALMEIDA, C.G; CONTINI, I.C.P. Acesso à saúde pelas profissionais do sexo na atenção primária: uma revisão integrativa. **Scire Salutis,** v. 11 n. 3, 2021. Disponível em: https://sustenere.co/index.php/sciresalutis/article/view/5663. Acesso em: 15 jan. 2023.

ORGANIZAÇÃO MUNDIAL DA SAÚDE - OMS. **Estrategia mundial del sector de la salud contra las hepatitis víricas 2016-2021**. Genebra: OMS, 2016. Disponível em: http://apps.who.int/iris/bitstream/handle/10665/250578/WHO-HIV-2016.06-spa.pdf?sequence=1. Acesso em: 12 nov. 2022.

ORGANIZAÇÃO MUNDIAL DA SAÚDE - OMS. **Global hepatitis report 2017.** Genebra: OMS, 2017. Disponível em: www.who.int/hepatitis/publications/global-hepatitis-report2017/en/. Acesso em: 18 nov. 2022.

ORGANIZAÇÃO PAN-AMERICANA DA SAÚDE - OPAS. **Dia Mundial da Hepatite 2020:** "Um Futuro Livre de Hepatite". 2020. Disponível em: https://www.paho.org/pt/noticias/9-9-2020-dia-mundial-da-hepatite-2020-um-futuro-livre-hepatite. Acesso em: 10 jan. 2023.

ORGANIZAÇÃO PAN-AMERICANA DA SAÚDE - OPAS. **Interrupção dos serviços de saúde durante pandemia de COVID-19 ameaça eliminação das hepatites virais na América Latina e no Caribe.** 2021. Disponível em: https://www.paho.org/pt/noticias/27-7-2021-interrupcao-dos-servicos-saude-durante-pandemia-covid-19-ameaca-eliminacao-das. Acesso em: 12 jan. 2023.

ORGANIZAÇÃO MUNDIAL DA SAÚDE - OMS. **Consolidated guidelines on HIV, viral hepatitis and STI prevention, diagnosis, treatment and care for key populations**. Geneva: OMS, 2022. Disponível em: https://reliefweb.int/report/world/consolidated-guidelines-hiv-viral-hepatitis-and-sti-prevention-diagnosis-treatment-and-care-key-populations?gad_source=1&gclid=Cj0KCQiAoKeuBhCoARIsAB4WxtfjeH9C6vRsJanC6YbLnLlEvVtkSdd9sXp_utz-uHOAK1bA-NobgtwaAnFgEALw_wcB. Acesso em 13 jan. 2023.

PARMEJIANI, E.P.; QUEIROZ, A.B.A.; PINHEIRO, A.S.; CORDEIRO, E.M.; MOURA, M.A.V.; PAULA, M.B.M. Saúde sexual e reprodutiva em comunidades ribeirinhas: revisão integrativa. **Revista da Escola de Enfermagem USP,** v. 55, 2021. Disponível em: https://www.scielo.br/j/reeusp/a/y3H6YN6pJHgmtDdGGMGcN8J/?format=pdf&lang=pt. Acesso em: 15 out. 2022.

PEREIRA, R.N.; MUSSI, R.F.F. Acesso e utilização dos serviços de saúde da população negra quilombola: uma análise bibliográfica. **ODEERE: Revista do Programa de Pós-Graduação em Relações Étnicas e Contemporaneidade,** v. 5, n. 10, p. 280-303, 2020. Disponível em: https://periodicos2.uesb.br/index.php/odeere/article/view/6938/5450. Acesso em: 15 out. 2022.

PÉREZ HERNÁNDEZ, J.L. *et al*. Chronic viral hepatitis C micro-elimination program using telemedicine: The mexican experience. **Revista espanola de enfermedades digestivas: organo oficial de la Sociedad Espanola de Patologia Digestiva,** v. 113, n. 6, p. 432-435, 2021. DOI: 10.17235/reed.2020.7425/2020. Disponível em: https://pubmed.ncbi.nlm.nih.gov/33267593/. Acesso em: 15 out. 2022.

