

Care for people living with HIV in the time of COVID-19: scoping review

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ABSTRACT

This study aimed to analyze the scientific productions involving the repercussions of the COVID-19 pandemic on the actions and health services offered to people living with HIV. To this end, a scoping review was carried out following the recommendations of the Joanna Briggs Institute and PRISMA-ScR. The search took place in March 2022 in seven databases and the gray literature, with the descriptors: *pandemic*, *COVID-19*, *SARS-CoV-2*, *HIV*, *HIV infections*, *health strategies*, and *health services*, combined with operators booleans “AND” and “OR”. Two researchers independently searched for the data sources. With the search, 1,032 publications were identified, of which 42 were included. Difficulties in accessing and linking to health services were evidenced, such as reduced service hours, scarcity of materials, and reduction or overload of human resources, which weakened the offer of actions to monitor treatment, dispensing of medicines, and clinical follow-up. On the other hand, digital care and follow-up systems were employed, in addition to the use of long-term medication dispensing methods, resorting to places close to the affected people or even in their homes. In short, it was possible to verify that, despite the negative effects of the pandemic on health actions and services, threatening the achievements of the last 40 years in confronting the HIV epidemic, promising strategies to provide comprehensive, proactive, and continuous care were implemented in times of COVID-19.

Keywords: COVID-19; pandemics; HIV; health services; health strategies; review.

INTRODUCTION

COVID-19 – the name given to the infection caused by SARS-CoV-2 (coronavirus disease 2019) – has been generating an unprecedented health and humanitarian crisis since March 2020^{1,2} and was considered a pandemic by the World Health Organization (WHO). The disease and its containment measures have interrupted many of the population’s daily activities and have drastically affected global health due to its high potential for transmissibility morbidity and mortality^{1,2}.

The fight against COVID-19 has required health systems around the world to implement strategies aimed at strengthening epidemiological surveillance, in addition to the need to reorganize healthcare processes³. However, despite the aggravated health scenario, the pandemic has shown the potential to also impact the development and follow-up of actions and services to care for pre-existing diseases and conditions⁴.

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The overload of health workers and institutions and the isolation and social distancing measures imposed have made responses to other health problems precarious⁴. The centralization of actions to tackle the COVID-19 pandemic, as well as the restriction of circulation as a measure to control the transmission of the virus, has had repercussions on morbidity and mortality due to other health conditions, making access to services and the continuity of care actions difficult⁵.

In this scenario, there is even greater concern about the effects of the pandemic on the sustainability of programs to treat chronic communicable conditions, which are a global public health problem⁶. These conditions, such as human immunodeficiency virus (HIV) infection, have a persistent or permanent course in the individual, requiring specific and adapted responses from the health system⁷.

It is understood that models of care for chronic conditions should aim to articulate care based on the tripod: stratification of the user's risk, stabilization of the chronic condition, and supported self-care⁷. Therefore, the health actions and services offered to people living with HIV must include continuous, proactive, and integrated care^{6,7}, which still represents a challenge for the system⁷.

The isolation and social distancing necessary to control the transmission of COVID-19, among other preventive measures adopted, have interrupted and/or jeopardized care for people living with HIV^{8,9}, especially about follow-up to monitor CD4+ cell levels, assess viral load, adjust antiretroviral therapy (ART) and treat opportunistic infections commonly caused by immunocompromise⁸.

Additionally, the changes brought about by the pandemic have significantly affected the routine of individuals, especially people living with HIV⁸. In addition to the biological aspects that constitute greater fragility and vulnerability in the case of HIV/COVID-19 co-infection, especially when adherence to ART is irregular, COVID-19 has had significant effects on the psychological and socioeconomic spheres, reflecting difficulties in maintaining treatment in this population^{8,9}.

Given the above, considering the potential impact of COVID-19 on access to health services and continuity of care for other health conditions, as well as the need for continuous and comprehensive care for people living with HIV to improve their quality of life, this study aimed to analyze scientific productions involving the repercussions of the COVID-19 pandemic on health actions and services offered to people living with HIV.

