Assessing the impact of COVID-19 on people living with HIV, including pregnant women and children

Final Report **Republic of Moldova**

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Acronyms and Abbreviations

AIDS	*Acquired immunodeficiency syndrome*
ART	*Antiretroviral therapy*
ARV	*Antiretroviral drugs*
CAPI	*Computer-assisted personal interviewing*
CATI	*Computer-assisted telephone interviewing*
CIS	*Commonwealth of Independent States*
CNESP	*Extraordinary National Commission for Public Health*
COVID-19	*Coronavirus disease of 2019*
CSO	*Civil society organization*
FGD(s)	*Focus Group Discussion(s)*
GAM	*Global AIDS Monitoring*
HCW	*Healthcare workers*
HIV	*Human immunodeficiency virus*
IDU	*Injecting Drug User*
KII(s)	*Key Informant Interview(s)*
KAP	*Knowledge, attitude, and practices*
MOH	*Ministry of Health*
MSM	*Men having sex with men*
NCC	*National Coordination Council*
NGO	*Non-governmental organization*
NPI	*Non-pharmaceutical interventions*
PEP	*Post exposure prophylaxis*
PMTCT	*Prevention of mother-to-child transmission*
PLWH	*People living with HIV*
PPE	*Personal protective equipment*
STI(s)	*Sexually Transmitted Infection(s)*
SW	*Sex Workers*
TB	*Tuberculosis*
TGF	*The Global Fund to Fight AIDS, Tuberculosis and Malaria (Global Fund)*
TOR	*Terms of Reference*
UN	*United Nations*
UNAIDS	*Joint United Nations Programme on HIV/AIDS*
UNDP	*United Nations Development Programme*
UNGASS	*United Nations General Assembly Special Session on HIV/AIDS*
UNICEF	*United Nations Children's Emergency Fund*
WHO	*World Health Organization*

1 Executive Summary

Purpose

The purpose of this study is to provide an assessment and analysis of the situation of people living with HIV/AIDS (PLWH) in the Republic of Moldova in the context of the COVID-19 pandemic, including COVID-19 awareness and concern, socioeconomic status, quality of life, mental health and social support, access to medical care/treatment (including digital methods), and stigma and develop recommendations for key government stakeholders to address the identified challenges and mitigate the negative impacts of COVID-19. This study considers available statistics and latest trends, including an analysis of the data before and during the pandemic, as well as quantitative and qualitative data collected in the field. The study also highlights the situation of pregnant women and children of caretakers with HIV or with HIV themselves.

Methodology

This study adopted a comprehensive approach consisting of a literature review, a national survey, and qualitative data gathering. Data was collected from priority population groups and relevant stakeholders at the national and sub-national/community level. The national survey included 609 PLWH aged 18+ across the Republic of Moldova to create a national representative sample of PLWH in the country. The results were disaggregated by area of residence (rural and urban), region (Chisinau municipality, Northern, Central, Southern, Gagauzia, Transnistrian region), gender, age, education, employment, and ethnicity. The qualitative component comprised FGDs with pregnant women, parents/caregivers of HIV-positive preschool and school aged children, representatives from non-governmental organizations (NGO), and national stakeholders working in the field of HIV/AIDS, as well as KIIs with a range of respondents who are knowledgeable about HIV/AIDS issues, policies and programs in the country.

Intended audience

The intended audience for this report includes key stakeholders and end users who will find the study useful for developing policy and taking action to address the impact that the COVID-19 pandemic has had on PLWH. The intention of this study is ~~to~~ not only to identify the ways in which COVID-19 has impacted PLWH, but also to analyze the findings in order to better serve this community. The end users and key stakeholders include local NGOs that work with PLWH, governmental bodies including the Ministry of Health (MOH), and multinational bodies include the United Nations Children's Emergency Fund (UNICEF) and the Joint United Nations Programme on HIV/AIDS (UNAIDS).

Key findings

The COVID-19 pandemic has had widespread implications on the health and well-being of PLWH in the Republic of Moldova. One-fifth of PLWH in the national survey reported being severely affected by the pandemic and one-third reported being moderately affected. The multifaceted dimensions of PLWH's vulnerabilities, compounded with restrictions during COVID-19 lockdowns, resulted in job loss, limited access to treatment, and continued stigma.

Key Findings	Recommendations
COVID-19 awareness and concern	
• PLWH received the bulk of COVID-19-related information from online news sources and TV. Less than half of all respondents felt family doctors were a good source of information. • Over one-third of PLWH said they were "definitely willing" to get the COVID-19 vaccine. A slightly smaller portion, reported no intention of receiving the vaccine at all.	1. Enhance accurate and timely information to PLWH on COVID-19 and HIV. 2. Consider the main sources of information utilized by PLWH to improve communication strategies 3. Increase trust between family doctors and PLWH, with a focus on those living in urban areas. 4. Implement studies and educational programs that highlight safety of COVID-19 vaccinations among PLWH to increase confidence in the vaccine.
Socioeconomic indicators	
• 1 in 10 PLWH experienced job loss. • Decrease in income was reported by half of all PLWH. Pandemic-induced income reduction was more frequent among urban dwellers. • More than half of PLWH expressed concerns regarding financial sustainability and ability to pay daily expenses (utilities, food, drugs). • Half of households spent savings, borrowed money, and bought cheaper food to cope with economic hardships during the COVID-19 pandemic. 2 in 5 limited their personal food consumption. • More than half of PLWH reported anxieties tied to not being able to pay utilities and buy medication. • Out-of-pocket expenses related to HIV care were reported by 56% of PLWH.	5. Provide social support for PLWH who lost their jobs or reported a decrease in income caused by the COVID-19 pandemic. 6. Reimburse PLWH for out-of-pocket expenses related to HIV care, such as travel expenses.
Quality of life	
• Self-reported quality of life during the COVID-19 pandemic was very poor to poor among over a quarter of PLWH. • Self-reported deterioration in health during the COVID-19 pandemic was reported by 17% of PLWH. Deterioration was expressed at a higher rate among the male population.	7. Establish targeted programs to address deterioration of health and poor quality of life among PLWH during the COVID-19 pandemic.
Access to medical care/treatment	
• Nearly 1 in 10 respondents had a lack of knowledge regarding existing HIV/AIDS programs offered by healthcare facilities during the COVID-19 pandemic and therefore had not accessed them. • 1 in 10 PLWH reported cancelled medical visits between July 2020 – July 2021. • A quarter of PLWH indicated that the frequency of their visits to healthcare facilities had decreased during the COVID-19 pandemic period when compared to pre-pandemic periods. • Fear of contracting COVID-19 was the most cited barrier in accessing healthcare facilities, reported by 41% of PLWH.	8. HIV/AIDS programs targeted towards PLWH during the COVID-19 pandemic need to be communicated to PLWH more effectively. 9. PLWH should be prioritized for COVID-19 vaccination. 10. Strategies like use of multi-month ARV dispensing and implementation of community ART distribution must be extended to cover geographical areas with low access and areas in which vulnerable, marginalized, and high-risk groups exist. 11. Medical services need to be PLWH-centered, accessible, effective, inclusive, equitable, non-discriminatory, rights based and sufficiently funded. 12. Given that newly detected cases of HIV positive people in Moldova was significantly less than pre-pandemic periods, targeted strategies need to be elaborated to cover PLWH that have not been identified during the COVID-19

	pandemic period and are missing an entire cascade of care. To do this, innovative alternative mechanisms for identification of PLWH need to be employed, including the scaling up of testing and treatment services. 13. Eliminate barriers in access and utilization of HIV targeted services such as out-of-pocket expenses, stigma, and waiting times. 14. PLWH living in the Transnistrian region should receive increased attention due to higher HIV prevalence. Further collaboration and cooperation with central Moldovan authorities and international partners are essential.
Mental health and social support	
• While a lot of focus has been placed on providing ART during the COVID-19 pandemic, psycho-emotional support for PLWH has been all but missing. • Sadness, anxiety, and depression were mentioned from "very often" to "always" in 13%, 12% and 9% of respondents, respectively. • Demand for social and psychological counselling services increased among PLWH during the COVID-19 pandemic. • Nearly 1 in 10 respondents expressed a lack of knowledge regarding existing HIV/AIDS programs offered by healthcare facilities during the COVID-19 pandemic had prevented them from accessing these services. • There was an increased demand for social services during the pandemic. Various obstacles negatively impacting PLWH in accessing social services: bureaucracy in social welfare programs, rigidity of authorities, and a high number of documents and certificates requested by authorities (in addition to some certificates not being free of charge).	15. Mental health support programs need to be developed for PLWH during the COVID-19 pandemic. 16. Peer and community support during pandemic was limited. Strengthen peer and community support for PLWH. 17. Provide PLWH with a combination of information, income, livelihood, and employment support. 18. Social services should be expanded to increase volume and diversification of social protections for PLWH during times of crisis such as the COVID-19 pandemic. 19. Address bureaucracy in social welfare programs, rigidity of authorities, and a high number of documents and certificates requested by authorities.
Stigma	
• 1 in 10 PLWH felt they received less/worse care during the COVID-19 pandemic at healthcare facilities when compared to others who were not HIV positive. • 1 in 5 PLWH felt that healthcare workers (HCW) acted differently around them during the COVID-19 pandemic because of their HIV status. This was more pronounced among those living in the Central region of the country. • Just over 1 in 10 PLWH with lyceum/college/ vocational school education cited stigma/ discrimination had been a significant barrier in accessing healthcare during the pandemic.	20. Target training for HCW on sensitization and non-discrimination towards PLWH. 21. Empower PLWH, their networks, and their communities to reduce stigma. 22. Ensure continuous and systemic development of knowledge and positive attitudes towards PLWH among the general population. 23. Invest in awareness programs and health literacy in younger generations, including in schools to improve attitudes towards PLWH from a young age.
Digital healthcare services	
• Virtual visits were more common during the COVID-19 pandemic, with 1 in 7 PLWH reporting that one or more of their scheduled visits to a healthcare facility had migrated online.	24. Ensure digital healthcare visits are secure and data is protected.

• While more than half of PLWH had not used digital devices to partake in healthcare appointments, 65% respondents were ready to adopt such methods in getting necessary healthcare services in the future, presenting opportunities for future digital-based initiatives to reach PLWH.	
Pregnant women with HIV	
• Just under half of all pregnant women with HIV were "severely" affected by the pandemic (slightly less than the national average of all respondents surveyed), • One-quarter of pregnant women with HIV reported overall "poor" and "very poor" health status. Additionally, one-quarter had symptomatic HIV serostatus. • "Very poor" and "poor" quality of life were reported by one-third of pregnant women with HIV. • Sadness and anxiety during the COVID-19 pandemic were reported by a large majority of pregnant women with HIV. Depression was reported by slightly more than half. • Pregnant women with HIV highlighted a lack of support from the government for pregnant/recently pregnant women, especially in the postpartum period. • A lack of privacy and access to physicians in private settings was identified.	25. Ensure privacy and access to physicians in private settings. Ensure proper protocols are implemented and followed to guarantee patient confidentiality. 26. Scale up targeted information towards pregnant women with HIV regarding vertical transmission if ART is not followed. 27. Place a larger focus on strengthening programs targeted towards pregnant women with HIV or women with HIV who wish to conceive. 28. Ensure prompt, appropriate and non-stigmatized, user-friendly medical services. 29. Provide "help packages," and vouchers for pregnant women and extended healthcare needs they may have. 30. Provide vouchers for children of pregnant women living with HIV/AIDS to attend existing summer camps free of charge. 31. Ensure specialized training for HCW working with pregnant women living with HIV/AIDS on sensitization and non-discrimination.
Children of HIV positive caregivers/children with HIV	
• Single mothers and families with multiple children had particularly poor living conditions. • Distance learning was a challenge for caregivers and children. Two-thirds of caregivers felt distance learning was of poor quality. • The impact of a pause in in-person learning was more severe for children of lower socioeconomic status. The interruption resulted in a pause in learning, compromised nutrition, and economic loss to families who could not both work and take care of school-aged children.	32. Children with HIV and their caregivers should get full support for treatment, follow-up, and psychosocial wellbeing. Financial support for children living with HIV and their families is necessary. 33. Provide kindergarten that is free of charge (with a focus on informal fees imposed by schooling institutions that are burdensome, especially for HIV/AIDS positive families) and early childhood development programs. 34. Introduce child-focused programs both for children with HIV and their peers to lessen stigma. 35. HCW should be trained to provide effective HIV services for children living with HIV. 36. Community support systems are invaluable and need to be strengthened to allow them to effectively support children with HIV. 37. Provide the most disadvantaged children with HIV IT devices for distance learning. 38. Provide financial aid to caregivers to cover the cost of increased internet charges and electricity bills tied to distance learning.

2 Methodology

This study utilized a review of existing data and the collection of qualitative and quantitative data from a national representative survey, KIIs, and FGDs. Table 1 below presents the sample size and provides an indication of the numbers of PLWH and relevant stakeholders who participated in this study.

TABLE 1: TOTAL PARTICIPANTS

	Survey	FGDs	KIIs
Total participants	**609 PLWH**	**19 (4 FGDs)**	**12**

The Navanti research team consisted of Dr. Alexandru Gaina as the team lead and Mrs. Mariana Ianachevici as the research consultant. For the quantitative phase of the study, the Navanti team worked with Moldova-based analytics company IMAS to conduct the national survey. Results from the national survey, combined with data collected from 4 FGDs and 12 KIIs, were analyzed and used to compile the final report and provide recommendations.

Due to the COVID-19 pandemic and recommendations received from various stakeholders, Navanti and IMAS worked with 7 local NGOs to conduct the surveys - a total of 4 NGOs from the right bank of the Nistru river - “Pas cu Pas,” “Initiativa pozitiva,” “Credinta,” and "Второе дыхание” (Second Breath) - and 3 from the left bank of the Nistru river - НПО Тринити (NGO Trinity), НПО Милосердие (NGO Mercy), and НПО Альянс Здоровья (NGO Alliance for Public Health). The NGOs directly engaged with the survey respondents and acted as an intermediary. IMAS worked alongside the NGOs in order to collect requested questionnaire data, while ensuring the highest level of ethical standards, protection of the participants’ personal information, and comfort of the respondents.

2.1. Quantitative data collection

The quantitative component included a nationally representative sample of 609 PLWH. The sample was disaggregated by gender, age, education, employment, ethnicity, primary language, rural vs urban dwelling, and regions.

When creating the sample, the percentage of PLWH in each region by type of locality in a database held by the Hospital of Dermatology and Communicable Disease in Chisinau was utilized to allocate respondents proportionate to the population size. With this, a sample of 480 respondents from the right bank of the Nistru river and 129 from the left bank of the Nistru river was established, for a total of 609 respondents. For more details on respondent demographics, see “Profile of Respondents” chapter.

2.2. Qualitative data collection

The qualitative component comprised FGDs with pregnant women, parent/caregiver of HIV-positive preschool and school aged children, NGO representatives, and national stakeholders

working in the field of HIV/AIDS, as well as KIIs with a range of respondents who are knowledgeable about HIV/AIDS issues, policies, and programs in the country. FGD and KII guides can be found in Annex 3 and Annex 4.

KIIs were conducted cross-sector and cross-stakeholder. The KIIs specifically incorporated the initial desk research in order to help shape semi-structured discussions to allow for open-ended responses on the current and end-state goals of the study. The purpose of these discussions was to further enrich the desk review and enabled the team to better interpret the quantitative data collected in the survey and to provide the how and why of survey findings.

In total, 12 KIIs were conducted. (Table 2).

TABLE 2: KII PARTICIPANTS

Name	Organization	Gender
Alexandru Cocirta	UNDP	M
Alexandru Voloc	WHO	M
Angela Capcelea	UNICEF	F
Eugenia Berzan	UNFPA	F
Iurie Climasevschi	National Programme on Prevention and Control of HIV/AIDS and STI	M
Svetlana Plamadeala	UNAIDS	F
Tamara Tentiuc	Head of the Department of Child's Rights, The People's Advocate (Ombudsmen)	F
Victor Solomon	Directorate for Child Protection, Ombudsmen office	M
Undisclosed female with HIV positive child	Undisclosed social service organization	F
Undisclosed manager of alternative care facility for children	Undisclosed alternative care facility for children	M
Undisclosed HIV-positive educator at a vocational school	Undisclosed vocational school	F
Undisclosed female	Undisclosed	F

FGDs were exploratory in nature and were held with participants from the following groups: pregnant women, parent/caregiver of HIV-positive preschool and school aged children, NGO representatives, and national stakeholders working in the field of HIV/AIDS. COVID-19 social distancing and mask rules were followed at all times.

FGD 1 was held with 5 pregnant women. Participants were aged between 24 and 37 years old and originated from Floresti, Balti, Glodeni, and Chisinau. FGD 2 was held with 7 parents/caregivers with HIV of preschool and school-aged children. All participants were mothers, aged between 24 and 42 years old, and originated from Floresti, Balti, Singerei, and Chisinau. FGD 3 was held with NGO representatives from 4 Moldova-based NGOs that worked directly with respondents for the quantitative portion of the study in both banks of the Nistru river. FGD 4 was held with 3 national stakeholders from the Hospital of Dermatology and Communicable Disease in Chisinau, the National Programme on Prevention and Control of HIV/AIDS and STI, and the Harm Reduction Programme.

More details about the methodology are presented in Annex 1.

2.3. Ethical considerations

Information related to local institutional and policy related frameworks in order to fully comply with country-specific regulations as well as to identify any local requirements and/or limitations that may affect the scope of research was collected at the onset of the report. The study fully adhered to the Republic of Moldova's legal framework, including Law 133/2011 on Personal Data Protection. In order to protect the identities of the respondents, any personally identifiable information remained solely in the hands of the NGOs that worked with the respondents. Navanti nor IMAS ever had access to any personally identifiable information for any respondent. In all survey data, the respondents are only ever referred to by a randomized number ID—never by name.

Prior to beginning the study, the study protocol that included data collection tools and instruments (see Annexes 3, 4, and 5) were submitted for an independent ethical review and endorsement by the National ethical committee in the Republic of Moldova, as per ECARO's Standard Operating Procedures. Survey instruments were translated into Romanian and Russian. All considerations raised by the ethical review and during the testing of the questionnaire with a small sample set of PLWH were addressed prior to beginning the study. All parties involved came to an agreement on details regarding the study protocol and other relevant accompanying documents, as part of the Inception Report.

All respondents were informed about the context and purpose of the assessment through an informed consent form (Annex 2). Respondents were made aware that they could chose to partake in the study or chose not to partake—and that their choice would have no repercussions. Respondents who chose to partake in the study were also made aware that they could chose to stop the survey at any point, chose to skip questions, or ask for further clarifications of questions.

