

**COVID-19 AND ITS IMPACT ON HIV RISK BEHAVIOUR
AND USE OF HIV PREVENTION METHODS IN SELECTED AREAS IN
MANICALAND, EAST ZIMBABWE**



INTERIM RESULTS FROM A GENERAL POPULATION SURVEY

Third Update: February 25 to July 28, 2021

Key Findings

1. People's perception of the risk of getting infected with the COVID-19 virus themselves has been low (15.5%) throughout the survey period (February 25th to July 28th, 2021) and dropped to only 5% in July despite the high level of cases. Compliance with national guidance seems to have been reasonable (74% on our index - based on self-reports) but, again, has slipped since February.
2. Vaccine hesitancy is quite low and reduced by 60% between February and June/July 2021.
3. Vaccine uptake in older people (≥ 55 years) and people with underlying health conditions is encouragingly high (48% at July 28th, 2021).
4. Intimate partner violence was at a high level at the end of the last (January) national lockdown (8.9%), fell to 4.6% in June but may have started to rise again in July (5.4%). Mental health problems (depression) also appear to become less common since January.
5. HIV risk behaviour was lower between March and April 2021 than in pre-COVID times but has picked up again subsequently.
6. Uptake of HIV treatment and prevention services has held up reasonably well except for VMMC uptake which is now 50% of pre-COVID levels.

Background

In this study, we aim to find out how the COVID-19 pandemic and local responses to it have affected HIV risk behaviours and use of HIV prevention methods in the general population. The study is being done in eight sites in Manicaland province – two high-density suburbs in Mutare city, two small towns, two large-scale agricultural estates, and two subsistence farming areas – where baseline data on the immediate pre-COVID-19 situation and recent telephone contact details for study participants were available from a survey conducted in 2018/2019. Two rounds of a telephone-based household census and survey are planned – the first has just been completed; the second will be conducted later this year or in 2022 (whenever is most useful). In each round, the fieldwork is being carried out in two phases, with one site from each socio-economic stratum included in each phase. In each site, residents aged 15 years and above in a random sample of two-thirds of households are being invited to participate in the individual interviews. A longitudinal qualitative study is being run in parallel with the surveys.

This third report extends the results on a selection of key indicators shown in earlier reports to include July, 2021, the peak period of the third wave of the national epidemic. Indicator definitions are given in the Appendix. A more complete analysis (to include formal statistical analyses) will be conducted shortly after data cleaning has been completed. The study is being funded by the Bill and Melinda Gates Foundation.

Data available for this report

This report includes data provided by the 8500 people who were interviewed in the first survey between February 25th, 2021 and July 28th, 2021.

Status of the local COVID-19 epidemic and response

The national COVID-19 lockdown introduced on January 2nd, 2021 was still in place when the survey started but was eased shortly afterwards on March 1st, 2021. National COVID-19 situation reports indicate that the cumulative numbers of confirmed COVID-19 cases and deaths countrywide up to July 28th were 103,567 and 3,340 respectively. Numbers of cases and deaths were low from March to May 2021 but a third wave of the epidemic took off early in June and a new national lockdown was implemented from June 14th, 2021.

In Manicaland province, 5,966 new cases of COVID-19 were confirmed and 124 new deaths occurred from the start of the survey to July 28th; bringing the totals since the beginning of the pandemic to 10,104 confirmed cases and 327 deaths respectively. A COVID-19 outbreak was detected at a boarding school in one of the study areas around April 16th, 2021 with approximately 200 cases reported. Nationally, up to July 28th, 1,562,285 people had received the first dose of a vaccine and 713,131 people had received their second dose.

Preliminary results of the survey on the effects of COVID-19 and associated control measures on the study population are shown in Table 1. The average score on the knowledge index is similar for men and women and has been consistent at around 61% throughout the survey period to date. The main gaps in knowledge are lack of knowledge about the risks of infection from touching a person with the virus, touching surfaces which have the virus on them, touching one's eyes, nose or mouth with unclean hands, and contact with bodily fluids from an infected person. Self-reported compliance with Government regulations and guidance on COVID-19 safety precautions has also been consistent at around 74% but is slightly lower for men (71%) than for women (76%). Personal risk perception of becoming infected with the COVID-19 virus is low and fell to 5% in July 2021 from 17% in March 2021 (odds ratio [OR]=0.46; 95% confidence interval [95%CI], 0.30-0.69; $p<0.001$), despite the large increases in cases and deaths recorded in national reports.