METHODS

A scoping review was conducted following the recommendations of the Joanna Briggs Institute (JBI)¹⁰ and the Preferred Reporting Items for Systematic Reviews and Meta-Analyses

extension for Scoping Reviews (PRISMA-ScR)¹¹ to map the state of the art¹². Steps were followed: 1) identification of the research question; 2) search and identification of studies; 3) selection; 4) data extraction; 5) grouping, synthesis, and reporting of results; and 6) dissemination of results¹⁰.

To address the guiding question of this review, the Population, Concept, and Context (PCC) strategy¹⁰ was used: P – people living with HIV; C – repercussions on health actions and services; and C – COVID-19 pandemic. The question thus became: “What scientific evidence is available in the literature about the repercussions of the COVID-19 pandemic on health actions and services offered to people living with HIV?”

To delimit the repercussions, materials covering aspects related to the clinical, social, and psychological effects of the pandemic on the lives of people living with HIV were disregarded, since they do not encompass the health actions and services offered. Furthermore, as the review focused on the care of people living with HIV, publications with a population/sample with unknown serology were not included.

The search was carried out on the following databases: Embase, *Literatura Latino-Americana e do Caribe em Ciências da Saúde* (LILACS), *Índice Bibliográfico Español en Ciencias de la Salud* (IBECs), Medical Literature Analysis and Retrieval System Online (MEDLINE), Cumulative Index to Nursing and Allied Health Literature (CINAHL), Web of Science (WoS) and Scopus. We also searched the gray literature via Open Access Theses and Dissertations (OATD) and Brazilian Digital Library of Theses and Dissertations (BDTD).

To systematize this stage, the following controlled descriptors were used and inserted into the Health Sciences Descriptors (DeCS) and the Medical Subject Headings (MeSH) databases: pandemic (*pandemia*), COVID-19 (COVID-19), SARS-CoV-2 (SARS-CoV-2), HIV (HIV), HIV infections (*infecções por HIV*), health strategies (*estratégias de saúde*), and health services (*serviços de saúde*). The descriptors were combined with the Boolean operators “AND” and “OR” (Table 1).

The following inclusion criteria were used to select the productions: publications (original articles, reviews, letters, editorials, reports, comments, correspondence, reports, and government materials) that addressed the question posed, published between March 2020 and February 2022, and available in Portuguese, English or Spanish. Publications that were unavailable in full or not free of charge, unfinished, and repeated were excluded.

The search was carried out through the journal portal of the *Coordenação de Aperfeiçoamento de Pessoal de Nível Superior* (CAPES). The publications were selected independently by peers, and only those selected by two of the authors of this study were included. At this point, divergences identified in four publications, that entered the review, were resolved by consensus between the evaluators, without the need to consult a third party.

Table 1: Strategies used to search for evidence in data sources.

Data source	Search strategy
IBECS/LILACS	MH:(pandemia) AND (COVID-19 OR SARS-CoV-2) AND (HIV OR "infecções por HIV") AND ("serviços de saúde" OR "estratégias de saúde")
MEDLINE	(pandemics[MeSH Terms]) AND (COVID-19 OR SARS-CoV-2[MeSH Terms]) AND (HIV OR "HIV infections"[MeSH Terms]) AND ("health strategies" OR "health services"[MeSH Terms])
WoS	ALL=pandemics AND ALL=(COVID-19 OR SARS-CoV-2) AND ALL=(HIV OR "HIV infections") AND ALL=("health strategies" OR "health services")
Scopus	TITLE-ABS-KEY (pandemics) AND TITLE-ABS-KEY (COVID-19 OR SARS-CoV-2) AND TITLE-ABS-KEY (HIV OR "HIV infections") AND TITLE-ABS-KEY ("health strategies" OR "health services")
Embase	Pandemics AND (COVID-19 OR SARS-CoV-2) AND (HIV OR "HIV infections") AND ("health strategies" OR "health services")
CINAHL	MH pandemics AND MH COVID-19 OR MH SARS-CoV-2 AND MH HIV OR MH "HIV infections" AND MH "health strategies" OR MH "health services"
OATD/BDTD	COVID-19 AND HIV

For the eligibility assessment, the publications were selected in two stages. In the first, the titles and abstracts of the publications identified from the search strategies were analyzed, and potentially eligible materials were pre-selected. Subsequently, the pre-selected documents were read in their entirety to confirm their eligibility. Only publications selected by both evaluators were included in this scoping review.