Navanti and IMAS ensured that participation of human subjects in the research was in line with the United Nations Evaluation Group (UNEG) Ethical Guidelines, as it relates to participation of children and adolescents, as well as larger subset of people living with HIV and other stakeholders in the study.

3 Profile of Respondents

Demographic characteristics of national survey respondents

Men made up less half of all PLWH in the national survey, at 42%. The average age of all participants was 41 years. Out of all respondents, 68% lived in urban areas, only 13% reported higher education, and 34% were unemployed. (Table 3).

TABLE 3: GENERAL CHARACTERISTICS OF NATIONAL SURVEY RESPONDENTS

		N	%
Gender	M	261	42.9%
	F	348	57.1%
	Total participants	609	100%
Age	18-25	40	6.6%
	26-40	286	47.0%
	41-55	236	38.8%
	56-70	44	7.2%
	71+	3	0.4%
	Total participants	609	100%
Education	Incomplete secondary	46	7.6%
	General (grades 1-11)	446	73.2%
	Lyceum/college/vocational school	37	6.1%
	Higher	80	13.1%
	Total participants	609	100%
Employment	Employed	264	43.3%
	Temporarily unemployed	141	23.2%
	Unemployed	204	33.5%
	Total participants	609	100%
Ethnicity	Moldovan/Romanian	380	62.4%
	Russian	135	22.2%
	Ukrainian	61	10.0%
	Other	33	5.4%
	Total participants	609	100%
Primary language	Romanian	220	36.1%
	Russian	389	63.9%
	Total participants	609	100%
Residence	Urban	413	67.8%
	Rural	196	32.2%

	Total participants	609	100%
Regions	**Chisinau Municipality**	135	22.2%
	Northern	128	21.0%
	Central	137	22.5%
	Southern	64	10.5%
	Gagauzia	16	2.6%
	Transnistrian Region	129	21.2%
	Total participants	609	100%

Demographics of pregnant women in the national survey

A total of 12 women in the national survey reported being pregnant, with an average age of 37 years old. 5 women had 1 child, 4 had 2 children and the remaining had more than 3 children. Half of all women had only general secondary education and only 7 were married.

In the right bank of the Nistru river, 8 women were pregnant. Half were married, 3 were in a relationship but not married, and 1 was widowed. The duration of HIV positive status for the pregnant women was on average 4.6 years. 6 of the women were from rural areas and 2 from rayon centers. All 8 were receiving ART.

In the left bank of the Nistru river, 4 pregnant participants were identified. The sample had an average age of 32 years. All lived in urban settings. The average number of years that the women had lived with HIV was 6.2 years. Only 1 person had never been prescribed or received ART. All 4 women had received an updated CD4 count less than 6 months from the time of interview and all but one were aware of the number of their most recent CD4 count. 3 of the 4 women reported out-of-pocket expenses for comorbidities.

Self-evaluation of health status

In the national survey, 77% of total respondents reported “very good” to “good” health status, 18% reported “poor” health status, and 4% “very poor” health status.

Women reported “very good” to “good” health status at a higher rate (80%) compared to male respondents (73%). Respondents living in the Chisinau municipality reported the highest rate of very good health status. “Poor” to “very poor” health statuses were more prevalent with advancing age.

Route of HIV infection

The most cited HIV infection route for the total sample was sex with a man, accounting for 41% of respondents. For male respondents, the most common infection route was sex with a woman (27%) and for females, sex with a man (40%). Notably, 14% of the total respondents in the national survey were identify the route of their HIV infection. Only 6% reported “other” methods of HIV infection, 36% of which reported contracting an HIV infection in hospital settings during surgical interventions and 24% during a dentist visit. (Table 4).

TABLE 4: HIV INFECTION ROUTE, N AND PERCENTAGE

Percent of total national sample, total number, by **gender**

	Total % (N)	Male % (N)	Female% (N)
Sex with a man	41.1 (250)	2.7 (7)	75.5 (263)
Sex with a woman	27.3 (166)	57.9 (151)	0 (0)
Blood products	5.8 (35)	6.7 (17)	5.0 (17)
Injecting drugs	5.8 (35)	9.7 (25)	2.3 (8)
Other	6.0 (37)	6.3 (16)	5.8 (20)
N/A	14.0 (86)	16.7 (44)	11.4 (40)
Total	100 (609)	42.9 (261)	57.1 (348)

Duration of HIV Positive Status

One-third of the respondent sample reported HIV positive status for less than 5 years, 25% for a period between 5 to 10 years, 28% for over 10 years, and 4% that were not able to answer the question. The average number of years that respondents reported living with HIV was 11.1 years.

PLWH from the Northern region reported the longest period of HIV positive status, with (56%) reporting positive status for over 10 years. Additionally, those with positive HIV status over 10 years were more prevalent in urban areas (41%). PLWH with less than 5 years of positive status were more prevalent in rural areas (42%) compared to only urban areas (24%). This finding may denote that the HIV epidemic is spreading from concentrated urban settings into rural areas.

HIV serostatus

Three-fourths of respondents in the national survey reported HIV asymptomatic status. Only 3% of respondents reported AIDS, and 11% were symptomatic. Alarmingly, 11% of respondents were not able to answer the question, indicating non-awareness of their serostatus, with the highest number of non-awareness in the Northern region (22%) and the Transnistrian region (10%). Additionally, in Gagauzia, the percentage of respondents reporting AIDS status was the highest at 19%, potentially showcasing issues with education, access to ART, timely linkage to ART, or adherence to ART.

Duration of ARV treatment (ART)

A total of 94% reported being prescribed ART and 96% reported that they had received ART at one point. Of those receiving ART, 99% were actively receiving treatment. When disaggregated, 6% of PLWH from Gagauzia reported not receiving ART. Among PLWH without ART prescriptions, the majority resided in the Chisinau municipality and the Central region. All respondents with higher education received ART.

ARV treatment is essential in controlling HIV infection and protecting the immune systems of PLWH. Adherence to ART for less than 5 years was reported in 45% of respondents, between 5-10 years in 41%, and more than 10 years in 14%.

KIIs found that some PLWH purposely refuse to take ART, or have inconsistent, sporadic approaches. Additionally, a number of PLWH prefer to receive ART in places outside of their

residence in order to keep their status secret among members of their family/community and avoid stigma. Only 5 respondents in the national survey reported completely stopping ART. The main reasons expressed were that ART disturbed their daily activities (61%) and gave them undesirable side effects (58%). Less than half expressed doubts regarding the efficiency of ART. Only one person indicated no access to drugs and 1 reported no access to doctors.

4 Background

4.1. Overview of HIV/AIDS in the Republic of Moldova

According to UNAIDS data, Eastern Europe and Central Asia are now the only regions in the world where the annual rate of HIV infections continues to rise at an alarming rate.[1] This is due to a large number of factors, presenting an array of challenges. According to 2019 UN report, HIV prevalence among adults was 0.9 per cent compared to 0.2 per cent in Central and Western Europe. Russia has the worst statistics in the region, with 70 new HIV diagnoses per 100,000 population, followed by Ukraine (37 per 100,000 population), Belarus (26.1 per 100,000 population), the Republic of Moldova (20.6 per 100,000 population) and Latvia (18.8 per 100,000 population).

The main determinants of the HIV/AIDS epidemic in the Republic of Moldova are as follows:

- Socio-economic situation in the country, including inequality and poverty
- High external migration patterns (labor migration) and population mobility
- Limited infrastructure, access and capacity to provide comprehensive, timely and qualitative HIV/AIDS-related services covering prevention, diagnostic, care, support and treatment
- High rates of negative behavior patterns (injecting drugs, unprotected sex, etc.)
- High incidence of sexually transmitted infections (STIs)
- Overall relative low health, sexual and reproductive health literacy
- Unemployment, standards of living for particular segments of population and knowledge, attitude, and practices (KAP)
- Stigma and discrimination against people living with HIV/AIDS and the misperception that HIV affects only high risk, marginalized groups
- Violence against women
- Overcrowded places of detention
- High rate of HIV/AIDS in the Transnistrian region.

The Republic of Moldova joined the UN 2030 agenda and is committed to ending the HIV/AIDS epidemic by 2030 under the Sustainable Development Goals and is part of the Dublin Declaration and the World Health Organization (WHO) Global Strategy for the Health Sector. The Government's response in controlling HIV infection is assumed by implementing the National Programme on Prevention and Control of HIV/AIDS, STI, and TB for 2016-2020, aimed at: minimizing the consequences of the HIV epidemic and sexually transmitted infections by reducing transmission, especially in key populations, as well as AIDS-associated mortality.[2] With the joint effort of partners from the government sector, CSOs, and international agencies, the draft National Programme on Prevention and Control of HIV/AIDS and STI for 2021-2025 was developed and is in the process of public consultation.[3] At current, there is only one coordination mechanism to implement the strategic framework, namely the National Coordination Council for

[1] UNAIDS, "UNAIDS report on the global AIDS epidemic shows that 2020 targets will not be met because of unequal success; COVID-19 risks blowing HIV progress way off course" [Press Release], 06 July 2020, https://www.unaids.org/en/resources/presscentre/pressreleaseandstatementarchive/2020/july/20200706_global-aids-report

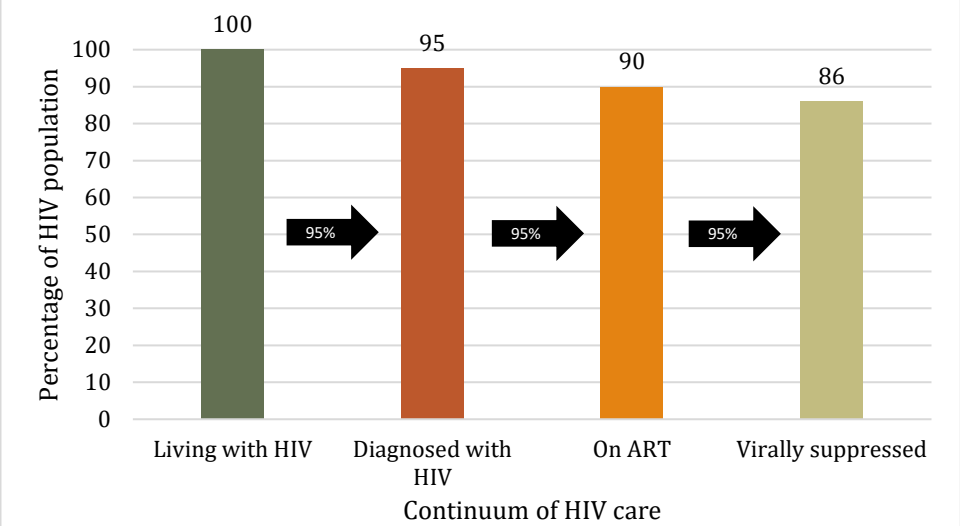
[2] Government Decision no.1164 of 22.10.2016 https://www.legis.md/cautare/getResults?doc_id=111740&lang=ro#

[3] Reublica Moldova, „cu privire la Programul național de prevenire și control al infecției HIV/SIDA și infecțiilor cu transmitere sexuală pentru anii 2021-2020," https://sdmc.md/wp-content/uploads/2020/12/Proiect-HG_PN_HIV_SIDA_ITS_05.11.2020-2.pdf

National Programs for Prevention and Control of HIV/AIDS/STI and TB Control (NCC on HIV/AIDS/STI/TB). NCC on HIV/AIDS/STI/TB was established in order to attract, coordinate, monitor and manage the grants offered by international organizations in response to the needs of the country in achieving the Millennium Development Goals. Monitoring and evaluation is conducted by the Coordinator of the National Program, the NCC on HIV/AIDS/STI/TB, and the Hospital of Dermatology and Communicable Disease in Chisinau which also maintains a database of PLWH in the country.

In 2021, UNAIDS updated its 2014 global 90–90–90 targets to 95-95-95: 95% of all PLWH to be diagnosed (to know their HIV status), 95% of those diagnosed to receive ART, and 95% of those receiving treatment to have suppressed viral loads by 2026 (Figure 1).

FIGURE 1: FOUR-STAGE CONTINUUM OF HIV CARE
Global UNAIDS 2021-2026 95-95-95 Target and Substantive Target[4]



When compared to progress towards the global 90–90–90 targets in countries in Eastern Europe and the Commonwealth of Independent States (CIS) in 2019, the Republic of Moldova scored among the lowest – 64% of PLWH knew their status, with only Tajikistan and Kyrgyzstan scoring lower.[5,6] Of the PLWH who knew their status, 71% were receiving ART (11% lower than the UNAIDS target), and of the PLWH who knew their status and were receiving ART treatment, 84% were virally suppressed (11% higher than the UNAIDS target).

During 2020, 171 HIV positive women gave birth, of which 53 by caesarean section. Out of these 171 HIV positive women who gave birth in 2020, 15 did not receive prophylactic treatment to

[4] Global Aids Strategy 2021-2026, 2021, UNAIDS, https://www.unaids.org/sites/default/files/media_asset/global-AIDS-strategy-2021-2026_en.pdf
[5] Brown, A., et al., "HIV in Europe and Central Asia: Progress in 2018 towards Meeting the UNAIDS 90-90-90 Targets," *Eurosurveillance, 2018;23(48)* https://doi.org/10.2807/1560-7917.ES.2018.23.48.1800622
[6] Seizing the Moment, Tackling entrenched inequalities to end epidemics, Global AIDS Update, 2020, UNAIDS, https://www.unaids.org/sites/default/files/media_asset/2020_global-aids-report_en.pdf

prevent the transmission of HIV infection from mother to child, resulting in a 91.2% coverage with prophylactic treatment, 4% lower than the previous year.

Law no. 23/2007 on the prophylaxis of HIV/AIDS regulates the legal relations in the activity of prophylaxis and diminishing the impact of HIV/ AIDS infection and guarantees the observance of the rights of people with HIV/AIDS.[7] By default, the law regulates the provision of medical, social and psychological assistance to people with HIV/AIDS and their family members, as well as the strengthening of efforts to prevent and combat infection.

Although the legal framework has been periodically updated and particular legal barriers have been removed, the practice still shows cases of discrimination and refusal of care based on HIV status among the most vulnerable groups. Even though HIV prevention, treatment, and care on paper is ensured, the fragmented, somewhat rigid healthcare system has caused services to be inaccessible for some individuals. The state's health institutions are unable to provide full coverage and enough flexibility in work with vulnerable and most-at-risk populations. Therefore, there is a need to provide prevention services through NGOs in a more flexible and user-friendly manner.

NGOs provide resources to prevent the spread of HIV/AIDS, advocate for removing punitive laws and policies that impede the response to HIV/AIDS, and collect data through community monitoring of health services and systems. Moreover, the organizations play a significant role in raising HIV issues on the political agenda, holding decision-makers accountable, and making sure that human rights are respected, protected, and fulfilled. The activities related to strengthening community systems underpin community-based responses.

During the last decades, with considerable efforts of international actors (TGF, World Bank, UNAIDS, UNICEF, UNDP, and the European Union), HIV/AIDS related capacity was strengthened in particular sectors, namely: prevention (including KAP), ARV treatment (including updated clinical protocols), counselling, education, diagnostic, training, surveillance, and interpersonal communication. Namely, since 2003, the country has received substantial financial contributions from the TGF, to prevent the spread of HIV infection and STIs, in particular through interventions among people at high risk of infection; strengthening the laboratory system to diagnose infection and monitoring HIV patients; ensuring universal access to treatment, care and support services; and strengthening management of the National Programme on Prevention and Control of HIV/AIDS and STI.

HIV/AIDS Prevalence in the Republic of Moldova before and during the COVID-19 pandemic

In the Republic of Moldova, HIV infection is under constant surveillance and monitoring among key population groups, including injecting drugs users (IDU), sex workers (SW), and their clients, and men having sex with men (MSM). In 2020, the Integrated Biological Behavioural Surveillance (IBBS) survey indicated an HIV weighted average prevalence of 11.4% among persons who use drugs, 11.4% among MSM, and 2.7% among female SW.[8] Notably, during the late 1990s, a large majority (85%) of the HIV cases in the Republic of Moldova were reported exclusively among IDU, but effective programs, especially syringe exchange and distribution programs, improved the situation. While there is limited data for both the right bank of the Nistru river and the Transnistrian region in the Republic of Moldova, national statistics suggest HIV prevalence is

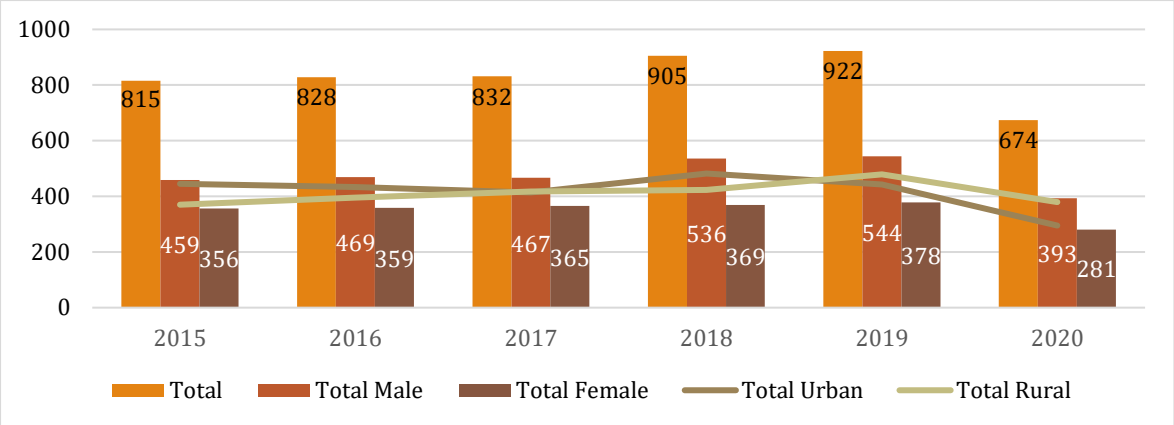
[7] Republica Moldova, „Parlamentu Lege Nr. 23," https://www.legis.md/cautare/getResults?doc_id=110180&lang=ro
[8] Integrated Biological-Behavioural Surveillance Survey of Moldova, the Government of the Republic of Moldova, 2020, https://sdmc.md/wp-content/uploads/2020/12/IBBS_REPORT_MD_2020_FINAL_eng.pdf

significantly higher in the Transnistrian region, at around 563 per 100,000, compared to 240 in the right bank.[9] As a result, the global HIV/AIDS epidemic is more severe on in the Transnistrian region, accounting for one-third of the total number of registered HIV/AIDS cases in the Republic of Moldova, while the population of the region accounts for only one-sixth of the total population in the Republic of Moldova. It is also important to note that while the Transnistrian region's officially reported population is around 470,000, the number is likely heavily influenced by political factors and often exaggerated values. The de facto population is likely closer to 300,000.[10] As a result, HIV prevalence in the region may be even higher.