POURMARZI, D.; SMIRNOV, A.; HALL, L.; THOMPSON, H.; FITZGERALD, G.; RAHMAN; T. Enablers and barriers for the provision of community-based HCV treatment: A case study of a real-world practice. **Journal of viral hepatitis**, v. 27, n. 5, p. 484–496, 2020. Disponível em: https://pubmed.ncbi.nlm.nih.gov/31958355/. Acesso em: 20 nov. 2022.

REIPOLD, E.I., *et al*. Optimising diagnosis of viraemic hepatitis C infection: the development of a target product profile. **BMC infectious diseases,** v. 17, n. 1, 2017. DOI 10.1186/s12879-017-2770-5. Disponível em: https://www.ncbi.nlm.nih.gov/pmc/articles/PMC5688443/. Acesso em 10 jan. 2023.

SCHILLIE, S.; WESTER, C.; OSBORNE, M.; WESOLOWSKI, L.; RYERSON, A.B. CDC Recommendations for Hepatitis C Screening Among Adults - United States, 2020. **MMWR. Recommendations and reports: Morbidity and mortality weekly report,** v. 69, n. 2, p. 1–17, 2020. Disponível em: https://pubmed.ncbi.nlm.nih.gov/32271723/. Acesso em: 20 dez. 2022.

SIMPSON, H. *et al*. Distance to treatment as a factor for loss to follow up of hepatitis C patients in North East England. **Journal of public health (Oxford, England),** v. 41, n. 4, p. 700-706, 2019. DOI: 10.1093/pubmed/fdy190. Disponível em: https://pubmed.ncbi.nlm.nih.gov/30351415/. Acesso em: 10 out. 2022.

SMITH, S. *et al*. Global progress on the elimination of viral hepatitis as a major public health threat: An analysis of WHO Member State responses 2017. **Journal HEP reports: innovation in hepatology**, v. 1, n. 2, p. 81–89, 2019. DOI: 10.1016/j.jhepr.2019.04.002. Disponível em: https://pubmed.ncbi.nlm.nih.gov/32039355/. Acesso em: 10 nov. 2022.

TANAKA, O.Y. **Avaliação em Saúde:** Contribuições para incorporação no cotidiano. Rio de Janeiro: Atheneu, 2017. 223 p.

VUORI, H. A qualidade da Saúde. **Divulgação em Saúde para Debate,** n. 3, p. 17-25, 1991. Disponível em: https://pesquisa.bvsalud.org/portal/resource/pt/lil-223179. Acesso em: 13 jan. 2023.

WACHHOLZ, P.A.; LIMA, S.A.M.; VILLAS BOAS, E.P.J.F. Da prática baseada em evidências para a saúde coletiva informada por evidências: Revisão Narrativa. **Revista Brasileira em Promoção da Saúde,** v. 31, n. 2, 2018. DOI:10.5020/18061230.2017.6753. Disponível em: https://pesquisa.bvsalud.org/portal/resource/pt/biblio-907009. Acesso em: 20 dez. 2022.

WADE, A.J.; VERONESE, V.; HELLARD, M.E.; DOYLE, J.S. A systematic review of community based hepatitis C treatment. **BMC infectious diseases,** v. 16, 2016. Disponível em: https://pubmed.ncbi.nlm.nih.gov/27184661/. Acesso em: 15 out. 2022.

WADE, A.J. *et al*. Aiming for elimination: Outcomes of a consultation pathway supporting regional general practitioners to prescribe direct-acting antiviral therapy for hepatitis C. **Journal Viral Hepatology**, v. 25, n. 9, p. 1089-1098, 2018. Disponível em: https://pubmed.ncbi.nlm.nih.gov/29660212/. Acesso em: 15 out. 2022.

WONG, W.C.W. *et al*. Improving the hepatitis cascade: assessing hepatitis testing and its management in primary health care in China. **Family practice**, v. 35, n. 6, p. 731-737, 2018. Disponível em: https://pubmed.ncbi.nlm.nih.gov/29741661/. Acesso em: 15 nov. 2022.