After selecting the materials, the data from the publications was extracted and organized in Microsoft Word 2016® software, listing: author (year), type of publication, place of study, and main results. Subsequently, the publications were analyzed through critical reading and synthesis of the findings, to organize the analytical categories and their constituent elements, which were discussed in the light of current and relevant literature.

The final stage, the dissemination of the data, was the publication of this review. It is hoped that the results will reach managers and health professionals who work with people living with HIV. As the research does not involve human beings, the project was not submitted to the Research Ethics Committee, by Resolution No. 674/2022 of the National Health Council. However, the ethical precepts of the publications included were observed.

RESULTS

The search took place in March 2022 and resulted in the identification of 1,032 publications, of which 470 were found in CINAHL, 217 in Scopus, 198 in MEDLINE, 84 in Web of Science, 46 in OATD, 11 in Embase and six in BDTD. With the strategies employed, no results were found in the IBECS and LILACS databases. After applying the eligibility criteria, 42 publications were included. The publication selection process is shown in Figure 1.

About the type of publication, the most prevalent were reviews (n=6), qualitative studies (n=6), and commentaries (n=4). As for the location of the publications included in this review, the most recurrent countries were the United States of America (n=4), China (n=3), South Africa (n=3), and Uganda (n=3). There were multicenter studies (n=4) and publications with no delimitation

of location (n=6). The characteristics and main results of the publications¹³⁻⁵⁴ included are organized in Table 2.

The results of this scoping review pointed to the negative repercussions of the COVID-19 pandemic on actions and services for people living with HIV, affecting infection control by compromising the person's follow-up and linkage to care. Nevertheless, the pandemic has brought potential strategies for overcoming it, reorganizing care to provide continuity of care. The analytical categories and their constituent elements are shown in Table 3.

DISCUSSION

HIV infection remains one of the biggest public health challenges in the world³⁵, even 40 years after its emergence. Coping with the pandemic has imposed numerous barriers to the continuity of care for people living with HIV^{20,46} since they require robust support services and a functional system³², which has suffered deleterious impacts on the screening of new cases, specialized care, and follow-up care¹⁹.

Repercussions of the COVID-19 pandemic on access to essential follow-up services for people living with HIV

There have been negative effects on access to essential services, such as difficulty in accessing and linking to services, as some were interrupted or closed during the pandemic^{13-18,21-24,29,36-38,41,42,46,50}; reduction in opening hours or shortage of materials and resources, including ART drugs^{17,20,23,31,32,35,38,41-43,46}, and reduction or overload of workers, who ended up being reallocated to deal with COVID-19^{13,17,23,31,42,53}.

The pandemic has overloaded the already saturated health system¹⁴, negatively impacting essential services for people living with HIV¹³. In developing countries, the system already routinely operates with overstretched human resources, restricted budgets, and limited materials, making them more vulnerable to disruptions such as that imposed by COVID-19¹⁵, which threatens to reverse the historic progress of HIV control¹⁴.