The overall prevalence of HIV infections in the general population is around 0.2%. However, among target high-risk populations (IDU, MSM, etc.), the prevalence is around 11.4%. In prisons, the prevalence is around 3.7%. Around 6,690 people were estimated to receiving ART at the end of 2020.[11] Notably, constant migration of certain populations in the Republic of Moldova has played a significant role in the spread of HIV.

According to data from the UNAIDS Global Aids Monitoring (GAM) program, 14,537 HIV cases were cumulatively registered by the end of 2020, of which 674 cases were newly registered in 2020 (compared to 922 in 2019), with no major changes in the gender distribution (Figure 2). Significant differences in HIV cases continued to exist in the Transnistrian region compared to regions in the right bank of the Nistru river - of the 734 new cases in 2020, 545 were registered in the right bank of the Nistru river and 189 in the Transnistrian region. The predominant mode of HIV transmission remained heterosexual sex, which accounted for 90.3% of new cases in 2020. HIV in key populations in 2020 remained among MSM, IDU, and SW.

FIGURE 2: DISTRIBUTION OF NEW CASES OF HIV IN THE REPUBLIC OF MOLDOVA
Total population number 2015-2020, by **gender and residence**



Source: GAM report, 2021

[9] Moldova progress report, Global AIDS Monitoring 2018. UNAIDS, 2018
[10] https://regnum.ru/news/polit/3332886.html
[11] Fleej Romania, "An Estimated 14.5 thousand People with HIV are in the Republic of Moldova," 01 December 2020, https://fleej.com/romania/an-estimated-14-5-thousand-people-with-hiv-are-in-the-republic-of-moldova/

Compared to 2019, in 2020 mortality in PLWH increased by 12.7% (236 in 2019 and 266 in 2020). There is no sufficient information available regarding if mortality indicators were influenced by or due to COVID-19 infection. In 2019, the percentage of deceased in a year following HIV diagnosis confirmation accounted for 6.8% of deaths, while in 2020 there was an observed increase up to 13.2%. This may have been influenced by COVID-19 pandemic-related disruption of testing and treatment services, restriction of movement, and increase in mental health issues.

In the years preceding the start of the COVID-19 pandemic, HIV/AIDS related deaths were on a steady decline while the number of those receiving ART was constantly increasing. This progress was the result of a series of systemic, dynamic changes and reforms, led by the National Programme on Prevention and Control of HIV/AIDS and STI management unit, in cooperation with national stakeholders. While numbers still remained high and were still increasing for key PLWH population groups such as as IDU and SW, it was clear that institutional change had begun to turn the tide. However, the COVID-19 pandemic introduced a shift in this progress, with the number of HIV/AIDS related deaths increasing in 2020 and newly diagnosed cases of PLWH receiving ART plateauing.

Coverage of prevention services in high-risk groups remained relatively low and was negatively affected by pandemic. According to GAM report, in 2020 prevention services increased only for IDU by 4.3% and psychosocial support for PLWH only by 2.9%. Opioid substitution therapy remained at the same level, but prevention services for SW and MSM decreased by 1.7% and 13.3%, respectively.

HIV testing during the COVID-19 pandemic

HIV testing is essential for slowing the spread of HIV pandemic. A substantial number of people living with HIV do not know that they are infected because they have not been tested for the virus. Free and voluntary HIV testing is performed by health institutions and NGOs in the Republic of Moldova. In 2020, during the COVID-19 pandemic, the overall number of administered HIV tests decreased by 3% and the number of new cases found using HIV testing decreased by 21%. Slightly more women were tested, accounting for around 53% of total tests. Among children under 15 years old, a total of 3,045 tests were performed and the positivity rate was approximately 0.9%.

Women and children with HIV

Women and children with HIV represent one of the most vulnerable groups of the PLWH. HIV can be transmitted from an HIV-positive woman to her child during pregnancy, childbirth, and breastfeeding. Without treatment, if a pregnant woman is living with HIV the likelihood of the virus passing from mother-to-child ranges from 15% to 45%. However, by providing an HIV-positive mother access to effective ART and support services during pregnancy, delivery, and breastfeeding, the risk can be reduced to below 5%.

All pregnant women are required to be tested for HIV twice – at the time of their registration into a medical institutions and a second time during the second trimester of their pregnancy. Women who test positive for HIV during their prenatal visits should be immediately linked to lifelong ART and counselled on benefits of enrolment and retention of the treatment, however, adherence to treatment is not guaranteed and some pregnant women do not follow these recommendations. Safe childbirth is an important consideration for all expectant mothers and particularly for HIV-positive women. Without access to prevention in the form of ART during pregnancy, infants have

a higher chance of being infected (1 in 3 infants). Additionally, adherence to ART after giving birth is highly contingent on HIV positive pregnant women receiving counselling and proper preparation before they start ART.[12] Young pregnant women living with HIV are especially in need of programs to help them navigate pregnancy and HIV.[13]

In 2019, a total of 20 children under 15 years old began ART in the Republic of Moldova. In 2020, the number dropped to 14. Similarly, treatment re-initiation dropped from 3 to 2 respectively. No deaths were registered among children under 15 years old and the overall number of children on ART remained the same (132 in 2020 and 131 in 2019).

4.2. Overview of COVID-19 pandemic in the Republic of Moldova

The first case of a COVID-19 infection was confirmed in the Republic of Moldova on 7 March 2020 in a person returning from Italy.[14] Considering the existence of the confirmed danger of triggering a public health emergency and in the context of the provisions of the Government Decision no.1431/2016, the Extraordinary National Commission for Public Health (CNSPE) declared on 13 March 2020, a red code alert at the national level regarding the epidemiological situation due to the infection of COVID-19. [15,16] At the same time, the Plan for the Preparation and Response to New Coronavirus Infection (COVID-19) was approved.[17] On 17 March 2020, the Parliament declared a state of emergency on the entire territory of the Republic of Moldova from 17 March to 15 May 2020, empowering the Commission for Exceptional Situations of the Republic of Moldova to manage the situation in the country.[18] In an attempt to limit the spread of the virus, several economic activities were suspended during this period, activities of educational institutions (schools and universities) were organized to operate remotely, and a series of individual protection measures were introduced. Upon expiration of the state of emergency, CNSPE declared a state of public health emergency[19], which was extended consecutively until 30 September 2020 and resumed again on 27 November 2020.[20] At the same time, the resumption of economic activities was initiated under new conditions to protect from and prevent the spread of COVID-19. As of 20 October 2021, there has been a total of 319,614 confirmed COVID-19 cases reported in the Republic of Moldova, and 7,309 deaths associated with COVID-19.[21] The predominant mechanism of infection transmission has been through local communities.[22]

[12] Avert, Prevention of Mother-to-Child Transmission (PMTCT) of HIV, 2020, https://www.avert.org/professionals/hiv-programming/prevention/prevention-mother-child
[13] Ibid.
[14] Ministerul Sănătății, Muncii și Protecției Sociale. Comunicat de presă. MSMPS confirmă primul caz de coronavirus de tip nou în Republica Moldova, https://msmps.gov.md/comunicare/comunicate/msmps-confirma-primul-caz-de-coronavirus-de-tip-nou-in-republica-moldova/
[15] Hotărârea Guvernului nr. 1431 din 29.12.2016 pentru aprobarea Regulamentului privind sistemul de alertă precoce și răspuns rapid pentru prevenirea, controlul bolilor transmisibile și evenimentelor de sănătate publică, https://www.legis.md/cautare/getResults?doc_id=102615&lang=ro
[16] Comisia națională extraordinară de sănătate publică. Hotărâre nr. 7 din 13 martie 2020, https://gov.md/sites/default/files/hot_7_cnesp_cu_modificari.pdf
[17] Planul de pregătire și răspuns la infecția cu Coronavirus de tip nou (COVID-19). Republica Moldova, aprobat prin Hotărârea CNESP nr. 7 din 13 martie 2020, https://msmps.gov.md/ro/content/ordine-covid-19
[18] Hotărârea Parlamentului nr. 55 din 17 martie 2020 privind declararea stării de urgență, https://www.legis.md/cautare/getResults?doc_id=120817&lang=ro
[19]Comisia Națională Extraordinară de Sănătate Publică. Hotărâre nr. 10 din 15 mai 2020, https://gov.md/sites/default/files/hotarirea_cnesp_nr.10_15.05.2020.pdf
[20] Comisia Națională Extraordinară de Sănătate Publică. Hotărârea nr. 35 din 27 noiembrie 2020, https://gov.md/sites/default/files/hotarirea_cnesp_nr.35_27.11.2020.pdf
[21] World Health Organization, "COVID-19: Republic of Moldova Situation," accessed on 20 October 2021, https://covid19.who.int/region/euro/country/md
[22] Ministerul Sănătății, Muncii și Protecției Sociale. COVID-19 în Republica Moldova: situația la zi, https://gismoldova.maps.arcgis.com/apps/opsdashboard/index.html#/d274da857ed345efa66e1fbc959b021b

In the midst of the COVID-19 pandemic, the HIV/AIDS epidemic in the Republic of Moldova has gained an extra level of importance. At the governmental level, officials attempted to mitigate the foreseeable challenges that PLWH would face because of COVID-19 restrictions, including the inability to access treatment. Officials worked with the medical sector, social services sector, and NGOs working with PLWH to ensure that PLWH had access to treatment, even under lockdown conditions. Following the March 2020 declaration of a state of emergency in the country which instituted a national lockdown, around 900 PLWH were able to receive ART at home, free of charge as a result of significant efforts by officials from the government, the medical sector, social services sector, and NGOs. The initiative was called "an amazing [act of] solidarity and mobilization effort by all partners."[23]

[23] Ibid.

5 Key Concepts and Review of Existing Literature

5.1. COVID-19 pandemic in the global context

The COVID-19 pandemic is an unprecedented global and regional health emergency that has led to a major health, social, and economic crisis in a very short time. It is adversely affecting people living with HIV globally, already disadvantaged by stigma, discrimination, and marginalization. Many have little or no access to social protection and the majority of people living with HIV are of working age. It is critical that their health and basic needs are not compromised as a result of the COVID-19 pandemic. The pledge of "leaving no one behind", underpinning the 2030 Agenda for Sustainable Development, must guide the world of work response.

5.2. Influence of COVID-19 on PLWH in the global context

5.2.1. Economic impact dimension

For the first time in more than two decades, extreme poverty is on the rise as a result of the COVID-19 pandemic. There is an urgent need to reinforce efforts to break the vicious cycle of poverty, fragility, and conflict still devastating many nations, including the Republic of Moldova. Even before the COVID-19 crisis, a high percentage of PLWH were engaged in the informal economy. They faced high levels of discrimination in employment and had high rates of unemployment.[24] Almost 1.6 billion informal economy workers in the world have been significantly impacted by lockdown measures. Among informal economy workers in the hardest hit sectors, women are overrepresented. In April 2020, the rate of relative poverty was expected to increase by ≈ 34 percentage points globally for workers in the informal economy.[25]

The negative consequences of COVID-19 for some populations are more severe than others, including job loss, food insecurity, inability to manage existing conditions, and inability to maintain preventive measures such as social distancing and use of personal protective equipment (PPE). Those who live in poverty have less control of their living arrangements and their immediate environment, thus the barriers that they are facing when trying to protect themselves and their families are greater than those that are not living in poverty.

5.2.2. Interaction between COVID-19 and HIV/AIDS

Limited information is known of the interaction between HIV and COVID-19. Furthermore, there is very little knowledge on the impact of HIV on the clinical outcomes of patients infected with COVID-19. Whilst HIV infected people on treatment with normal CD4 count and low viral load may not be at a high risk of serious illness, the presence of other chronic conditions may increase their overall risk.[26]

The fact that COVID-19 can cause transient immune deficiency denotes that HIV and COVID-19 interaction may have adverse immunological and clinical outcomes. Therefore, defective cellular immunity in HIV infected patients may be paradoxically protective for severe cytokine

[24] The People Living with HIV Stigma Index, "GNP+, PLHIV Stigma Index, Country Reports, 2016-2019," https://www.stigmaindex.org/country-reports/
[25] International Labor Organization, "COVID-19 and the World of Work," 29 April 2020, https://www.ilo.org/wcmsp5/groups/public/---dgreports/---dcomm/documents/briefingnote/wcms_743146.pdf (page 2 upper right column)
[26] Gervasoni, C., et al. "Clinical Features and Outcomes of Patients with Human Immunodeficiency Virus with COVID-19," *Clinical Infectious Diseases,* November 2020, 19:71(16): 2276-2278, https://doi.org/10.1093/cid/ciaa579

dysregulation in patients with COVID-19.[27] Different researchers hypothesized that the absence of T-cell activation alleviates the severe immunopathological phenomena seen in COVID-19. While this study had its limitations, it further suggested that COVID-19 does not act as an opportunistic pathogen in patients with uncontrolled HIV or AIDS.[28] Different studies suggest that HIV status does not significantly impact clinical outcomes in patients with COVID-19 infection, albeit the study detected trends suggestive of worse course outcome in HIV-positive patients.[29]

5.2.3. Estimation of prevalence

Multiple studies have noted that PLWH who have COVID-19 have a median age about a decade lower than individuals without HIV, despite a similar prevalence of comorbidities.[30] This is likely related to the fact that biological age is advanced in PLWH by several years, which raises the possibility that the age threshold for determining high-risk among PLWH may differ from that of the general population, which could have public health implications.[31] The global prevalence of PLWH with SARS-CoV-2 infection was 1%.[32]

5.2.4. Estimation of mortality

A recent World Health Organization (WHO) report found that the risk of developing severe or fatal COVID-19 infection was 30% greater in PLWH compared to people without HIV infection.[33] It was found that HIV infection was a significant independent risk factor for both severe/critical COVID-19 presentation at hospital admission and in-hospital mortality. Nearly a quarter (23.1%) of all PLWH who were hospitalized with COVID-19, died.

5.2.5. Comorbidities

The correlation between COVID-19 mortality among PLWH and other comorbidities is still under investigation. Are comorbidities among PLWH the drivers of poor outcomes from COVID-19 rather than HIV itself? Questions about whether comorbidities are confounders or effect measure modifiers are important and still unclear.[34]

5.2.6. Pharmacology

Presently, there is no indication that changing ART regimens among virologically suppressed PLWH prevents COVID-19. Until new data from ongoing trials emerge, national governments must work to ensure that medications are maintained and not diverted.

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[27] Harter, G. et al. "COVID-19 in people living with human immunodeficiency virus: a case series of 33 patients," *Infection,* May 2020, 11: 1-6, https://doi.org/10.1007/s15010-020-01438-z

[28] Shalev, N., et al, "Clinical Characteristics and Outcomes in People Living with Human Immunodeficiency Virus Hospitalized for Coronavirus Disease 2019," *Clinical Infectious Disease,"* November 2020, 19:71(16): 2294-2297, https://doi.org/10.1093/cid/ciaa635

[29] Karmen-Tuohy, S., et al., "Outcomes among HIV-Positive Patients Hospitalized with COVID-19," *J Acquir Immune Deficiency Syndromes*, September 2020, 1:85(1): 6-10, https://doi.org/10.1097/QAI.0000000000002423

[30] Gervasoni, C., et al. "Clinical Features and Outcomes of Patients with Human Immunodeficiency Virus with COVID-19," *Clinical Infectious Diseases,* November 2020, 19:71(16): 2276-2278, https://doi.org/10.1093/cid/ciaa579

[31] Francesco D, Wit FW, Bürkle A, et al. "Do people living with HIV experience greater age advancement than their HIV-negative counterparts?" *AIDS*, 2019;33:259–268. https://doi.org/10.1097/QAD.0000000000002063

[32] Raya, Reynie Purnama, Global and regional prevalence and outcomes of COVID-19 in people living with HIV: A cutting-edge systematic review and meta-analysis, 2021, https://www.medrxiv.org/content/10.1101/2021.07.12.21260361v1.full

[33] Clinical features and prognostic factors of COVID-19 in people living with HIV hospitalized with suspected or confirmed SARS-CoV-2 infection, WHO, 2021, https://apps.who.int/iris/bitstream/handle/10665/342697/WHO-2019-nCoV-Clinical-HIV-2021.1-eng.pdf

[34] Lesko C., Bengtson A., "HIV and SARS-CoV-2: intersecting epidemics with many unknowns," *American Journal of Epidemiology*, January 2021, 190(1):10-16, https://doi.org/10.1093/aje/kwaa158

5.2.7. Vaccines

The COVID-19 vaccines existing at this stage are considered safe and highly effective in preventing serious illness for most people, including PLWH. There is no evidence that PLWH are at greater risk from the COVID-19 vaccines than anyone else. For PLWH, COVID-19 vaccines bring the same benefits as they bring to all individuals and communities.[35]

5.2.8. Individual level challenges

The fear of contracting COVID-19 has led to decreased engagement with care among PLWH in several countries.[36] The reasons for this are unsurprising. People who have faced stigma for decades due to their HIV status and live under the burden of a chronic virus are hesitant to engage in care when the potential to be infected with another, more deadly virus is real. This fear has even led some to question the safety of going to pharmacies to collect ART.

National lockdowns have also significantly hindered access to care. In some countries, nationwide public and private transportation suspensions have made distant clinics all but impossible to access for many. Migrant workers in cities have retreated to the rural areas they are from, likely losing access to HIV care in the cities where they had lived. Even when people can access clinics, the financial stress from loss of livelihoods makes it harder for them to pay for care.

Finally, physical distancing guidelines can exacerbate the high levels of isolation that older individuals with HIV already face. Despite no definitive evidence that PLWH are at higher risk of contracting COVID-19, individuals may fear that they are, and it may result in them not seeking needed care. Depression is the second most common mental health disorder (after substance use) among PLWH and constitutes an additional barrier to care.[37] The ongoing pandemic is a significant stressor and likely to worsen the already high prevalence of mental health concerns among PLWH.

5.2.9. The COVID-19 pandemic's impacts on HIV care and health service disruptions

Years of progress in HIV testing and treatment are in jeopardy due to the COVID-19 pandemic, which has created unprecedented challenges to HIV care delivery worldwide.

The COVID-19 pandemic has not only directly caused high morbidity and mortality, but also disrupted essential systems for health (general and essential services) in addition to specific programs to address HIV. For example, the global HIV response is heavily dependent on generic medicine manufacturers in India, a country that began to emerge from a national lockdown to slow the spread of COVID-19 in May 2020. Additionally, restrictions on international transportation led to significant delays in the delivery of medicines. As the TGF reported, COVID-19 control measures at the point of origin and destination for essential health commodities have already resulted in considerable delays in the delivery of medicines and other health commodities.[38] Repurposing HIV clinic and health-care workers, travel restrictions, messaging that keeps people away from services, emerging human rights abuses, and worsening social and economic contexts are also disrupting continuity of services.