The average number of social contacts increased steadily from 12 per day at the end of the previous national COVID-19 lockdown to 18 per day in June 2021 and then fell to 10 per day in July 2021 after the latest lockdown was introduced. Men had higher numbers of contacts overall but the trend over time followed a similar pattern in both sexes.

2.1% of survey respondents (up from 1.7% at May 14th) reported having had a confirmed symptomatic case of COVID-19 at some point since the beginning of the pandemic. The rate remains higher for women (2.6%) than for men (1.5%). Confirmed asymptomatic cases remain low (0.8%). However, 2.3% of women and men who had not been tested suspected they had had COVID-19 and also reported having had common symptoms of the disease since April 2020.

Vaccine hesitancy is low (19%), is higher in women (22%) than in men (13%), and has continued to reduce over time (30% in February-March; 17% in May; 11% in June-July). Vaccine coverage in older people and other vulnerable groups increased rapidly from 2% in February-March 2021 to 48% in July 2021.

The proportion of women reporting violence from male intimate partners in the last 12 months was high (8.6%) in February-April 2021 (i.e. just after the previous national COVID-19 lockdown), fell to 4.6% in June 2021 (OR=0.49; 95%CI, 0.35-0.66; $p<0.001$), and increased slightly to 5.4% in July 2021 (OR vs. February-April 2021 =0.59; 95%CI, 0.28-1.11; $p=0.11$).

In the Manicaland study areas, 8.9% of women and 4.3% of men reported experiencing mental health problems in the pre-COVID-19 period. These levels had increased to 20.1% of women and 13.6% of men at the end of the previous national lockdown (February-March 2021) but have come down to 7.5% and 2.0%, respectively, in July 2021 (OR for women and men combined =0.28; 95%CI, 0.17-0.43; $p<0.001$).

Impact of COVID-19 on HIV risk and use of prevention services

The results of the survey to date on the effects of the COVID-19 pandemic on HIV risk behaviours and on use of HIV services in the study population are shown in Table 2. Results on similar indicators from the

2018/19 pre-COVID-19 survey are shown for comparison. Some caution should be exercised in interpreting differences between the results of the two surveys bearing in mind: 1) the change in data collection methods from face-to-face interviews in 2018/19 to telephone-based interviews in 2021; 2) that intensified VMMC and PrEP promotion activities were implemented amongst young people for 6 months after the 2018/19 survey in parts of the study sites; and 3) that, in some cases, sample sizes are small. Survey data on sexual risk behaviours can be subject to participation, recall and social desirability biases.

There were no differences in the proportions of male and female respondents reporting at least one non-regular sexual partner in the last 12 months between February and July 2021 compared to the pre-COVID-19 period (15.9% *versus* 15.4% for men; 6.0% *versus* 6.2% for women). The proportions of sexually-active respondents reporting more than one partner in the last month were lower in the current survey period for men (2.3% *versus* 3.2%) but not for women (1.0% *versus* 1.1%). This proportion was higher for men and women combined between May and July 2021 than between February and April 2021 (1.96% *versus* 1.00%; OR=2.01; 95%CI, 1.28-3.24; $p<0.001$).

Amongst men and women whose most recent sexual partner was a non-regular partner, the proportion who reported using condoms all or most of the time in the last 2 weeks rose slightly to 86.5% in the current survey period from 83.4% in the pre-COVID-19 period. People who are continuing to have casual partners in the COVID-19 period may be disproportionately those who do use condoms on a consistent basis. However, the numbers reporting casual partners are quite small. In both periods, most survey respondents with non-regular sexual partners were motivated to use condoms and felt able to access them (lack of access increased only slightly to 2.0% from 1.2%) and lack of capacity to use condoms effectively (e.g. due to low skills, low self-efficacy or lack of partner support) was the main barrier to use (>45% in both periods).