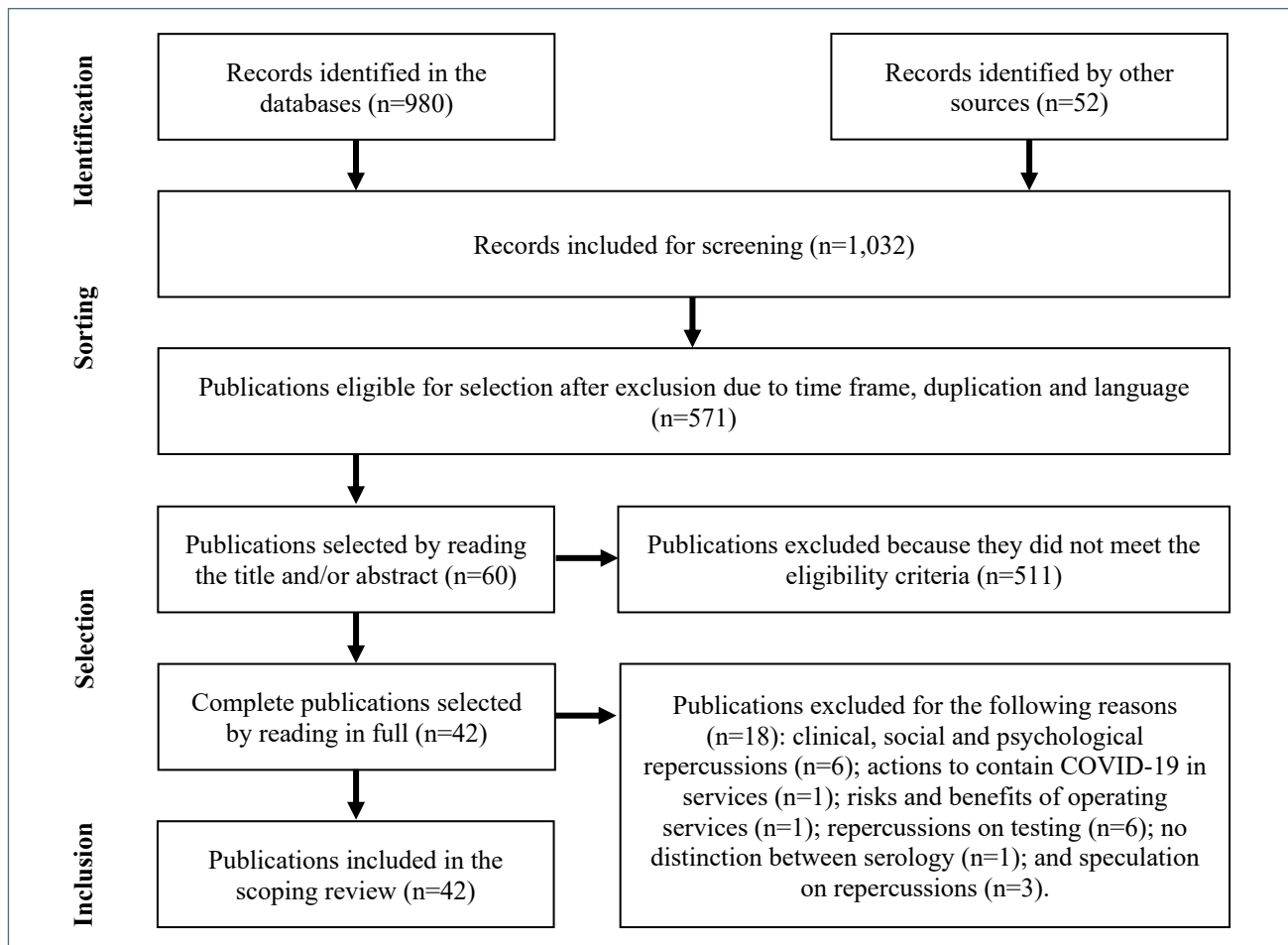


Figure 1: Flowchart of the process of selecting publications for the scoping review.

Furthermore, the pandemic and its containment measures, such as quarantine, suspension of activities, and blocking of establishments, have hampered the follow-up of care for people living with HIV^{16,33}, limiting access to services for individual reasons, such as lack of transport, fear of contamination and isolation^{26,35}, and organizational reasons, related to the physical structure and management of the service, such as lack of staff and discontinuity of operation^{13,14,31,42}.

This lack of care can have profound effects on individual and collective health¹⁵, since linking people living with HIV to the Brazilian Healthcare Network (*Rede de Atenção à Saúde – RAS*) is essential for controlling the infection³⁴, including early detection of new cases. There has been a significant reduction in HIV testing in essential services during the pandemic^{20,55-57}, while late diagnosis with acquired immune deficiency syndrome (AIDS) already in place has increased⁵⁶.

Even though this is not the subject of this study, there is concern about people's access to services, especially those with unknown serology. A multisectoral effort is needed to avoid interruptions in access to these institutions, especially for vulnerable populations¹⁷. HIV policies should be implemented to increase

early detection and timely treatment in the current context and future waves of the pandemic¹⁶.

Repercussions of the COVID-19 pandemic on the provision of monitoring and follow-up actions for people living with HIV

The influence of the pandemic on the provision of health actions to monitor and follow up people living with HIV was also noted, namely: a reduction in the dispensation or follow-up of the ART^{13-18,20,22,24,25,31,32,35,37,38,43,45,46,51-54}; fewer appointments, routine tests – such as viral load and CD4+ cell counts – or counseling actions^{14-16,19-22,25,27,32,37,38,42,45,48,51,52}; and a drop in the screening and treatment of opportunistic infections^{13,14,19,27,33}.