[35] COVID-19 Vaccines and HIV, 2020, UNAIDS, https://www.unaids.org/sites/default/files/media_asset/covid19-vaccines-and-hiv_en.pdf
[36] Kowalska JD., Skrzat-Klapaczynska A., Bursa D., et al. "HIV care in times of the COVID-19 crisis - where are we now in Central and Eastern Europe?" *International Journal of Infectious Diseases,* 2020;96:311–314, https://doi.org/10.1016/j.ijid.2020.05.013
[37] Rabkin JG. "HIV and Depression: 2008 Review and Update," Current HIV/AIDS Reports, November 2008;5:163–171. https://link.springer.com/article/10.1007%2Fs11904-008-0025-1
[38] The Global Fund, "Fighting HIV, TB, Malaria, and COVID-19," https://www.theglobalfund.org/en/covid-19-plan/

Service disruptions associated with COVID-19 are impacting global, regional, and national efforts to end the epidemics of HIV, TB, and malaria.[39] According to UNAIDS, there were around 140,000 newly detected HIV infections in Eastern Europe and Central Asia in 2020 compared to 170,000 in 2019, which experts attribute to a dramatic slowdown in screening, not a drop in cases.[40] In 2020 Romania managed to screen only 234,000 people for HIV/AIDS, down nearly one-third from 334,000 screenings in 2019.

5.2.10. Country level challenges

The rapidly growing pandemic has strained national healthcare systems worldwide. In Eastern Europe, HIV physicians have been called to care for patients with COVID-19, creating staffing shortages.[41] This has forced some clinics to suspend in-person visits, others to postpone blood tests, and some to solely focus on ART distribution. Simultaneously, these already overwhelmed clinics are approached by PLWH who previously received their healthcare elsewhere but were unable to return home due to travel restrictions.

These challenges limit the ability of clinics to identify individuals with drug resistance, rapidly diagnose opportunistic infections, and carry out routine blood tests. For high-risk individuals who wish to be tested for HIV, this delays access to care, making it impossible to "test and treat" in a timely manner. Modelling studies show that even a 3-month disruption of ART supply can lead to half-million HIV/AIDS related deaths in Africa alone, erasing years of progress.[42]

The challenges to HIV care mentioned above simultaneously impact TB care. TB is the leading cause of mortality among PLWH and modelling studies show that even short-term disruptions in TB diagnosis and treatment can lead to increased incidence and mortality for many years to come. One of the major strategies to tackle the spread of COVID-19 has been encouraging 'shelter in place' or home quarantine; prolonged contact at the household level can lead to household transmission of tuberculosis, whose long incubation period means we may not see the impact of this on TB incidence for months or years. Finally, an increased emphasis on COVID-19 should not distract from timely administration of annual influenza and guideline-directed pneumococcal vaccines to PLWH.

5.2.11. Summary regarding COVID-19 and HIV

Based on the WHO recommendations regarding HIV and COVID-19,[43] a few messages need to be stipulated:

- People living with HIV who have not achieved viral suppression ART may have a compromised immune system that leaves them vulnerable to opportunistic infections and further disease progression.
- At present there is no evidence to suggest that there is an increased risk of infection and increased severity of illness for people living with HIV.

[39] Hogan A., et al., "Potential impact of the COVID-19 pandemic on HIV, tuberculosis, and malaria in low-income and middle-income countries: a modelling study," *Lancet Global Health,* September 2020;8(9): 1132-1141, https://doi.org/10.1016/S2214-109X(20)30288-6
[40] https://www.euractiv.com/section/health-consumers/news/in-covids-shadow-hiv-on-march-in-eastern-europe/
[41] Prabhu, S., Poongulai, S., Kumarasamy, N., "Impact of COVID-19 on people living with HIV: A review," *Journal of Virus Eradication,* November 2020, https://doi.org/10.1016/j.jve.2020.100019
[42] Ibid.
[43] Information note on HIV and COVID-19, Manila - WHO Regional Office for the Western Pacific, April 2020, https://apps.who.int/iris/handle/10665/331919

- Current clinical data suggest the main mortality risk factors are linked to older age and certain comorbidities including cardiovascular disease, diabetes, chronic respiratory disease, and hypertension.
- People living with HIV who know their HIV status are advised to take the same precautions as the general population (e.g., wash hands often, cough hygiene, avoid touching your face, social distancing, seek medical care if symptomatic, self-isolation if in contact with someone with COVID-19, and other actions per local and national government responses). People living with HIV who are taking antiretroviral drugs should ensure that they have at least a 30-day supply of these drugs, if not a 3- to 6-month supply and ensure that their vaccinations are up to date (influenza and pneumococcal vaccines). Polypharmacy considerations should also be taken into account, including related to adequate supplies of medications for comorbidities (e.g., hypertension, diabetes), as well as contraception and gender-affirming hormone therapy.
- People with CD4 cell counts below 50 or an opportunistic illness in the last 6 months may choose to take extra precautions to protect themselves from infection.
- It is also an important opportunity to ensure that all people living with HIV who are not yet on ART get initiated on ART to achieve viral suppression. People who feel they may have been at HIV risk are advised to seek testing to protect against HIV disease progression and complications from any other comorbidities.

6 Findings – General Population of PLWH

6.1. Socioeconomic characteristics of PLWH during COVID-19 pandemic

PLWH were more severely affected during the COVID-19 pandemic compared to the general population, partly due to a higher proportion of PLWH in low socioeconomic status households.

HIV is a disease that is embedded in social and economic inequity, as it affects those of lower socioeconomic status and living in impoverished neighborhoods at a disproportionately higher rate. Research suggests that a person's socioeconomic standing may increase his or her likelihood of contracting HIV and developing AIDS.[44] Additionally, a lack of socioeconomic resources has been linked to the practice of riskier health behaviors, which can lead to the contraction of HIV.

Socioeconomic characteristics are also key factors in determining the quality of life for individuals after they have been affected by HIV. HIV often has a negative impact on the socioeconomic status of PLWH by constraining their ability to work and earn income. KIIs and FGDs revealed PLWH in rural areas are disproportionality affected. PLWH living in extreme poverty and subsequent marginalization have less control over their living arrangements and their immediate environments, thus facing greater barriers when trying to protect themselves and their families when compared to those who do not experience poverty.

HIV infection itself undermines food security and nutrition by reducing capacity to work and productivity, thus jeopardizing household livelihoods.[45] The impacts of the COVID-19 pandemic have increased the burdens that PLWH already face in fulfilling their basic needs, such as financial stability.

Often neglected, food security and nutrition are critical for individuals, households, and communities affected by HIV. Lack of food security and poor nutritional status may hasten progression to AIDS-related illnesses, undermine adherence and response to ART, and exacerbate socioeconomic impacts of the virus.

Reduction in income due to COVID-19

Employment among PLWH was negatively impacted during the COVID-19 pandemic. Some sources reported that around 15% of all employees in the Republic of Moldova were forced to quit their jobs and/or reduce working hours and subsequently saw a reduction in income.[46] Around 7% of PLWH in the national survey for this study reported losing their jobs since the start of the pandemic and another 9% were forced to change their place of employment due to COVID-19. No significant gender difference was found for employment lost/job change.

PLWH living in urban areas experienced twice more instances of job loss and 3 times more changes in the workplace compared to PLWH living in rural areas. This might be related to a higher

[44] American Psychological Association, HIV/AIDS and Socioeconomic Status, https://www.apa.org/pi/ses/resources/publications/hiv-aids
[45] HIV, Food Security, and Nutrition, WHO, WFO, UNAIDS, 2008, https://www.unaids.org/sites/default/files/media_asset/jc1565_policy_brief_nutrition_long_en_1.pdf
[46] Cine Plătește Factura Pandemiei? Impactul social-economic al coronacrizei, 2020, Friedrich-Ebert-Stiftung, https://moldova.fes.de/fileadmin/user_upload/2020/Publications/Cine_plateste_factura_pandemiei.pdf

stability of the agricultural sector and a higher proportion of those that are self-employed in rural areas.

REDUCTION IN INCOME DUE TO COVID-19

Percent who reported yes/no to a reduction in income

FIGURE 3: By **region**

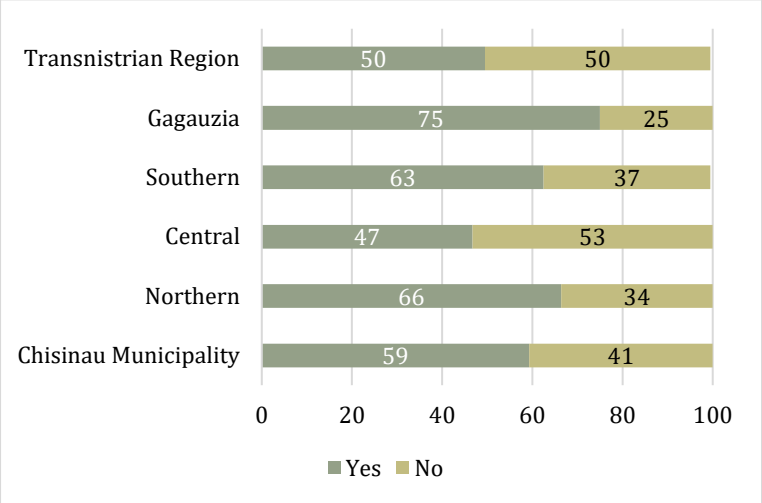
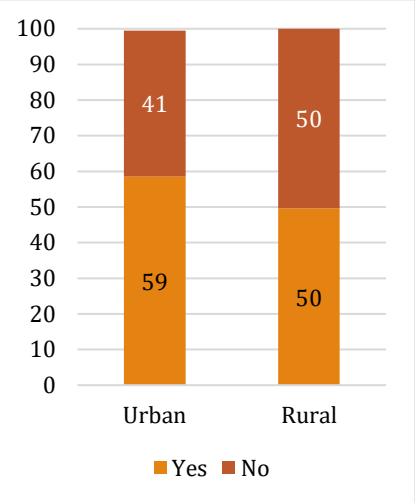


FIGURE 4: By **urban vs rural**



The Republic of Moldova's GDP decreased by 7% in 2020.[47] Repercussions of this dramatic decrease on PLWH were reflected in the national survey - 56% of all respondents reported a decrease in income since the start of the pandemic. FGDs revealed the serious impact of the pandemic among PLWH engaged in seasonal work overseas.

Nearly all PLWH reported some decrease in income during the last 12 months. Nearly one-fifth reported a decrease in total income between 21-30% and 7% reported a decrease in income between 91% and 100%. Loss of income between 90% and 100% was highest among PLWH with incomplete secondary education (11.5%). Additionally, a higher proportion of PLWH living in urban areas reported loss of income between 21% and 30% when compared to rural residents (22.3% and 13.1%, respectively).

Anxieties regarding expenses during COVID-19 pandemic

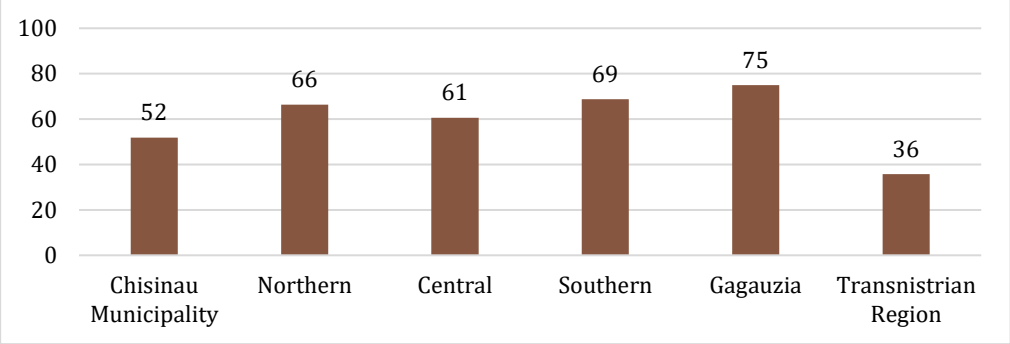
Many PLWH expressed concerns about financial security during the COVID-19 pandemic, especially being able to pay for essential expenses such as utilities (68% of all PLWH in the national survey), food (61%), and medications (55%). Additionally, 30% of PLWH expressed worry regarding the ability to pay rent.

[47] https://www.worldbank.org/ro/country/moldova/brief/moldova-economic-update

Results of the national survey suggested PLWH living in Gagauzia and the Southern region of the country had heightened anxieties regarding their ability to pay for food during the pandemic. Conversely, PLWH residing in the Transnistrian region had the least (36%) (Figure 5).

FIGURE 5: ABILITY TO AFFORD FOOD

Percent of total national sample who responded "yes" to having worries about ability to pay for food during the COVID-19 pandemic, by **region**



Concerns about financial security were also confirmed by the KIIs and FGDs, with respondents noting that economic vulnerability among PLWH was particularly heightened during the COVID-19 pandemic and especially during lockdown periods.

> *Yes, it [COVID-19 lockdowns] was quite a difficult period. There were bills to be paid: electricity, gas. These were the necessary ones. And nobody gave me a job. How should people cope? Indeed, with hope. We were helped a couple of times in the cold season.*
>
> *– Female, 30s, Balti*

Measures taken in the last 12 months to address any hardships due to CODIV-19 pandemic

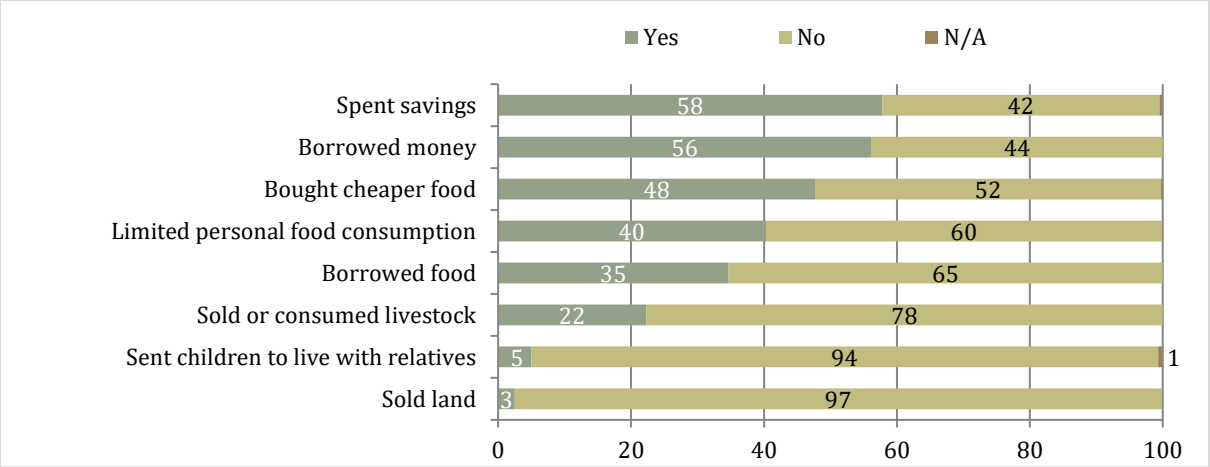
Coping strategies to economic hardship among PLWH ranged from spending savings to selling assets. Half of households spent savings, borrowed money, or bought cheaper food, and 2 in 5 limited their personal food consumption (Figure 6).

PLWH from urban areas were more likely to buy cheaper food, to limit personal food consumption, and to send children to live with relatives compared to the national average.

2 in 5 rural households sold or consumed livestock.

Households with children were disproportionality affected by food insecurity. A UNICEF report found 30% of households with children reported that their children's nutrition had been impacted by the COVID-19 pandemic.[48]

FIGURE 6: ACTIONS TAKEN TO ADDRESS FINANCIAL HARDSHIPS DUE TO COVID-19
Percent of total national sample



Access to social protection during COVID-19 pandemic

Social protection in its classical form (social assistance, social insurance, social services and policies, legislation, and regulations) is an important contributing part of support for PLWH. Despite the difficult situation caused by the COVID-19 pandemic, a large majority of PLWH surveyed (70%) believed that access to social protection during the pandemic had been adequate. However, 2 in 3 PLWH aged 71+ reported that social protection was not adequate during the pandemic.

PLWH living in urban areas were satisfied with social protections at higher rate (73%) when compared to PLWH living in rural areas (63%). This might be a reflection of higher access and coverage in urban areas.

PLWH living in the Transnistrian region and Chisinau municipality had the highest rates of agreement that access to social protection during the COVID-19 pandemic was sufficient, whereas PLWH from the Northern and Central regions had the lowest (Figure 7).

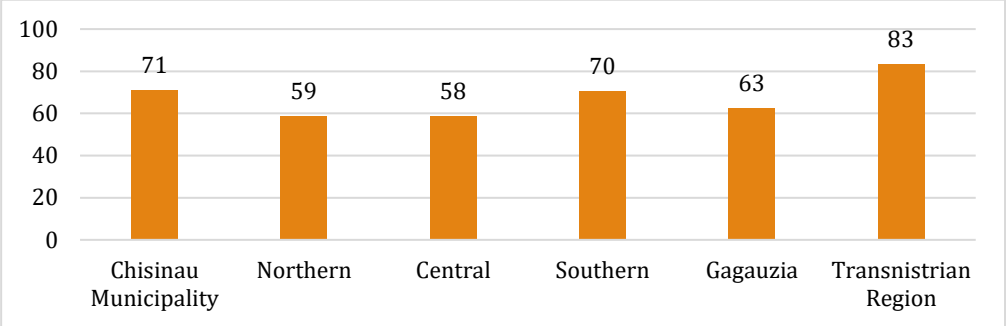
FGDs highlighted an increased demand for social services during the pandemic and a necessity to increase the volume and diversification of social protection for PLWH during times of crisis. Additionally, KIIs and FGDs noted various obstacles negatively impacting PLWH in accessing social services: bureaucracy in social welfare programs, rigidity of authorities, and a high number of

[48] COVID-19 Impact on the Remittances - Assessment of coping mechanisms of families with children from the Republic of Moldova, 2020, UNICEF Moldova, https://moldova.un.org/sites/default/files/2021-10/Unicef%20Moldova_COVID19%20Impact%20on%20Remittances%20and%20Families%20with%20Children_2021.pdf%20.pdf

documents and certificates requested by authorities (in addition to some certificates not being free of charge).