Uptake of VMMC in the last month in young men in Manicaland had fallen to 0.87% in the current survey period from 3.8% prior to the COVID-19 pandemic. Lack of motivation to take up VMMC actually declined to 27.6% from 44.2% (i.e. *more* men reported wanting to get circumcised) but reports of lack of access to VMMC services amongst those wanting to be circumcised increased to 18.2% from 10.5%. Reports of lack of capacity to take up VMMC services amongst young men with motivation and access to these services also increased to 64.6% from 42.8%.

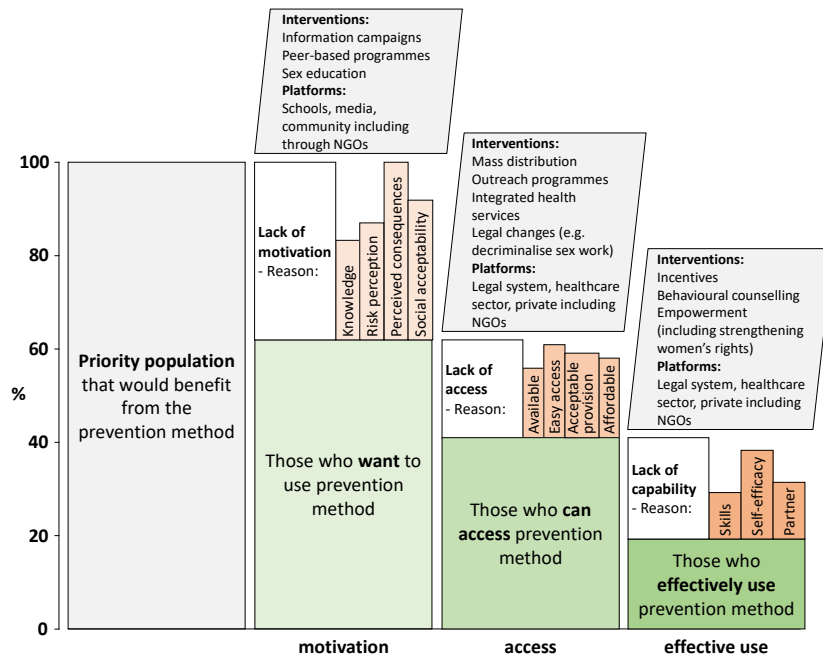
Use of PrEP amongst sexually-active HIV-negative adolescent girls and young women was very low (0.5%) in the study areas prior to COVID-19 and had increased only marginally (to 1.4%) in the current survey period despite intensive promotion activities in some of the study areas. Lack of motivation to use PrEP fell to 83.2% from 92.1% and lack of access to PrEP services fell to 17.5% from 23.3%, possibly due to increases in knowledge of PrEP and local provision, but lack of capacity to use PrEP effectively was reduced only slightly to 89.4% from 91.3%.

Self-reports of HIV testing in the last 12 months amongst sexually-active HIV-negative individuals were high (>60%) in both sexes and did not reduce following the COVID-19 outbreak. Perhaps surprisingly, reports of lack of access to HIV testing services actually fell to 5.3% in the current survey period from 8.2% in the pre-COVID-19 period. This reduction was particularly strong in women (to 2.3% from 5.9%).

In the current survey, 7.0% of men and 10.8% of women with recent symptoms of sexually transmitted infections (STIs) reported not having sought treatment within one week. The proportion of women who delayed seeking treatment fell steadily from 20.8% in February-March 2021 to 3.8% in June 2021 but increased to 12.5% in July 2021.

There is little evidence in the data for a reduction in self-reported recent cessation or inconsistent adherence to ART in the overall survey period (9.5%) compared to the pre-COVID-19 period (8.5%). However, there is a suggestion in the data that adherence may have decreased during the latest outbreak and lockdown period with 11.7% self-reporting cessation or inconsistent ART adherence in June-July 2021 compared to 8.5% in the pre-COVID-19 period (OR=1.43; 95%CI, 0.87-2.30; $p=0.14$).