It is notoriously important to offer HIV prevention and treatment actions during the pandemic²². Recognizing the negative repercussions of COVID-19 on vulnerable populations, such as people living with HIV, is essential to provide a comprehensive understanding of the phenomenon and the needs of the public, establishing strategies that provide follow-up amid the crisis²⁷, to contribute to maintaining the quality of life.

Table 2: Summary of the characteristics of the publications included in the scoping review.

Author (year)	Type	Place	Main results
Gatechompol et al. 2021 ¹³	Review	Doesn't apply	There was a shortage of antiretrovirals, difficulty in accessing withdrawal services, interruption of services for the detection and treatment of opportunistic infections, and fewer health workers. Actions such as dispensing antiretrovirals for several months or at home and telemedicine were adopted.
Eisinger et al. 2021 ¹⁴	Review	Doesn't apply	There was an interruption in HIV monitoring and treatment services, negatively affecting linkage to care, access to antiretrovirals, and treatment of opportunistic infections.
Nachega et al. 2021 ¹⁵	Review	Doesn't apply	Interruption of treatment services was noted, resulting in a lower supply of drugs and fewer appointments. Actions such as dispensing for several months, home delivery, community withdrawal, telemedicine, mobile clinics, and online counseling groups were employed.
Shi et al. 2021 ¹⁶	Cross-sectional study	China	There was a low level of engagement with the service, fewer CD4+ cell count tests, and a reduction in the rate of timely ART.
Parikh et al. 2022 ¹⁷	Qualitative study	India	There was difficulty in accessing the service due to its interruption, resulting in low antiretroviral withdrawals due to a shortage of drugs, a lack of materials, and fewer workers. Actions such as home or community delivery of antiretrovirals and telemedicine were adopted.
Pantelic et al. 2021 ¹⁸	Mixed method study	United Kingdom	There were difficulties in accessing essential services and treatment, as well as a lack of medicines. Telemedicine actions by text message and call were employed.
El Moussaoui et al. 2021 ¹⁹	Retrospective cohort study	Belgium	There was a significant reduction in the interval between outpatient appointments and routine tests, as well as a reduction in the number of appointments offered. In addition, there was a drop in screening for co-infections/opportunistic infections.
Abraham et al. 2021 ²⁰	Qualitative study	Ghana	There was a decrease in counseling and ART dispensing. In addition, the effect of the pandemic was felt in the unavailability of resources in the service, including medication. Actions such as dispensing antiretroviral drugs for several months, changes in opening hours and staff roster, as well as restructuring the schedule of appointments were noted.
McGinnis et al. 2021 ²¹	Retrospective cohort study	United States of America	A lower number of face-to-face consultations and viral load tests were noted, although the suppression rate remained stable. Actions such as virtual consultations and dispensing antiretrovirals for several months were employed.
Pollard et al. 2021 ²²	Qualitative study	India	Barriers were seen in access to testing services for CD4+ cell counts and viral load, as well as in the withdrawal of antiretrovirals. Actions such as dispensing antiretrovirals for several months and home delivery were used.
Bisnauth et al. 2022 ²³	Qualitative study	South Africa	There were difficulties in accessing the service due to its closure and the withdrawal of medicines, a shortage of materials, and an overload of professionals. Actions such as dispensing antiretrovirals for several months and the use of technology were employed.
Tiomar et al. 2021 ²⁴	Comment	Doesn't apply	There was restricted access to services and antiretroviral drugs. Actions such as telecare and dispensing were applied for several months.
Galaviz et al. 2021 ²⁵	Descriptive study	United States of America	Delays in follow-up appointments, difficulty in monitoring viral load, and difficulty in accessing ART were noted. Actions such as home delivery of ART and telemedicine consultations were adopted.
Hoke et al. 2021 ²⁶	Report	Multicentric	Actions for home delivery of antiretroviral drugs, through community health agents and at home, have been implemented.
Gutiérrez-Velilla et al. 2022 ²⁷	Mixed method study	Mexico	There was a decrease in the number of appointments and testing for opportunistic infections. Actions such as a system for scheduling appointments and withdrawing antiretroviral drugs, as well as dispensing them over several months, were employed.
Lee et al. 2021 ²⁸	Cross-sectional study	Australia	Actions to deliver ART at home have been popularized, favoring viral load control and access to treatment.
Rao et al. 2021 ²⁹	Cross-sectional study	Multicentric	Difficulties were noted in accessing HIV services, whether face-to-face or remotely, jeopardizing the continuity of treatment.
Boyd, et al. 2021 ³⁰	Report	Nigeria	Actions such as initial schemes with more doses, dispensing antiretrovirals for several months, and community distribution have been implemented.
Sun et al. 2021 ³¹	Qualitative study	China	There impeded adequate communication between people living with HIV and the services, affecting the distribution and prescriptions of antiretrovirals, as a result of the reallocation of professionals to COVID-19 care and the insufficient stock of antiretrovirals. Actions such as the distribution of ART by community organizations and home delivery have been adopted.
Nyashanu et al. 2021 ³²	Qualitative study	Zimbábue	Houve escassez de antirretrovirais e redução na rotina de realização de exames regulares, inclusive os relacionados ao HIV.
Medina et al. 2021 ³³	Retrospective cohort study	Guatemala	A drop in screening for opportunistic infections was noted, leading to an increase in deaths from this cause.
Giuliani et al. 2021 ³⁴	Letter	Italy	Actions such as telephone or e-mail confirmation of specialist consultations, home delivery of ART, postponement of scheduled diagnostic procedures, and implementation of tele-service were adopted.
Ullah et al. 2021 ³⁵	Letter	Kenya	Antiretroviral drugs were in short supply, leading to low adherence to the therapeutic regimen.
Kaswa 2021 ³⁶	Case report	South Africa	There was little access to health services, which has a direct impact on HIV care.
Wagner et al. 2021 ³⁷	Cohort study	Uganda	There was a substantial reduction in access to the service for clinical consultations and the supply of antiretroviral drugs.