FIGURE 7: ACCESS TO SOCIAL PROTECTION SERVICES

Percent of total national sample who agreed access to social protection for PLWH during the COVID-19 pandemic was sufficient, by **region**



Home living conditions

The large majority of PLWH households had steady access to heating, home internet, and drinkable tap water during the COVID-19 pandemic; however, a flushing toilet was only reported in 73% of homes (Figure 8).

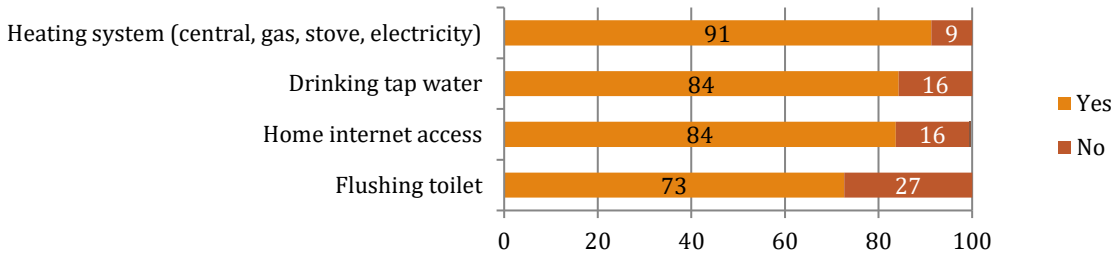
Among those without home internet access (16%), nearly half reported usage of internet through mobile phones as an alternative.

PLWH living in rural settings reported 3 times less availability of drinkable tap water, 4 times less availability of a flushing toilet, and 2 times less access to internet at home and heating systems when compared to the national average.

Single mothers and families with multiple children had particularly poor living conditions.

FIGURE 8: ACCESS TO ESSENTIAL LIVING CONDITIONS DURING COVID-19 PANDEMIC

Percent of total national sample



Out-of-pocket expenses

Despite HIV treatment being free of charge, out-of-pocket expenses were reported by 56% of PLWH. KIIs and FGDs mentioned a considerable amount of expenses for travel, especially for non-urban respondents.

6.2. Access to basic services during COVID-19 pandemic

Difficulties accessing basic services during COVID-19 pandemic

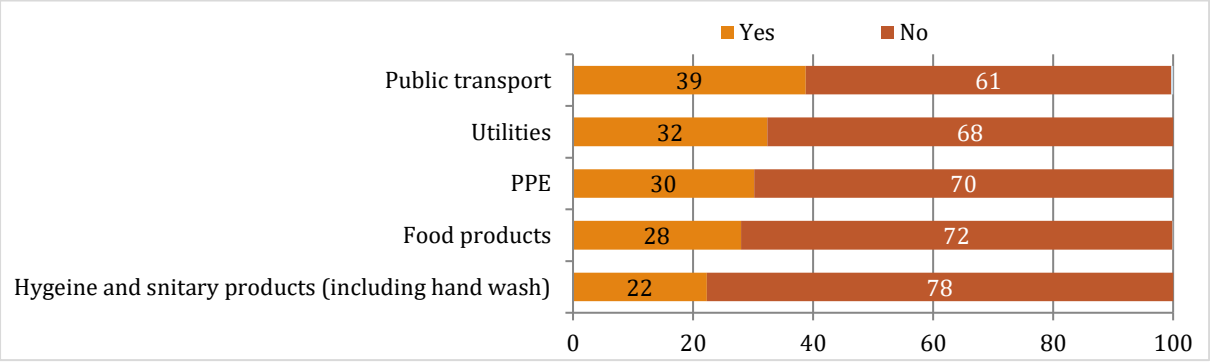
Access to food, transportation, and basic services are vital to achieving the goal of equitable access to HIV prevention, treatment, care, and support.

One-third of PLWH reported difficulties in accessing food products, utilities, public transportation, and PPE. Nearly a quarter of PLWH noted difficulty accessing hygiene and sanitary products, including access to hand wash (Figure 9).

Over half of PLWH living in the Transnistrian region and 3 in 5 PLWH living in Gagauzia had difficulty accessing public transportation.

Food was most difficult to access in Gagauzia and the Southern region of the country, with nearly half of PLWH in both regions reporting difficulty.

FIGURE 9: DIFFICULTIES ACCESSING BASIC SERVICES DURING COVID-19 PANDEMIC
Percent of total national sample



6.3. COVID-19 infection, awareness and, concern

Nearly 1 in 10 PLWH were diagnosed with COVID-19 during the last 12 months. An additional 3% reported a family member being infected with COVID-19 at the time of their interview.

Strong communication to vulnerable groups has been a critical component of the COVID-19 emergency response. Efforts to increase public motivation to participate in response efforts and

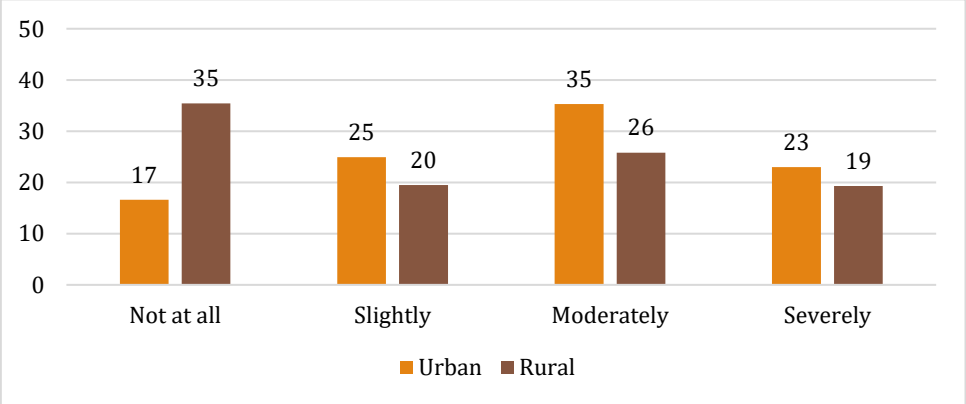
facilitate coordination across different institutions are contingent on the sensitivity to the needs of vulnerable communities, establishing trust in information, and building public awareness and knowledge of COVID-19.

Extent of COVID-19 impact on PLWH

Around 54% of PLWH reported being moderately to severely affected by the COVID-19 pandemic while 22% reported not being affected at all.

3 in 5 PLWH living in urban areas reported being moderately to severely affected. Conversely, over 1 in 3 PLWH living in rural areas reported not being affected at all (35%) (Figure 10).

FIGURE 10: HOW MUCH HAVE YOU BEEN AFFECTED BY THE COVID-19 PANDEMIC?
Percentage of total national sample, by **urban vs rural**



Level of concern towards contracting COVID-19

A quarter of PLWH reported significant concern over contracting COVID-19 while 29% reported absolutely no concerns. This likely influenced whether PLWH practiced social distancing, wore masks, or received COVID-19 vaccinations during the last 12 months.

A low level of concern towards contracting COVID-19 was most prevalent in the Southern region of the country, with 35% of PLWH in the region reporting no concern at all.

Main sources for acquiring information regarding COVID-19

Authorities' poor communication regarding COVID-19 in the early months of the pandemic introduced confusion among the population. Some KII respondents reported that conflicting information about protection and prevention measures—strongly influenced by election campaign messages— brought greater disadvantages to vulnerable population groups, including PLWH.

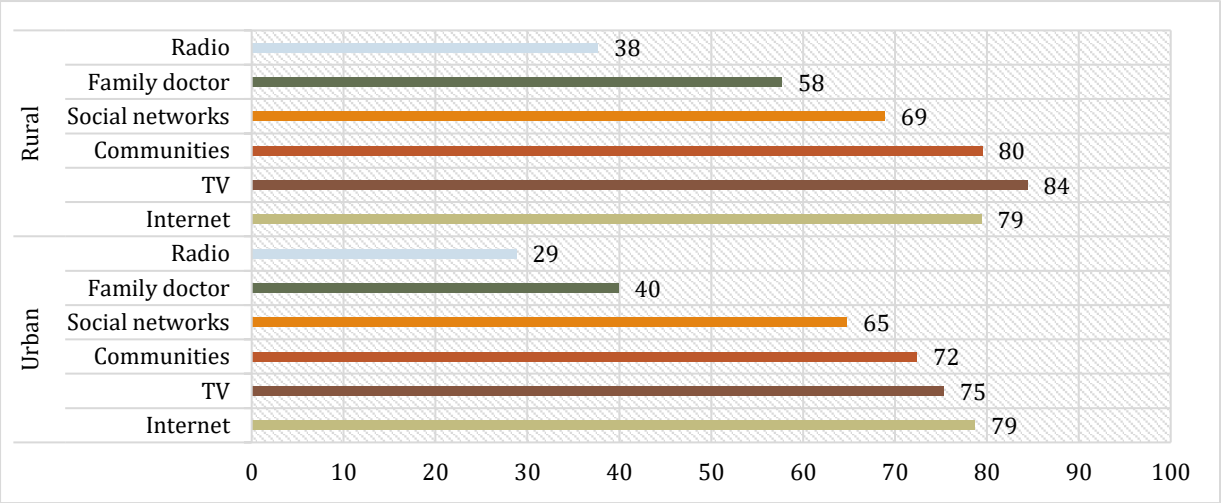
A majority of PLWH utilized online news sources to receive their information regarding COVID-19 (79%). TV and information from members of their communities followed closely at 78% and 74%, respectively.

PLWH living in rural areas utilized TV as a source of information at a higher level (84%) compared to those living in urban areas (75%).

Unfortunately, less than half of all PLWH felt family doctors were a good source of information. Despite this, family doctors were significantly more popular as a source of COVID-19 information among those living in rural areas (58%) compared to urban areas (40%) (Figure 11).

FIGURE 11: SOURCES FOR ACQUIRING INFORMATION REGARDING COVID-19

Percent of total national survey who identified the following as a main source, by **urban vs rural**



Non-pharmaceutical interventions (NPIs) against COVID-19

NPIs have been a key weapon against the spread of COVID-19. Handwashing, usage of masks, and maintaining social distance have been the most effective measures. One of the best advertised NPIs during the pandemic has been social distancing. The vast majority of PLWH (90%) were aware of NPIs against COVID-19.

COVID-19 related information targeting PLWH was regarded as easy to understand by the majority of respondents (86%). Female respondents found the information to be easier to comprehend (92%) when compared to male respondents (80%).

In the national survey, 43% of respondents reported that they always practiced social distancing, whereas 5% reported never practicing social distancing, and 10% rarely. Those aged 56+ and unemployed PLWH were more prone to maintaining social distancing practices.

According to the WHO, masks should be used as part of a comprehensive strategy of measures to suppress transmission and save lives.[49] Around 68% of all PLWH reported always wearing masks. The majority of PLWH reported sufficient PPE availability (84%) with no significant difference between those living in urban vs rural areas.

[49] https://www.who.int/emergencies/diseases/novel-coronavirus-2019/advice-for-public/when-and-how-to-use-masks

In addition to social distancing and wearing masks, the practice of handwashing/sanitizing is a crucial NPI. A total of 59% PLWH reported always practicing handwashing/sanitizing. PLWH living in rural areas reported handwashing/sanitizing hands at a higher rate (65%) compared to living in from urban areas (56%).

6.4. Health status

Last blood test to assess CD4 count

A CD4 count measures the strength and the status of the immune system which is used to monitor the effectiveness of ART, to decide whether to change ART, and to diagnose AIDS. Maintaining a high CD4 count with effective ART can prevent complications related to HIV and increase life span in PLWH. Patients who adhere to regular treatments can achieve a life span similar to persons who have not been infected with HIV. As a result, CD4 count should be measured frequently.

More than half of PLWH (63%) were aware of their most recent CD4 count. PLWH living in urban areas were aware of their CD4 count at a higher percentage (67%) compared to those living in rural areas (52%).

Regarding the last time PLWH had taken a serological test to assess their CD4 count, 76% of the sample had performed the test within less than 6 months, 21% between 6 months and 12 months, and 3% had not had the test in the last 12 months.

Changes in health and treatment indicators during the COVID-19 pandemic

The COVID-19 pandemic affected medical care, follow-up medical appointments for PLWH, and the detection of HIV. Existing progress in fighting HIV in the Republic of Moldova was disrupted by the COVID-19 pandemic. KII respondents reported that during the last years, the annual average increase of the share of PLWH who knew their status ranged from 3% to 5%. However, during 2020 only a 1 percent increase was observed. Similarly, the share of people on ART —in contrast to the pre-pandemic average which saw a yearly increase by 4-5% — remained constant at 46%. Similarly, the share of PLWH with viral suppression increased only by 2%, in contrast with higher values during pre-pandemic period. A KII respondent reported the number of patients who dropped treatment increased by an astonishing 78% from 355 to 631 in 2019 and 2020 respectively. Finally, in 2020 there were only 721 PLWH who initiated ARV treatment, compared to 1,075 in 2019—about a 33% drop.

Lockdowns and restrictions on movement imposed during the COVID-19 pandemic made it difficult for nearly 1 in 10 PLWH in the national survey to reach clinics for ARV treatment. When asked what impediments PLWH faced during the COVID-19 pandemic in FGDs, participants highlighted limitations in transportation, restrictions on leaving the Transnistrian region, and a lack of permissions for movement for special cases such as needing treatment. In the Chisinau municipality, 9% of PLWH had problems accessing ART on time because they were not able to reach a clinic due to COVID-19. In Gagauzia, 25% of PLWH noted issues.

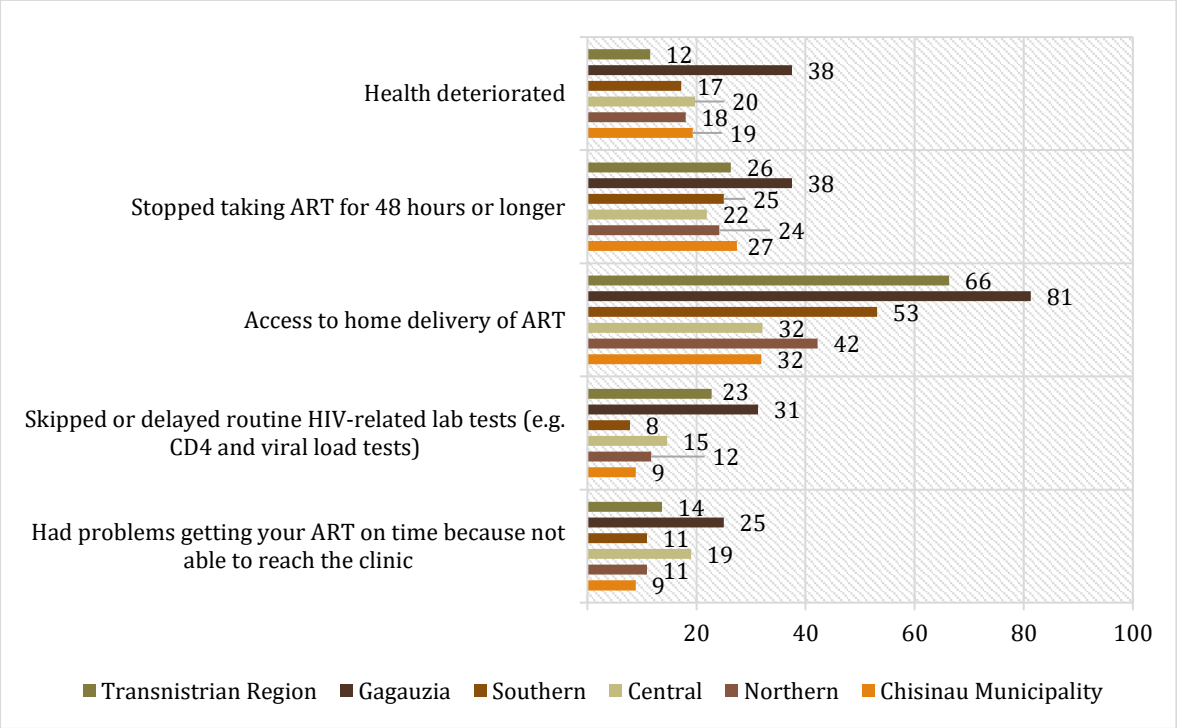
On the other hand, Gagauzia had the highest level of ART home delivery, with 81% of PLWH reporting access. Conversely, 32% of respondents in the Chisinau municipality had access to home delivery of ART.

In the Transnistrian region, 7% of PLWH reported problems in getting prescriptions or refills, compared to only 2% in the Chisinau municipality and 6% in Gagauzia.

Around one-quarter of PLWH stopped taking ART for 48 hours or longer during the COVID-19 pandemic. Among them, men reported at a higher percentage (30%) when compared to women (22%). Additionally, PLWH living in urban areas reported at a higher percentage (28%) when compared to rural areas (20%). In Gagauzia, 38% of PLWH cited a pause in ART for 48 hours or longer (Figure 12).

FIGURE 12: HEALTH/HEALTHCARE-RELATED CHANGES DURING COVID-19 PANDEMIC

Percent of national sample who responded "Yes" to the following taking place, by **region**



Despite a pause in overall progress, one of the biggest positive improvements during this time was the implementation of home delivery of ART which benefited 47% of PLWH in the national survey, making ART accessible for those who were unable to visit treatment centers in-person.

Self-reported deterioration in health during the COVID-19 pandemic was reported by 17% of PLWH. Deterioration was expressed at a higher rate among the male population (20%), PLWH living in urban areas compared to rural areas (18% and 14%, respectively), and those from Gagauzia (38%) compared to only 18% in the Northern region and 12% in the Transnistrian region (Figure 12).

Routine HIV-related lab tests were also delayed, reported by 15% of PLWH.

HIV-related physical problems and attitude towards HIV status during COVID-19 pandemic

PLWH often experience a variety of bodily changes, including changes in physical appearance, that are associated with their HIV disease and its treatment. Lipodystrophy, skin lesions, and bone abnormalities are among the most frequently reported. PLWH were asked if they had been bothered by physical problems related to their HIV status during the COVID-19 pandemic period. Less than 5% reported being bothered at high levels.

6.5. Access to healthcare and treatment

PLWH have numerous medical and psychosocial needs that impact the progression of HIV and the success of treatment. As a result, strict adherence to treatment and appropriate monitoring of HIV infection and other medical and social conditions faced by PLWH through regular access to medical care is crucial for effective management.[50]

The majority of KII respondents believed that the COVID-19 pandemic affected PLWH's engagement in the healthcare system and the medical community's response to PLWH because all efforts were redirected to meet the needs of the COVID-19 pandemic, especially during the first lockdown in the Republic of Moldova between March 2020 and April 2020.

Medical services at the central level (ex. Hospital of Dermatology and Communicable Disease in Chisinau) were affected to a lesser degree than at the rayon level where disruptions were severe. KIIs stressed a need for new methods and adjustments aimed at ensuring accessibility to services extend beyond major cities to the rayon level during the pandemic.