Figure: Illustrative HIV prevention cascade elaborating gaps in implementation of an HIV prevention method in a hypothetical priority population, explanatory factors that may contribute to these gaps, and intervention approaches and platforms that may be appropriate to address these factors.





COVID-19 AND IT'S IMPACT ON HIV RISK AND USE OF HIV PREVENTION METHODS

Table 1: COVID-19 INDICATORS 28 July 2021

Indicator	Combined			Males			Females					
	Cumulative			Cumulative			Cumulative					
	28 Jul '21	29 Jun '21	28 May '21	28 Jul '21	29 Jun '21	28 May '21	28 Jul '21	29 Jun '21	28 May '21			
1 COVID-19 knowledge index (%)	61	59	61	60	64	60	60	64	63	61	60	65
2 COVID-19 compliance index (%)	74	73	72	75	76	72	73	75	75	74	76	77
3 COVID-19 risk perception (%)	15	5	15	19	17	15	22	17	5	14	12	18
4 Social contacts	14	10	18	14	12	18	17	15	6	18	11	10
SARS-CoV-2 cases												
5a Confirmed symptomatic (%)	2.1	2.1	2.8	2.2	1.6	1.1	0.9	1.9	1.6	3.7	2.9	2.0
5b Confirmed asymptomatic (%)	0.3	0.8	0.4	0.5	0.2	0.3	0.0	0.0	0.5	0.6	0.7	0.1
5c Suspected (%)	2.3	1.8	2.3	2.4	1.5	0.5	2.2	1.2	2.2	3.9	2.5	2.5
6 COVID-19 vaccine hesitancy (%)	19	14	10	17	30	10	13	20	16	10	19	28
7 COVID-19 vaccine coverage (%)	22	48	40	24	2	50	32	19	47	43	26	6
8 Intimate partner violence (%)	6.6	5.4	4.6	5.8	8.4	8.9	6.8	13.6	5.4	4.6	5.8	8.4
9 Mental health problems (%)	14.5	4.7	14.7	12.8	17.6	9.3	7.2	6.8	7.5	16.9	16.6	21.9
Total number of participants	8500	383	2531	2260	1099	3590	901	428	186	1315	1359	1378