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Table 2: Continuation.

Author (year)	Type	Place	Main results
Errea et al. 2021 ³⁸	Experience report	Uganda	There has been a reduction in access to services, a shortage of antiretroviral drugs, and the suspension of medical appointments and laboratory monitoring tests.
Nyunt et al. 2021 ³⁹	Descriptive study	Myanmar	Actions such as dispensing antiretrovirals for several months and distributing ART in community organizations were developed.
Hans et al. 2021 ⁴⁰	Correspondence	Namibia	Actions such as increasing ART distribution points - including at borders with countries dependent on the service - dispensing for several months, ART monitoring, groups on chat apps, and phone tracking have been implemented.
Linnemayr et al. 2021 ⁴¹	Mixed method study	Uganda	There were difficulties in accessing specialized services and a lack of stock of antiretroviral drugs.
Qiao et al. 2021 ⁴²	Mixed-method study	United States of America	There were interruptions or closures of specialized clinics, a reduction in working hours, and a reduction in the number of professionals, as well as the suspension of counseling and support groups. Telecare actions played an important role in linking people living with HIV.
Shah et al. 2020 ⁴³	Editorial	Not applicable	There were delays in starting ART and drug shortages due to logistical and managerial issues. Actions such as telephone consultations, dispensing antiretrovirals for several months, home delivery of ART, and local care with non-specialist doctors were employed.
Hong et al. 2020 ⁴⁴	Report	Namibia	Actions such as dispensing antiretrovirals for several months and expanding the distribution of ART in the community, as well as telecare and remote group contact strategies were adopted.
Patel et al. 2020 ⁴⁵	Review	United States of America	There was a reduction in consultations, a reduction in laboratory monitoring, and an interruption in ART. Telecare actions were implemented.
Jiang et al. 2020 ⁴⁶	Commentary	Not applicable	There has been a reduction in the timely linkage of people living with HIV to the network, the reallocation of resources to tackle the pandemic, and the discontinuation of ART. Actions such as a greater supply of dispensing establishments and home delivery of medicines could be employed.
Wang 2020 ⁴⁷	Review	China	Actions such as dispensing for several months, home delivery of medicines, and setting up a direct online line for advice and consultations can be adopted.
Grimsrud et al. 2021 ⁴⁸	Commentary	Multicentric	There was a reduction in the number of medical consultations. Actions such as dispensing antiretrovirals for several months and increasing dispensing points in the community were implemented.
Molas et al. 2022 ⁴⁹	Descriptive study	Uganda	Actions to implement community pharmacies to dispense antiretroviral drugs have been adopted.
Nalubega et al. 2021 ⁵⁰	Qualitative study	Uganda	Difficulty in accessing services was noted. Actions to promote accessibility for ART withdrawal in the community were used.
Quiros-Roldan et al. 2020 ⁵¹	Retrospective study	Italy	There was a reduction in the dispensing of antiretroviral drugs and absences from routine appointments. Telecare actions were employed.
Mukwenha et al. 2020 ⁵²	Perspective	Zimbabwe	There was a reduction in viral load monitoring and fewer people living with HIV were newly diagnosed and starting ART in good time.
Keene et al. 2020 ⁵³	Commentary	South Africa	There has been a reduction in the supply of medicines and a shortage of staff. Actions such as self-service, remote counseling, and decentralization of ART dispensing could be adopted.
Harris et al. 2021 ⁵⁴	Cross-sectional study	Multicentric	There were declines in the first quarter of the pandemic in terms of new ART indications, especially in countries with stricter COVID-19 containment measures. On the other hand, viral suppression remained stable, and viral load counts increased.