Visits to healthcare facilities during the COVID-19 pandemic

Overall, 1 in 10 PLWH reported cancelled medical visits between July 2020 – July 2021. Less than 5% reported postponed medical visits. Notably, PLWH in Gagauzia reported a higher rate of postponed/cancelled visits.

Difficulties faced by PLWH in accessing healthcare during the last 12 months of the COVID-19 pandemic

PLWH have faced a variety of barriers in accessing healthcare facilities during the COVID-19 pandemic. A quarter of PLWH indicated that the frequency of their visits to healthcare facilities had decreased during the COVID-19 pandemic period when compared to pre-pandemic periods.

Fear of contracting COVID-19 was the most cited barrier in accessing healthcare facilities, with 41% of PLWH in the national survey reporting that it had stopped them from going when in need. Additionally, 41% stated that restrictions on movement that were put in place in response to the COVID-19 pandemic presented difficulties in their ability to access healthcare facilities.

Nearly 1 in 10 PLWH expressed a lack of knowledge regarding existing HIV/AIDS programs offered by healthcare facilities during the COVID-19 pandemic had prevented them from accessing these services. Lack of knowledge concerning existing programs was slightly higher among PLWH who were temporarily unemployed and those from the Chisinau municipality. PLWH who were aware

[50] Gallant et al., Essential components of effective HIV care, Clinical Infectious Diseases, 53, 1043–50, 2011. https://academic.oup.com/cid/article/53/11/1043/306746

of the programs noted challenges in accessing them due to complex procedures as well as fears of stigma and discrimination.

Additionally, while only 4% of PLWH stated stigma/discrimination at healthcare facilities had made it harder for them to access medical services during the COVID-19 pandemic, the proportion was significantly higher among PLWH with lyceum/college/vocational school education. Just over 1 in 10 PLWH with lyceum/college/vocational school education cited stigma/discrimination had been a significant barrier in accessing healthcare during the pandemic.

Access to medical services and medication, comparison before and during COVID-19 pandemic

Since the start of the COVID-19 pandemic, 11% of PLWH reported difficulties in safely accessing medications and 13% reported difficulties in accessing medical services.

Only under 5% of PLWH noted they had difficulties continuing ART during the pandemic.

Availability of emergency ARV supplies during the COVID-19 pandemic

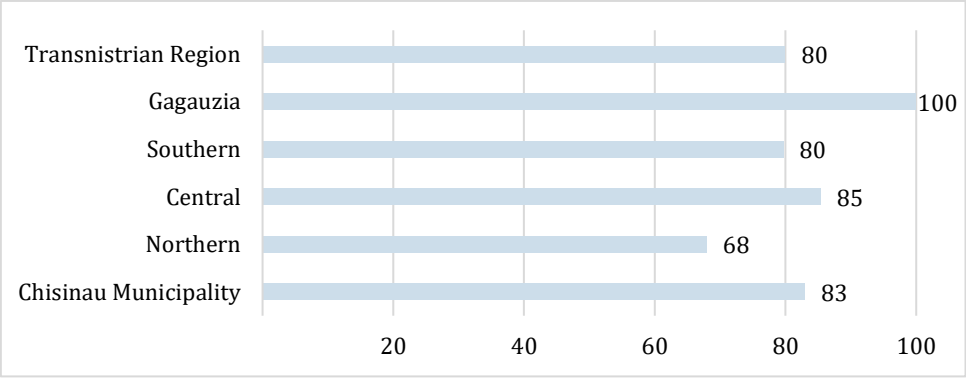
An increase in the duration of multi-month dispensing for ARV could reduce burdens on patients and providers and improve retention in HIV care by providing patients with larger quantities of ARV supply. In the Republic of Moldova, and globally, there is increasing interest in extending dispensing intervals to up to 6 months, in contrast to the 2–3-month norm pre-COVID-19 pandemic. Reducing the frequency of visits to medical institutions to obtain refills of medications can reduce barriers to care at both the patient-level and healthcare-system-level. KIIs identified the need for updating regulations, information systems that track PLWHs and their care, periodic monitoring of inventory management, ensuring sufficient emergency stock levels of ARV, and sufficient storage capacity to increase the success of ART.

Emergency stock of ARV was available in 80% of PLWH households. Those living in rural areas reported higher availability (85%) when compared to those in urban settings (78%). In Gagauzia, 100% of PLWH reported having emergency ARV stock in their households. The lowest reported percentage was among PLWH living in the Northern region (68%) (Figure 13).

ARV supply was also provided for PLWH from the Republic of Moldova that were stuck in other countries due to travel restrictions and unable to return home, such as seasonal migrants.

FIGURE 13: AVAILABILITY OF EMERGENCY ARV SUPPLY

Percent of national sample who reported having a supply of emergency ARV, by **region**



Negative experiences at healthcare facilities during COVID-19 pandemic

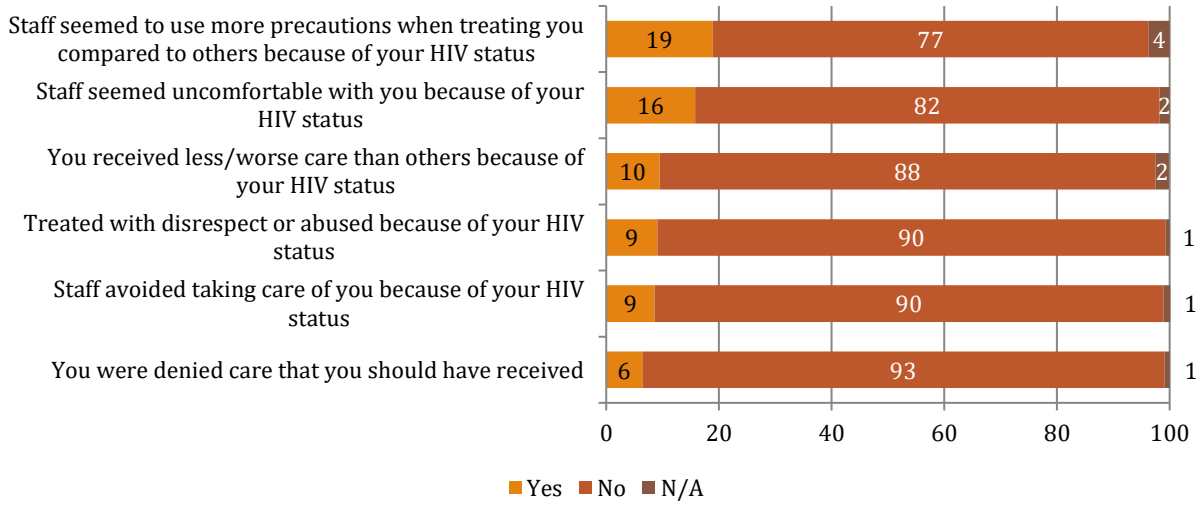
In addition to fears of contracting COVID-19 when visiting healthcare facilities, HIV-related stigmas continued to negatively impact the health and well-being of PLWH in connection to sentiments felt during visits to healthcare facilities – 1 in 5 PLWH felt that HCW acted differently (more precautious) around them during the COVID-19 pandemic because of their HIV status.

This was more pronounced among those living in the Central region of the Republic of Moldova, with 26% of PLWH in the region reporting a difference in HCW's attitudes towards them.

Additionally, 16% of PLWH felt that HCW seemed uncomfortable with them because of their HIV status.

1 in 10 PLWH felt they received less/worse care during the COVID-19 pandemic at healthcare facilities when compared to others who were not HIV positive. Stigmatizing attitudes contribute to missed opportunities for prevention, education, and treatment[51]—undermining efforts to manage and prevent HIV. See Figure 14 for other stigmas noted by participants in the national survey.

FIGURE 14: NEGATIVE EXPERIENCES AT HEALTHCARE FACILITIES DURING COVID-19 PANDEMIC
Percent of national sample



Utilization of digital methods to access healthcare services during the COVID-19 pandemic

Emerging digital technologies like telehealth are innovative and convenient approaches to the continuous support of PLWH. Despite this, KIIs highlighted an important implication of a move to telehealth during the pandemic related to the protection of personal data. Medical staff very quickly introduced the use of messaging applications, including Viber and WhatsApp, to exchange

[51] https://bmchealthservres.biomedcentral.com/articles/10.1186/s12913-017-2068-8

data and sensitive health information with PLWH. The exchange and processing of this data presents security risks, especially if proper guidelines are not in place, risking the anonymity of PLWH who wish to keep their status concealed.

Nearly 1 in 5 PLWH used digital devices (smartphones, tablets, or computers) during the COVID-19 pandemic to participate in digital healthcare appointments with HCW.

PLWH aged 18-25 and those living in rural areas reported higher usage compared to the national average. Notably, nearly 44% of respondents in Gagauzia reported usage of digital methods for healthcare appointments during the COVID-19 pandemic.

While more than half of PLWH had not used digital devices to partake in healthcare appointments, 65% were ready to adopt such methods in getting necessary healthcare services in the future, presenting opportunities for future digital-based initiatives to reach PLWH. Women were more slightly willing, with 66% saying yes, when compared to men at 63%. Additionally, PLWH with higher education were significantly more willing, with 81% saying yes (Figure 16). PLWH living in the Southern region of the country were the most hesitant to use digital devices for healthcare appointments, with only 58% saying yes (Figure 15). There was no difference in willingness when comparing those living in urban vs rural areas.

WILLINGNESS TO USE DIGITAL METHODS TO ACCESS HEALTHCARE SERVICES/PRESCRIPTIONS

FIGURE 15: Percent of national sample by **region**

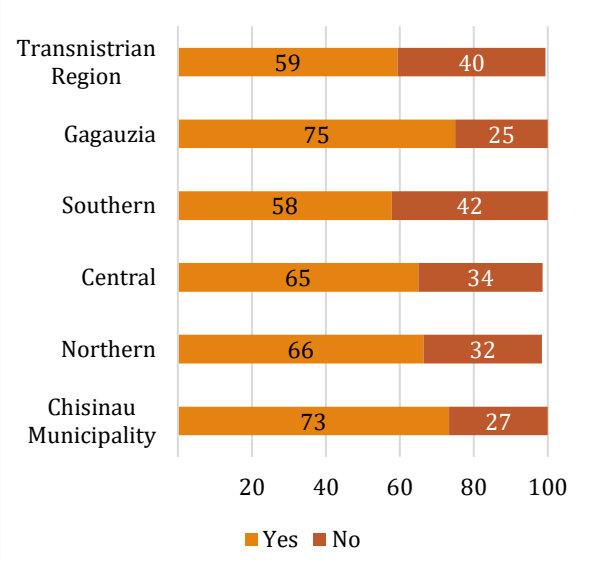
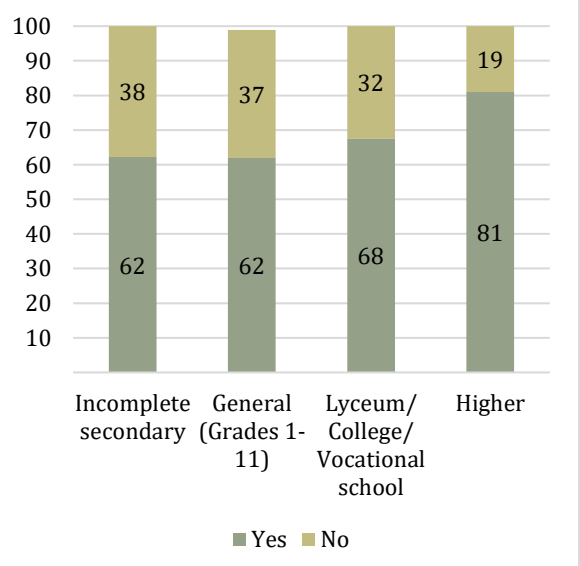


FIGURE 16: Percent of national sample by **level of education**



Preference towards non-physical methods for healthcare consultations /prescriptions

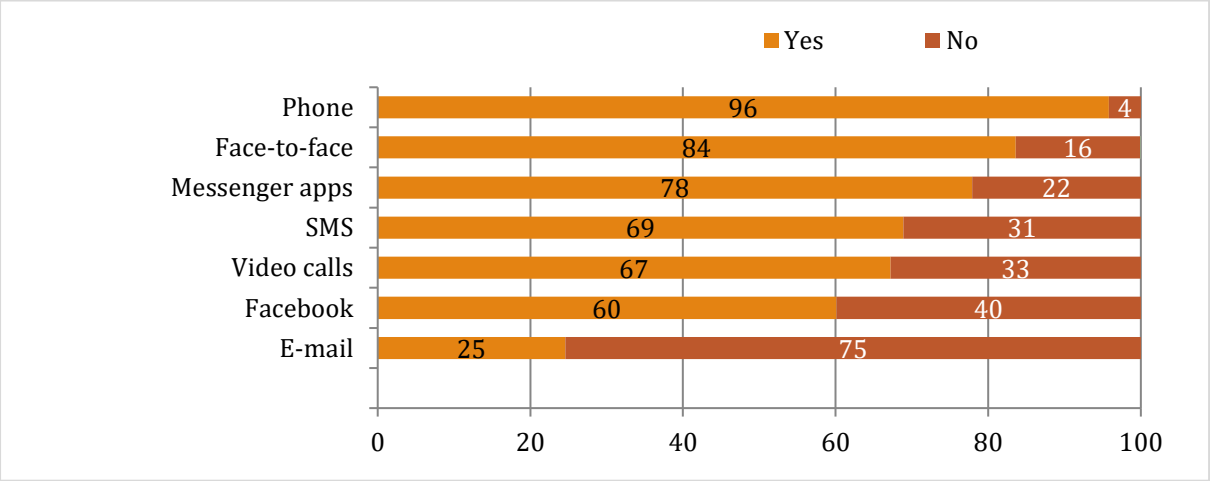
When analyzing PLWH preferences towards various mediums for digital appointments with HCW, phone calls were cited as the most preferred (90%), followed by smartphone applications (65%), and video calls/telemedicine (60%). Digital health tools were noted as being undoubtedly helpful.

Methods of maintaining contact during the COVID-19 pandemic

It is extremely important for PLWH to keep existing communication networks alive during periods of decreased in-person contact, such as lockdown periods that were enforced during the COVID-19 pandemic, in order to monitor their needs, provide support, and continue treatment. Phones, in-person face-to-face meetings, and messaging applications were used by more than 75% of PLWH to stay connected during the COVID-19 pandemic (Figure 17).

Notably, 42% of PLWH living in the Chisinau municipality reported email usage, compared to the 25% average. Additionally, Facebook was the least popular among PLWH living in the Transnistrian region, with only 41% reporting usage.

FIGURE 17: METHODS OF MAINTAINING CONTACT DURING THE COVID-19 PANDEMIC
Percent of national sample



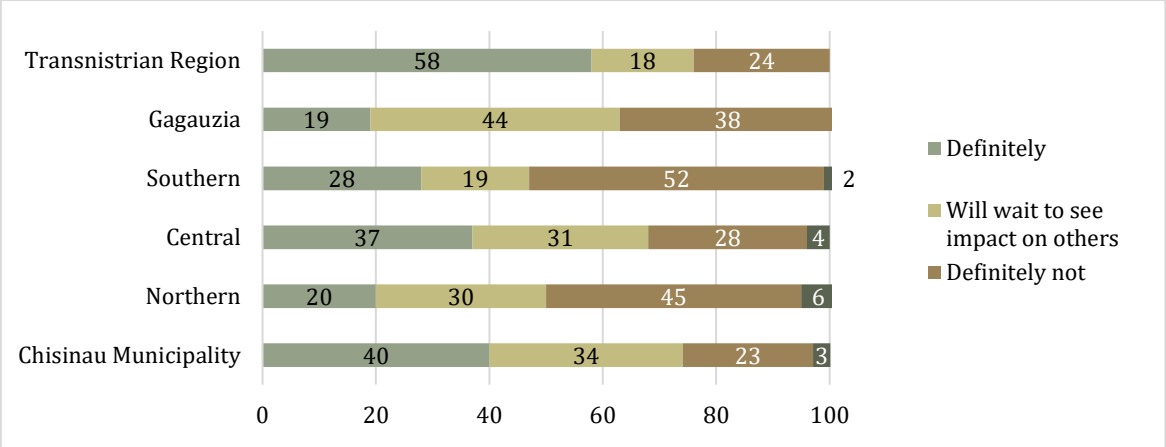
Willingness to vaccinate against COVID-19

There is no evidence at the time of the writing of this report that COVID-19 vaccines have more adverse side-effects among PLWH who are receiving ART than people with no underlying health conditions. Respondents' willingness to receive the COVID-19 vaccine presented no significant difference to the willingness of the overall population in the Republic of Moldova. Over one-third (39%) of PLWH in the national survey were "definitely willing" to get the COVID-19 vaccine. A smaller portion, at 31%, reported no intention of receiving the vaccine. Just over one-quarter of PLWH reported they would "wait to see the impact of the vaccine on others" before deciding.

Willingness to vaccinate was higher among PLWH aged 56+, employed, and residing in urban areas. In the Transnistrian region, 58% of PLWH were willing to vaccinate compared to only 20% in the Northern region and 19% in Gagauzia. The percentage of those who said they were

definitely not willing to get the COVID-19 vaccine was highest in the Southern region, with over half of respondents unwilling to get vaccinated against the virus. (Figure 18).

FIGURE 18: WILLINGNESS TO VACCINATE AGAINST COVID-19
Percent of national sample, by **region**



6.6. Drug usage and alcohol consumption

Drug usage pre-pandemic

Excessive alcohol consumption and drug use are linked to risky sexual behaviors which can hurt treatment outcomes among PLWH.

A total of 29% of PLWH reported that they had injected non-prescribed drugs at least once in their lifetime. Males reported injecting non-prescribed drugs at a higher rate when compared to females, (33% and 25%, respectively). Additionally, injecting drug usage was higher among PLWH living in urban areas when compared to those living in rural areas (31% and 23%, respectively).

When disaggregated by region, the percentage of those who had injected non-prescribed drugs was highest in the Northern region (41% of PLWH living in the region) compared with the Transnistrian region (28% of PLWH living in the region), Gagauzia (31% of PLWH living in the region), and the Central region (21% of PLWH living in the region).

Change in drug and alcohol usage patterns during COVID-19 pandemic

Non-prescribed drugs

1 in 10 PLWH of the national survey reported increased consumption of non-prescribed drugs during the COVID-19 pandemic (Figure 19). When disaggregated by level of education, nearly 1 in 5 PLWH with incomplete secondary education and 1 in 5 with education at the lyceum/college/vocational school level reported increased consumption of non-prescribed drugs during the pandemic.