Table 3: Analytical categories and constituent elements of the publications included in the scoping review.

Analytical category	Repercussions of the COVID-19 pandemic on access to essential follow-up services for people living with HIV	Repercussions of the COVID-19 pandemic on the provision of monitoring and follow-up actions for people living with HIV	Reorganization of actions and services for continuity of care for people living with HIV in times of pandemic
Constituent elements	<ul style="list-style-type: none"> - Difficulty in accessing and linking to services due to closure or interruption^{13-18,21-24,29,36-38,41,42,46,50} - Reduced service hours or shortage of materials and resources^{17,20,23,31,32,35,38,41-43,46} - Decrease or overload of professionals linked to the service^{13,17,23,31,42,53} 	<ul style="list-style-type: none"> - Reduction in ART dispensing or follow-up actions^{13-18,20,22,24,25,31,32,35,37,38,41,45,46,51-54} - Fewer appointments, routine tests, or counseling actions^{14-16,19-22,25,27,32,37,38,42,45,48,51,52} - Drop in screening and treatment of opportunistic infections^{13,14,19,27,33} 	<ul style="list-style-type: none"> - Use of electronic scheduling systems and teleservice consultations^{13,15,17,18,21,23-25,27,34,45-45,51,53} - Dispensing ART for several months, in the community or at home^{13,15,17,20-28,30,31,34,39,40,43,44,46-50,53} - Use of technology or creation of online support and/or advice groups^{15,23,40,44,47,53}

The decrease in the supply of monitoring and follow-up actions for people living with HIV threatens the progress of HIV care programs¹⁴. Immediate initiation and adherence to ART, monitoring of viral load and CD4+ cells, and routine appointments for complementary tests, immunizations, investigation, and treatment of other health conditions make up the framework of actions offered to this public⁵⁸.

These actions have been affected by the pandemic, being carried out at longer intervals or suspended to avoid exposing people living with HIV to the virus^{22,25,32,33}. It is not yet known what the long-term effects of interrupting these actions will be on these people, however, higher mortality from opportunistic infections has already been noted³³ and the same effect is expected for HIV mortality⁵⁹.

Furthermore, a cross-sectional study of 847 people treated at a men's clinic found that COVID-19 hurt income and vulnerability to HIV⁶⁰.

Given this, the continuity of health actions for these people is crucial, avoiding an increase in morbidity and mortality from HIV and its associated conditions. Promoting the overall quality of life of people living with HIV must be prioritized and achieved, including strategies that integrate different sectors of society. Among all the actions involved in care, those aimed at adherence to ART, which has been noticeably impaired, are urgently needed in this population^{16,35,61}.

Reorganization of actions and services for continuity of care for people living with HIV in times of pandemic

On the other hand, the findings pointed to potential situations for overcoming actions and services amid the pandemic, such as the use of electronic scheduling systems and tele-service consultations, avoiding exposure to SARS-CoV-2^{13,15,17,18,21,23-25,27,34,42-45,51,53}, dispensing ART for several months, in the community or at home^{13,15,17,20-28,30,31,34,39,40,43,44,46-50,53}, and the use of technology or the creation of online support and/or advice groups^{5,23,40,44,47,53}.

While the world has turned its eyes to COVID-19, millions of people live with chronic conditions, requiring long-term, comprehensive care^{6,41}. HIV programs have sought ways to restore the trajectory that existed before the pandemic⁵². The adaptation of services and the development of new health actions must be and have been priorities⁴³. Among the alternatives, the use of telemedicine seems to have helped ensure that the interruptions did not affect HIV control²⁵.

Telemedicine is believed to be an efficient strategy for facilitating communication with groups already engaged in care⁵¹ and for linking new people^{40,42}, making it an important tool for following up with people in the RAS. Furthermore, the use of these technologies was indispensable for maintaining support and counseling groups^{44,47,51,53}, which are necessary for continuity and adherence to care for people living with HIV.

In this segment, it can be seen that health technologies, especially soft-hard technologies (structured knowledge) and hard technologies (material resources), have provided a welcoming environment for the population and engaged the longitudinal of health actions and services, since they have adapted to the main demands emerging from the scenario imposed by the COVID-19 pandemic, which required behavioral and social changes, including in the relationship between the person and the health worker⁶².

A study carried out in a southern Brazilian capital showed the incorporation of remote management technologies and tools as a strategy to expand access to services in the face of the COVID-19 pandemic, to provide equity and comprehensive care in times of social distancing/isolation, especially with the support and strengthening of Primary Health Care (PHC),

which stands out on the national scene as the organizer and coordinator of the RAS⁶³.

ART dispensing has also been facilitated by the implementation of community models^{34,50,53}. The proposal, in which dispensing takes place in establishments in the community itself, was well received, suggesting the potential for reducing the overload of centralized services⁴⁹, including in the post-pandemic period, considering the potential of PHC. In addition, a response of dispensing for several months and at home was essential to overcome the systemic interruptions resulting from COVID-19^{30,34,39,44,46-48}.

Given the above, the management of services, as well as the expansion of the supply of their actions, have been able to substantially reduce the harmful effects of the pandemic on the care of people living with HIV³³. The progression of infection to AIDS, the increase in transmission, and growing mortality must be avoided through public policies that provide proper care in times of COVID-19 and adapt to the current reality in the post-pandemic period³⁷.

In this scenario, health systems can adapt to offer the necessary care to people living with HIV and other chronic conditions in this emerging moment in the face of COVID-19, especially in the subsequent months or years required to normalize care for these conditions⁴¹. To this end, it is essential to act equitably for vulnerable populations, preventing systemic interruptions and thus calamitous effects on their lives¹⁷.

Finally, the COVID-19 pandemic is threatening the achievements of the last 40 years in tackling the HIV epidemic and reaching the internationally proposed targets. It is therefore suggested that the programmatic sustainability of care for people affected be supported by alternative, creative, and innovative strategies, providing timely linkage of detected cases, adherence to ART, and follow-up care amid health crises.

It is worth mentioning that this study had limitations, namely: the vocabulary of non-controlled descriptors was not considered when designing the search strategies, and publications that were not retrieved for reading in full were excluded due to their unavailability free of charge. Thus, it is recognized that the results may be limited in certain aspects, given the possible non-inclusion of publications that fit the scope investigated.

Conclusion

This scoping review concludes that the repercussions of the COVID-19 pandemic have affected access to services for follow-up care and the provision of monitoring and follow-up actions for people with HIV. There have been difficulties in accessing and connecting to health services, manifested in a reduction in opening hours, a shortage of materials, and a reduction or overload of human resources, which has weakened the provision of treatment monitoring, dispensing of medication, and clinical follow-up.

On the other hand, there has been a process of reorganization to offer the continuous and comprehensive care needed to control HIV in times of COVID-19. In this sense, the materials selected pointed to the identification of strategies for maintaining and sustaining care, using digital systems for remote care and follow-up, as well as methods for dispensing medication over long periods, using locations close to the people affected or even in their homes.

Finally, although the negative effects of the pandemic on the fight against HIV threaten the achievement of controlling the epidemic, COVID-19 has brought promising strategies. Studies are therefore needed to analyze the impact of the pandemic on the care of people living with HIV and what the long-term effects will be on their lives, as well as to assess the effectiveness of the strategies employed and how they can be incorporated into HIV programs in the post-pandemic period.

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