Non-prescribed drug usage was especially among PLWH living in urban areas (11%) compared to rural areas (8%), among those with lower education (19%) compared to those with higher education (8%), and in Gagauzia (19%) compared to other regions in the Republic of Moldova.

Alcohol

Increased alcohol consumption during the COVID-19 was reported by 8% of PLWH (Figure 19).

Most notably, alcohol consumption saw a higher increase among PLWH living in Gagauzia (31%) compared to PLWH in the Northern region (4%) or the Chisinau municipality (10%).

Additionally, 10% of male respondents reported increased alcohol consumption compared to 8% of female respondents.

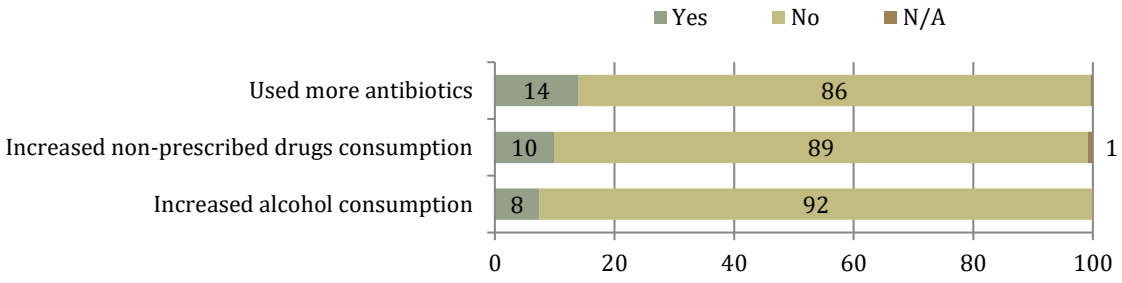
Antibiotics

Increased consumption of antibiotics was reported by 14% of PLWH (Figure 19).

The largest concentrations of PLWH who reported increased antibiotic consumption were among those with lower levels of education and those living in rural areas. These findings may be related in part to a lower degree of health literacy among those with lower levels of education as well as lower access to family doctors in rural areas.

FIGURE 19: CHANGE IN ALCOHOL AND NON-PRESCRIBED/PRESCRIBED DRUG USAGE PATTERNS DURING COVID-19 PANDEMIC

Percent of national sample



6.7. Quality of life

According to the definition from the WHO, health refers to physical, mental, and social well-being, not merely the absence of disease or illness. As a result, measuring one's health must include not only absence of, or improvements in disease frequency and severity, but also an estimate of well-being. This can be done by evaluating quality of life. Negative stigmas tied to being HIV-positive and a sense of loss can cause additional health-related disorders that impact one's quality of life.[52]

[52] Pozniak A. Quality of life in chronic HIV infection. Lancet HIV [Internet] 2014;1(1):e6–e7, https://www.thelancet.com/journals/lanhiv/article/PIIS2352-3018(14)70003-7/fulltext

Self-reported quality of life

A "good" quality of life was reported by 66% of PLWH in the national survey, while 8% reported "very good" quality of life. "Very poor" and "poor" quality of life were reported by 4% and 22% of PLWH, respectively.

A higher percentage of self-reported "very good" quality of life was reported among PLWH with higher education (13%), among those living in rural areas (11%), and PLWH in the Central region (16%).

Life enjoyment within the context of the COVID-19 pandemic

In addition to perceptions of their quality of life, PLWH were asked about how much they "enjoyed life" during the COVID-19 pandemic. Over half of all PLWH in the national survey (53%) reported they enjoyed their life "a moderate amount" during the pandemic.

Nearly 1 in 10 PLWH reported life during the pandemic was "not at all enjoyable". This was reported at even higher percentages among:

- Male PLWH (12%) compared to female PLWH (7%)
- PLWH aged 41-55 (14%)
- PLWH with incomplete secondary education (20%)
- PLWH living in the Southern (11%) and Transnistrian regions (11%)

Feelings of safety within the context of the COVID-19 pandemic

Elevated levels of stress and anxiety linked to fears of being unsafe during the COVID-19 pandemic have been further exacerbated by the ongoing uncertainty of the situation. Despite this, a majority of PLWH (58%) felt safe during daily life and only 7% did not feel safe at all. Notably, higher percentages of not feeling safe at all were reported by 13% of PLWH in the Southern region.

Satisfaction with the support received from friends during the COVID-19 pandemic

A large majority of PLWH said that they were satisfied (53%) with the support that they received from their friends regarding their HIV status during the COVID-19 pandemic. Only a small portion of PLWH reported that they were very dissatisfied or dissatisfied by the support they received from their friends (5% and 6%, respectively). Notably, 67% of PLWH aged 71+ stated they were very dissatisfied by the support they received from their friends.

6.8. Mental Health

Stigmatization and discrimination have the potential to significantly affect the mental health status of PLWH. Some may fear they will be discriminated against or judged negatively if their HIV status is revealed. PLWH reported negative attitudes and judgements towards them continue in the Republic of Moldova, posing threats to their mental well-being.

Negative experiences related to their HIV positive status during their lifetime

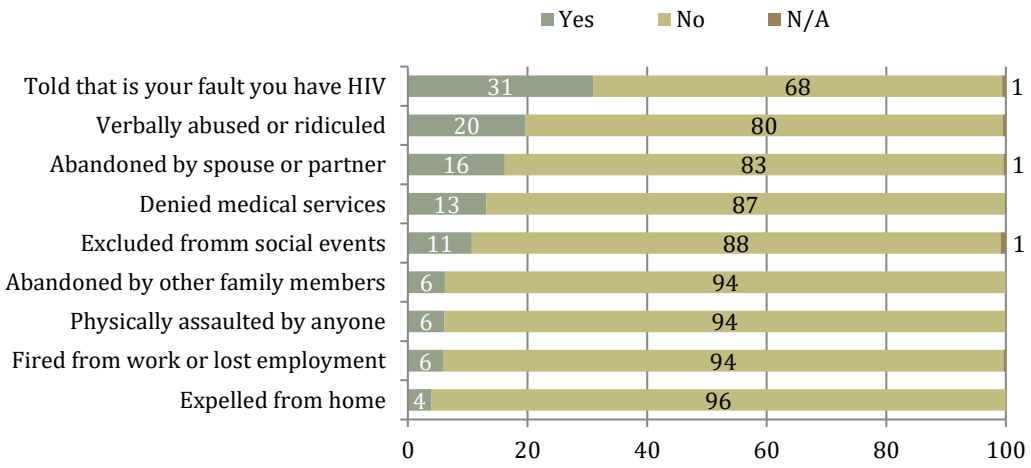
PLWH in the national survey reported a variety of negative experiences related to their HIV positive status during their lifetime. The most frequently cited negative experience was being told it was their fault that they had contracted HIV, reported by 31% of PLWH.

PLWH from rural areas answered "yes" twice more frequently than those from urban areas when asked if they experienced exclusion from social events, abandonment by their spouse/partner, abandonment by other family members, and physical assault.

Verbal abuse or experiences of ridicule were much more frequently cited by female PLWH, those with incomplete secondary school education, and PLWH living in the Southern region.

FGD also highlighted that PLWH faced stigma and discrimination frequently in their daily lives.

FIGURE 20: NEGATIVE EXPERIENCES DURING LIFETIME WITH HIV
Percent of national sample



Negative feelings during the COVID-19 pandemic

The mental health risks posed by the COVID-19 pandemic may disproportionately affect PLWH. Different studies reported that the mental well-being of the general population had been adversely affected by COVID-19.[53] Additionally, having a psychiatric diagnosis has been associated with increased mortality among patients hospitalized with COVID-19.[54] Status of mental health, social support, and substance use are predictors of HIV-related health outcomes, including treatment adherence. Resilient coping has been found to buffer the negative impact of stressors on mental health. PLWH already suffering from mental health issues may face increased anxieties tied to their vulnerability to COVID-19, especially those who are immunocompromised and have a higher risk for developing a serious illness, making the mitigation of the negative impacts on mental health in PLWH during the COVID-19 pandemic an important part of continuum of care.

[53] Palsson O, Ballou S, Gray S. The U.S. National Pandemic Emotional Impact Report. 2020, https://www.pandemicimpactreport.com/report/PalssonBallouGray_2020_PandemicImpactReport.pdf
[54] Luming, Li et al. "Association of a Prior Psychiatric Diagnosis with Mortality Among Hospitalized Patients with Coronavirus Disease 2019 Infection," accessed from *JAMA Online Network,* 30 September 2020, https://www.ncbi.nlm.nih.gov/pmc/articles/PMC7527869/

A wide range of negative feelings were reported by PLWH during the COVID-19 pandemic (Figure 21). Sadness, anxiety, and depression were mentioned from "very often" to "always" in 13%, 12% and 9% of PLWH, respectively.

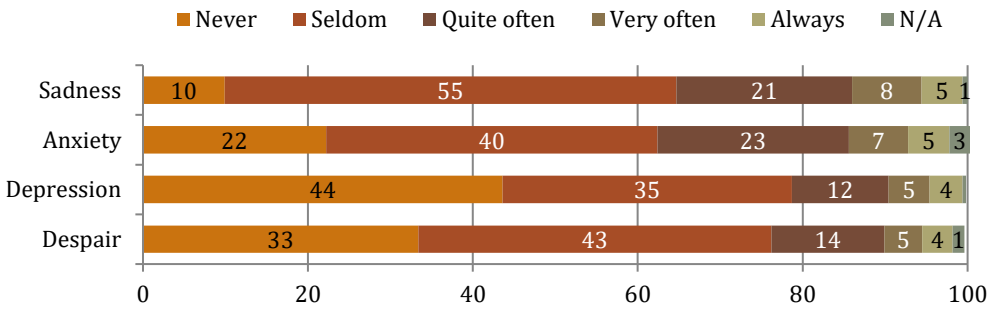
The following groups reported higher levels of "always" feeling sadness, anxiety depression, and despair when compared to the national survey average:

- Aged 71+
- With lower levels of education
- Living in rural areas

PLWH who suffer from behavioral health problems often face the dual stigma tied to having HIV and co-occurring psychiatric diagnoses. Disruptions in general psychological processes and internal stigma-related stressors can result in increased behavioral health problems, including poor coping mechanisms, decrease in self-care, and increase in substance use.

FGDs suggested that a lot of focus has been placed on providing ART during the COVID-19 pandemic, while psycho-emotional support for PLWH has been all but missing.

FIGURE 21: NEGATIVE FEELINGS DURING THE COVID-19 PANDEMIC
Percent of national sample



As the COVID-19 virus continues to spread, suicide may become a more pressing concern. Several factors at hand have been associated with increased suicide risk including increased feelings of depression, anxiety, or post-traumatic stress; financial stress associated with loss of employment; social isolation; substance abuse; and/or domestic violence. In 2020, a total of 398 suicides were registered in the Republic of Moldova —22 cases more than the number reported in 2019.[55] Most of the victims were men (80%). Additionally, the number of suicide attempts in 2020 was almost twice higher compared to 2019. There are currently no official statistics regarding the suicide rate among PLWH in the Republic of Moldova.

[55] Deschide, "Statistică îngrijorătoare în R.Moldova. Cine și de ce și-a pus capăt zilelor în 2020," 21 January 2020, https://deschide.md/ro/stiri/social/78914/Statistic%C4%83-%C3%AEngrijor%C4%83toare-%C3%AEn-RMoldova-Cine-%C8%99i-de-ce-%C8%99i-a-pus-cap%C4%83t-zilelor-%C3%AEn-2020.htm

7 Findings – Pregnant Women with HIV and their Children

7.1. Existing issues

Existing social and economic inequality among women is only exacerbated among women living with HIV/AIDS and especially among those who are pregnant. More than half of women from Eastern Europe and Central Asia have experienced physical abuse after being diagnosed with HIV, as reported by the Eurasian Women's Network on AIDS.[56] Women's increased general vulnerability tied directly to gender inequality has also had an impact on their increased vulnerability to contracting HIV. Women living with HIV require additional services during pregnancy, labor and delivery, and in the postpartum period.

A comprehensive strategic approach aims to respond to the wide range of health needs of women and their children and families. A woman living with HIV may experience many emotional and social problems that affect her health and well-being. Pregnancy is a unique situation in which the safety of both the woman and the fetus should be considered. Treatment of pregnant women living with HIV not only addresses women's individual health needs but also dramatically reduces the risk of maternal to child transmission, particularly for women at an advanced stage of HIV without ART who have a higher risk of transmission to their children.

It has been reported that HIV among pregnant women in Eastern Europe is often rooted in previous IDU practices, high-risk sexual partners, or partners who are migrant workers.[57] Additionally, high rates of STIs are seen among HIV infected pregnant women, highlighting the high prevalence of unsafe sexual behavior.

7.2. Findings - Pregnant Women

Just under half of all pregnant women surveyed were "severely" affected by the pandemic (slightly less than the national average of all PLWH surveyed), 17% "moderately", 17% "slightly", and one-quarter "not at all." One-quarter of women reported overall "poor" and "very poor" health status. Additionally, one-quarter had symptomatic HIV serostatus.

"Very poor" and "poor" quality of life were reported by one-third of pregnant women living with HIV and "good" and "very good" by two-thirds. Sadness and anxiety during the COVID-19 pandemic were reported by a large majority of pregnant women living with HIV surveyed. Depression was reported by slightly more than half.

Education related to pregnancy/child growth

Low level of education was reflected for example in knowledge regarding child growth and development: not all participants could recognize if their child was growing well and did not know the signs of undernutrition, especially HIV positive women pregnant with their first child. Those women also wondered when to introduce different types of foods and liquids after 6 months.

[56] Empowerment of women living with HIV in EECA Region - regional conference, AIDS Action Europe, 2019, https://www.aidsactioneurope.org/en/news/empowerment-women-living-hiv-eeca-region-regional-conference?position=31&list=cp5o2cloCD792pXP_0W9gVXUYa9NifznoSq3sb-OtMQ

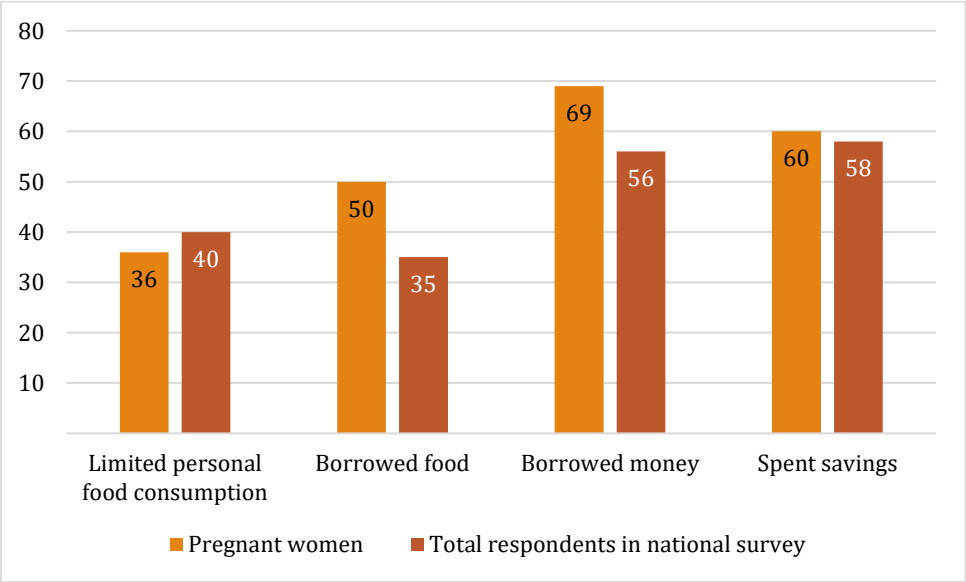
[57] Towards the elimination of mother-to-child transmission of HIV in low-prevalence and concentrated epidemic settings in Eastern Europe and Central Asia, UNICEF and World Health Organization, 2011, https://www.euro.who.int/__data/assets/pdf_file/0004/136273/e94882.pdf

Missing regular check-ups or child immunization was also found in a small proportion of pregnant women surveyed.

Economic status

The COVID-19 pandemic negatively impacted the economic standing of pregnant women living with HIV. Half of pregnant women in the national survey borrowed food; 36% limited food consumption, 69% borrowed money, and 60% spent savings (Figure 22). One woman lost her job.

FIGURE 22: ACTIONS TAKEN TO ADDRESS FINANCIAL HARDSHIPS DUE TO COVID-19
Percent of pregnant women vs percent of total respondents in national survey



They say that staying at home doesn't affect your salary, but of course it does. Let's be realistic: during the pandemic, children ate more, they kept opening the refrigerator all day long. The expenses are constantly growing... The electricity was consumed more than usual; someone was at the computer, someone was on the phone and the other child was also on the phone, because we had to keep him busy with something so that the other 2 children could learn. I'm doing my master's degree in university. The expenses are increasing, but the incomes are going down.

– Female, 30s, Chisinau

A decrease in income due to the COVID-19 pandemic was reported by 60% of pregnant women living with HIV. Single mothers in an FGD reported being especially vulnerable to economic hardships. Pregnant women living with HIV reported difficulty in maintaining decent living standards, including daily care for their HIV positive children. These findings are supported by FGDs in which participants shared the negative impact that their HIV status combined with the COVID-19 pandemic had on their employment.

Poverty in rural areas was highlighted as an impediment for the health and well-being of pregnant women living with HIV in KIIs and FGDs. A desire for an improvement in their economic status was shared by FGD participants who identified a lack of support from the government for pregnant/recently pregnant women, especially in the postpartum period.

Living conditions among women living with HIV differed slightly from the general population of PLWH - 77% had drinkable tap water, 63% a flushing toilet, and 20% had no home internet.

Procedures for collecting social compensations and help from various aid programs can be lengthy, bureaucratic, and exhausting. More targeted actions, "help packages," and vouchers for extended healthcare and summer camps for children were among those pregnant women in FGDs requested. Additionally, women with HIV positive children expressed they would benefit from additional support such as kindergarten that is free of charge and early childhood development programs. More child-focused programs both for children with HIV and their peers to lessen stigma were demanded by participants, including communication and coping strategies.

Access to medical services during COVID-19 pandemic

Adherence to medical recommendations made by healthcare professionals is essential among pregnant women to lessen negative consequences of HIV in pregnancy if not treated, ideally starting with preconception counselling and the planning of pregnancies when viral load is at a minimum in the conceiving mother. During pregnancy, ART is mandatory with very close monitoring of indicators such as viral load and CD4 counts. Special care must be taken to limit vertical transmission to the fetus in women who present themselves to healthcare facilities at later stages of their pregnancy and in women whose viral load is unknown or not controlled at the time of delivery.

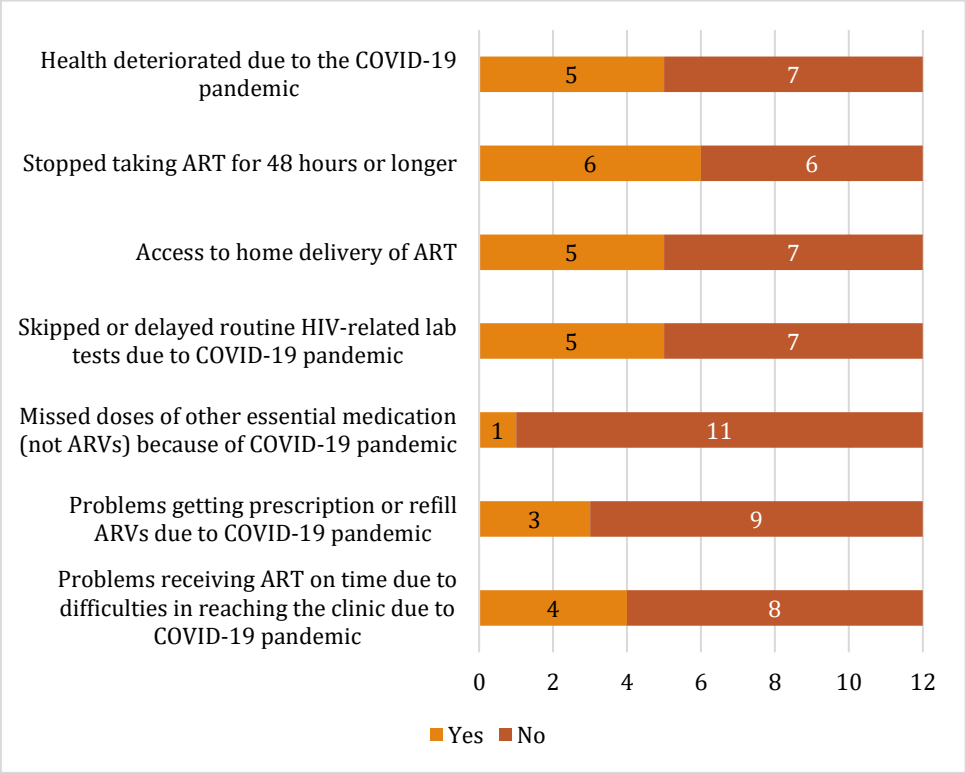
During the COVID-19 pandemic, pregnant women faced a unique set of challenges when accessing medical services, HIV testing, and receiving ART. Almost half of pregnant women living with HIV abstained from using medical services for fear of being discriminated against or fear of contracting COVID-19, levels significantly higher than the general population. Pregnant women in FGDs reported that stigma is still persistent and confidentiality in healthcare facilities is lacking, sometimes even among HCW. Participants noted that the disclosure of their HIV-positive status had a definite negative impact on their children, causing isolation and rumors in their communities.

While looking into the issues related to routine HIV lab tests and receiving ART among pregnant women living with HIV, some presented difficulties. A total of 85% of pregnant women surveyed were able to access ART safely. Two-thirds reported availability of an emergency supply of ART, nearly 15% less than the national average of respondents surveyed. However, some women reported difficulties in receiving ART on time due to difficulties in accessing clinics (3 pregnant women from the Central region and 1 from the Transnistrian region) and getting prescriptions or refills (2 pregnant women from the Central region and 1 from the Transnistrian region). Additionally, 4 pregnant women from the Central region and 1 from the Transnistrian region reported delays in receiving HIV lab tests due to the COVID-19 pandemic.

Despite difficulties accessing clinics for some women, 5 pregnant women reported continued access to home delivery of ART, mainly those residing in remote rural areas in the Republic of Moldova.

FIGURE 23: EXPERIENCES OF PREGNANT WOMEN LIVING WITH HIV DURING COVID-19 PANDEMIC

Number of pregnant women



Stigmas

Issues related to stigmas of being HIV positive are quite common among pregnant women. One-fifth were abandoned by their husbands due to their HIV status.

Unique cases of physical assault, denial of medical services, less or worse care/attitude from HCW at medical facilities, and exclusion from social events were also expressed during FGDs.

A majority of pregnant women stated the best way to avoid stigma was to keep their HIV status secret, even from close friends and relatives. One issue presented during the COVID-19 pandemic was the inability of pregnant women to see doctors without a scheduled appointment. Prior to the pandemic, pregnant women in FGDs stated they had the ability to see doctor's during walk-in appointments. During the pandemic, pregnant women were told instead to consult HCW at the reception desk if they walked into healthcare facilities without an appointment, unintentionally forcing them to speak about their medical concerns in front of other patients in the waiting room.

> *I'm registered in Buiucani and they receive us only at the reception desk outside. We say what we need to them, that we want an appointment with the doctor. But we cannot see the doctor, share some secrets, have privacy... no… We have to stay there and talk, receive advice from them. When you are pregnant, you need to eat more vitamins or other fruit, vegetables…*
>
> *– Female, 20s, Chisinau*

Information regarding COVID-19 pandemic

Among pregnant women living with HIV, 70% stated the internet, social media, and communities were their main sources of COVID-19 related information. Family doctors were cited by 60% of pregnant women, slightly above the national average of all respondents surveyed.

7.3. Findings - Children of women living with HIV

Children and orphans during COVID-19 pandemic

Enormous pressure was put on families with school-aged children, especially in families where the parents/only parent had to leave the home for work. Distance learning was a challenge for nearly all parents in the national survey and in FGDs.

At least one KII respondent mentioned that the quality of medical care for orphaned children with HIV was dependent on the insistence of caregivers (educators, foster parents etc.) in addressing the child's unique health concerns. This made it crucial but not always a reality that caregivers be educated in how to take care of children with HIV/AIDS in the absence of the help of authorities and healthcare facilities, such as was the case during the pandemic.

Some KII respondents indicated that during the pandemic some health services have become more responsible and sensitive: a prominent case was presented about an example of mobilizing all local health services to provide transportation and preferential access to diagnostic and treatment services for PLWH in Chisinau for an HIV mother and her small child.

FGDs highlighted that some seropositive parents refuse to administer ART to their infected child/children, due to various reasons: religious, false perception, side effects.

7.4. Distance learning

Remote/distance learning went into effect in the Republic of Moldova on 11 March 2020 to curb the spread of COVID-19.[58] Two-thirds of PLWH with children reported having school-aged children. The majority of them had attended school during the last 12 months. For 8% of PLWH with children, their children had missed at least one day of school. One quarter of PLWH with

[58] Education and COVID-19 in the Republic of Moldova, 2020, UNICEF, https://www.unicef.org/moldova/media/4231/file/Working%20Paper%20Education%20and%20COVID-19%20in%20the%20Republic%20of%20Moldova_FINAL_English%20version.pdf%20.pdf

children reported their child/children had stopped going to school all together. School closure was cited as the main reason children stopped going. In urban areas, almost twice more children stopped going to school (30% among respondents living in urban areas compared to 15% among respondents living in rural areas). Additionally, the Transnistrian region had the highest percentage of children missing school (40%) compared to all other regions: 33% in the Northern region, 25% in Gagauzia, and 17% in the Chisinau municipality.

The impact of a pause in in-person learning was more severe for children of lower socioeconomic status. The interruption resulted in a pause in learning, compromised nutrition, and economic loss to families who could not both work and take care of school-aged children.

Availability of technical equipment for school distance learning

A relatively high number of PLWH (84%) reported having the necessary technical equipment for distance learning including PCs, tablets, and smartphones. Among them, PLWH with higher levels of education, those from urban areas, other nationalities rather than Moldovan/Romanian, and respondents from the Chisinau municipality cited having the necessary technical equipment at higher rates. The most commonly identified devices were smartphones (93%) and PCs (71%). Tablets were the least cited, with only 39% of households reporting having one in the home. Despite relative availability of digital devices, the cost of increased internet charges and electricity bills tied to distance learning were expressed as a challenge during FGDs.

Satisfaction with quality of online education through distance learning

The vast majority of children of women living with HIV attended online school during the COVID-19 pandemic, mirroring other population groups in the Republic of Moldova. Children of 93% of PLWH had attended school online during the last 12 months. Slightly more children from rural areas frequented online school compared to those from urban areas (96% and 91%, respectively). In Gagauzia, 100% of PLWH reported that their children attended online school, compared to 91% in the Chisinau municipality and 90% in the Transnistrian region.

Parents expressed discontent with the quality of online education during the COVID-19 pandemic. When asked if they agreed the quality of online education for their children was of good quality, two-thirds of parents disagreed or strongly disagreed. This sentiment was more prevalent among PLWH with higher education, from urban areas, and from Gagauzia.

8 Conclusion

The COVID-19 pandemic had widespread effects on the lives and well-being of PLWH in the Republic of Moldova. Around 54% of all PLWH reported being moderately to severely affected. One-tenth of PLWH lost employment and more than half saw a decrease in income. Coping strategies to adjust to the pandemic were manifested through spending of savings and borrowing money, as reported by more than half of PLWH. Anxieties regarding ability to pay utilities and purchase medication and food were among the largest concerns, accounting for more than half of the sample. Social aid covered only one-fifth of respondents.

Internet, TV, communities, and social networks were cited as the main sources of information to obtain COVID-19 related information among PLWH. COVID-19 prevention strategies NPIs were widely used by PLWH, with nearly half of respondents self-reporting always adhering to social distancing practices outside of their homes.

Delivery of health services was drastically perturbed by the pandemic. 41% of PLWH cited fears of contracting COVID-19 as the main reason for avoiding visiting healthcare facilities. Despite this, only a very small portion of PLWH completely stopped ART during the pandemic period. Coping strategies mentioned by PLWH to continue receiving ARVs included use of multi-month home delivery services, solid reserve supplies, and extended multi-month prescriptions. Moreover, a large majority of respondents cited willingness to use phone calls, smartphone applications, and video calls/telemedicine to access health services.

Stigmas against PLWH persisted during the COVID-19 pandemic period. Phenomena such as over precautious behavior towards PLWH among HCW and treatment with disrespect or abuse were reported. Increased non-prescribed drugs consumption, especially the overuse of antibiotics and increased alcohol consumption, was also found among PLWH. Mental health issues such as anxiety and feelings of sadness were reported as occurring very often among nearly a quarter of PLWH. Despite these hardships, two-thirds of PLWH self-reported a good quality of life during the COVID-19 pandemic period.

Despite ART being free of charge in the Republic of Moldova, more than half of the PLWH reported spending out-of-pocket expenses on healthcare expenses such as on medications for comorbidities related to HIV. Additionally, approximately one-third of PLWH reported difficulties accessing public transport, utilities, and PPE (despite over 80% of PLWH reporting sufficient availability of PPE).

Distance learning was a challenge for the majority of parents living with HIV. Parents cited difficulties such as poor quality of learning, lack of equipment, issues with internet connection, data privacy, and ability to handle their children's remote education.

The COVID-19 pandemic negatively impacted the economic standing of pregnant women with HIV. Just under half of all pregnant women surveyed were "severely" affected by the pandemic. One-quarter of pregnant women reported overall "poor" and "very poor" health status. Sadness and anxiety during the COVID-19 pandemic were reported by a large majority of pregnant women. Depression was reported by slightly more than half. Pregnant women with HIV highlighted a lack of support from the government for pregnant/recently pregnant women, especially in the postpartum period.

9 Recommendations

The intended audience for the recommendations includes key stakeholders and end users who will find the study useful for developing policy and taking action to address the impact that the COVID-19 pandemic has had on PLWH.

The recommendations should be analyzed by the respective identified institutions. Each recommendation is intended to inform both the reevaluation and continued improvement of existing programs for PLWH in Moldova, as well as to inform future initiatives and working plans.

Recommendations	Priority	Timeframe	Responsible Institutions
COVID-19 Awareness and Concern			
1. Enhance accurate and timely information to PLWH on COVID-19 and HIV.	High	Short term	- Ministry of Health - Family doctors - Mass media - NGOs
2. Consider the main sources of information utilized by PLWH to improve communication strategies	High	Short and medium term	- Ministry of Health
3. Increase trust between family doctors and PLWH, with a focus on those living in urban areas.	Medium	Medium and long term	- Ministry of Health - Local public authorities - NGOs
4. Implement studies and educational programs that highlight safety of COVID-19 vaccinations among PLWH to increase confidence in the vaccine.	High	Short and medium term	- Ministry of Health - Ministry of Education Culture and Research
Socioeconomic indicators			
5. Provide social support for PLWH who lost their jobs or reported a decrease in income caused by the COVID-19 pandemic.	High	Short, medium, and long term	- Ministry of Labour and Social Protection - Social Assistance and Family Protection Directorates at rayon at local levels
6. Reimburse PLWH for out-of-pocket expenses related to HIV care, such as travel expenses.	High	Short and medium	- Ministry of Health - Ministry of Finance
Quality of life			
7. Establish targeted programs to address deterioration of health and poor quality of life among PLWH during the COVID-19 pandemic.	High	Short term	- Ministry of Health - Ministry of Labour and Social Protection
Access to medical care/treatment			
8. HIV/AIDS programs targeted towards PLWH during the COVID-19 pandemic need to be communicated to PLWH more effectively.	Medium	Short and medium term	- Ministry of Health - Family doctors - NGOs
9. PLWH should be prioritized for COVID-19 vaccination.	High	Short term	- Ministry of Health - Family doctors
10. Strategies like use of multi-month ARV dispensing and implementation of community ART distribution must be extended to cover geographical areas with low access and areas in which vulnerable, marginalized, and high-risk groups exist.	High	Short term	- Ministry of Health
11. Medical services need to be PLWH-centred, accessible, effective, inclusive, equitable, non-	High	Short and medium term	- Ministry of Health

discriminatory, rights based and sufficiently funded.			
12. Given that newly detected cases of HIV positive people in Moldova was significantly less than pre-pandemic periods, targeted strategies need to be elaborated to cover PLWH that have not been identified during the COVID-19 pandemic period and are missing an entire cascade of care. To do this, innovative alternative mechanisms for identification of PLWH need to be employed, including the scaling up of testing and treatment services.	High	Short term	- NGOs - Ministry of Health - Youth Friendly Health Centres
13. Eliminate barriers in access and utilization of HIV targeted services such as out-of-pocket expenses, stigma, and waiting times.	High	Short and medium term	- Ministry of Health
14. PLWH living in the Transnistrian region should receive increased attention due to higher HIV prevalence. Further collaboration and cooperation with central Moldovan authorities and international partners are essential.	High	Short and medium term	- Moldovan central authorities - Stakeholders in the Transnistrian region - NGOs
Mental health and social support			
15. Mental health support programs need to be developed for PLWH during the COVID-19 pandemic.	High	Short term	- Ministry of Health - Mental Health Centres
16. Peer and community support during pandemic was limited. Strengthen peer and community support for PLWH.	Medium	Medium term	- Local authorities - NGOs
17. Provide PLWH with a combination of information, income, livelihood, and employment support.	High	Short and medium term	- Moldovan central authorities - Local authorities
18. Social services should be expanded to increase volume and diversification of social protections for PLWH during times of crisis such as the COVID-19 pandemic.	High	Short and medium term	- Ministry of Labour and Social Protection
19. Address bureaucracy in social welfare programs, rigidity of authorities, and a high number of documents and certificates requested by authorities.	High	Medium term	- Ministry of Labour and Social Protection - Local authorities
Stigma			
20. Target training for HCW on sensitization and non-discrimination towards PLWH.	High	Short and medium term	- Ministry of Health - NGOs - Mass media
21. Empower PLWH, their networks, and their communities to reduce stigma.	Medium	Medium term	- Local authorities - NGOs - Educational institutions
22. Ensure continuous and systemic development of knowledge and positive attitudes towards PLWH among the general population.	Medium	Medium term	- Ministry of Health - Ministry of Education and Research - Educational institutions - NGOs - Mass media
23. Invest in awareness programs and health literacy in younger generations, including in schools to	Medium	Medium term	- Ministry of Education and Research - Ministry of Health

improve attitudes towards PLWH from a young age.			- NGOs
Digital healthcare services			
24. Ensure digital healthcare visits are secure and data is protected	High	Medium term	- Ministry of Health - National Center for Personal Data Protection
Pregnant women with HIV			
25. Ensure privacy and access to physicians in private settings. Ensure proper protocols are implemented and followed to guarantee patient confidentiality.	High	Short term	- Ministry of Health - Family doctors
26. Scale up targeted information towards pregnant women with HIV regarding vertical transmission if ART is not followed.	High	Short term	- Ministry of Health - NGOs
27. Place a larger focus on strengthening programs targeted towards pregnant women with HIV or women with HIV who wish to conceive.	High	Short term	- Ministry of Health - NGOs
28. Ensure prompt, appropriate and non-stigmatized, user-friendly medical services.	High	Short and medium term	- Ministry of Health
29. Provide "help packages," and vouchers for pregnant women and extended healthcare needs they may have.	High	Short term	- Ministry of Labour and Social Protection
30. Provide vouchers for children of pregnant women living with HIV/AIDS to attend existing summer camps free of charge.	High	Short term	- Ministry of Labour and Social Protection - Ministry of Education and Research
31. Ensure specialized training for HCW working with pregnant women living with HIV/AIDS on sensitization and non-discrimination	Medium	Medium term	- Ministry of Health
Children of HIV positive caregivers/children with HIV			
32. Children with HIV and their caregivers should get full support for treatment, follow-up, and psychosocial wellbeing. Financial support for children living with HIV and their families is necessary.	High	Short term	- Ministry of Labour and Social Protection - Ministry of Health
33. Provide kindergarten that is free of charge (with a focus on informal fees imposed by schooling institutions that are burdensome, especially for HIV/AIDS positive families) and early childhood development programs.	High	Short term	- Ministry of Labour and Social Protection - Local public authorities
34. Introduce child-focused programs both for children with HIV and their peers to lessen stigma.	High	Short term	- Ministry of Education and Research - Educational institutions - NGOs
35. HCW should be trained to provide effective HIV services for children living with HIV.	High	Short and medium term	- Ministry of Health
36. Community support systems are invaluable and need to be strengthened to allow them to effectively support children with HIV.	Medium	Medium term	- Local public authorities - NGOs
37. Provide the most disadvantaged children with HIV IT devices for distance learning.	Medium	Short and medium term	- Ministry of Education and Research - Local public authorities - NGOs
38. Provide financial aid to caregivers to cover the cost of increased internet charges and electricity bills tied to distance learning.	High	Short and medium term	- Ministry of Labour and Social Protection