COVID-19 AND IT'S IMPACT ON HIV RISK AND USE OF HIV PREVENTION METHODS

Table 2: HIV RISK INDICATORS 28 July 2021

Indicator	Combined			Males			Females															
	Cumulative	Pre-COVID	Month ending	Cumulative	Pre-COVID	Month ending	Cumulative	Pre-COVID	Month ending													
	28 Jul '21	29 Jun '21	28 May '21	29 Jun '21	28 May '21	27 Apr '21	28 Jun '21	27 Apr '21	26 Mar '21													
HIV risk behaviours																						
1 Non-regular partner(s) in last 12 months	9.9	9.6	13.4	10.2	8.7	10.6	8.7	15.9	19.7	14.4	14.8	18.2	15.9	6.0	6.2	8.0	6.9	5.1	6.5	4.4		
2 Multiple partners in last month	1.5	1.9	2.5	1.9	1.7	1.1	0.7	2.3	3.2	3.8	2.3	2.9	1.6	1.8	1.1	1.3	1.6	1.0	0.8	0.0		
3 Unprotected sex at last sex with a non-regular partner	13.5	16.6	13.0	14.8	10.9	13.8	14.9	22.4	17.2	6.7	23.8	19.6	25.3	25.1	7.5	15.9	18.5	7.3	5.6	8.7		
Gaps in condom cascade for people with non-regular partners																						
3a Lack of motivation	6.2	5.4	3.2	8.6	5.3	5.9	4.4	11.9	5.3	4.5	15.3	11.4	12.5	5.7	2.4	5.5	2.0	2.9	1.5	2.3	3.7	
3b Lack of access	2.0	1.2	1.8	1.8	1.4	2.0	3.5	1.3	1.2	0.0	0.7	1.1	2.3	1.8	3.3	1.2	6.7	4.4	1.8	1.5	6.7	
3c Lack of capacity to use effectively	55.6	46.6	100.0	100.0	66.7	40.0	40.0	28.6	46.5	0.0	100.0	0.0	25.0	0.0	72.7	46.6	100.0	100.0	50.0	100.0	50.0	
Gaps in VMMC cascade																						
5 VMMC uptake in last month																						
5a Lack of motivation																						
5b Lack of access																						
5c Lack of capacity to use effectively																						
Gaps in PrEP cascade																						
6 Currently using PrEP																						
6a Lack of motivation																						
6b Lack of access																						
6c Lack of capacity to use effectively																						
Gaps in HIV testing cascade																						
7 HTS uptake in last 12 months	65.1	59.5	54.8	62.8	68.5	66.3	61.0	63.9	52.3	68.0	60.7	68.6	62.9	63.3	66.8	64.2	58.6	65.1	69.0	69.0	61.0	
7a Lack of motivation	6.0	8.7	16.1	5.4	5.0	7.1	5.8	4.8	10.2	8.0	5.8	3.4	5.3	3.9	5.2	7.6	0.0	4.1	5.0	6.4	4.8	
7b Lack of access	5.3	8.2	1.9	6.3	3.2	5.1	8.7	11.0	12.0	0.0	12.4	8.7	12.4	11.6	2.3	5.9	3.5	1.9	0.7	1.7	7.2	
7c Lack of capacity to use effectively	26.8	28.9	33.3	29.1	25.5	24.8	29.2	24.6	33.9	26.1	26.5	22.2	24.3	25.5	27.9	26.1	39.3	30.8	26.9	25.0	31.0	
8 Delayed seeking STI treatment	10.3	N/A	10.0	4.4	9.8	10.4	18.9	7.0	N/A	0.0	6.3	9.1	11.1	0.0	10.8	N/A	12.5	3.8	9.9	10.3	20.8	
9 Gaps in ART adherence	9.5	8.5	13.2	11.5	7.6	9.9	6.9	12.4	11.0	22.2	11.8	10.1	11.7	14.8	8.2	7.5	8.6	11.3	6.5	9.2	4.0	
Total number of participants	8500	9803	383	2531	2260	2226	1099	3590	4074	197	1216	901	848	428	4910	5729	186	1315	1359	1378	671	

APPENDIX

Notes on construction of COVID-19 and HIV risk indicators

COVID-19 indicators

COVID-19 knowledge index: Constructed using responses to questions on five ways in which the new coronavirus can spread from person-to-person. These are from droplets from coughing and sneezing; touching people who have the virus; touching surfaces with the virus; touching eyes, nose and mouth with unclean hands; and contact with body fluids from an infected person. Greater weight given to correct answers that are given spontaneously.

COVID-19 compliance index: Constructed using responses to questions on levels of consistency of compliance with guidance on hand washing and sanitising, avoiding social gatherings, going out for non-essential reasons, wearing face masks, and on following Government regulations on safety when using public transport.

COVID-19 risk perception: Measured using a question on the respondent's perception of his or her own chances of contracting the COVID-19 virus.

Social contacts: A social contact was defined to be an interaction between two individuals – either physical, involving skin-to-skin contact such as a handshake, or non-physical, involving a two-way conversation with three or more words in the physical presence of each other but with no skin-to-skin contact. Calculated as the total number of such contacts in a day at work, on public transport, or at bars, restaurants, nightclubs or shebeens.

Confirmed symptomatic SARS-CoV-2 cases: Based on self-reports of having received a positive SARS-CoV-2 test result after developing common symptoms of COVID-19 disease.

Confirmed asymptomatic SARS-CoV-2 cases: Based on self-reports of having received a positive SARS-CoV-2 test result after testing for reasons other than developing common symptoms of COVID-19 disease (e.g. contacts of confirmed cases, health workers and hospital patients).

Suspected COVID-19 cases: Individuals self-reporting suspected COVID-19 disease who also reported having experienced common symptoms of COVID-19 disease (i.e. fever, cough and/or loss of sense of smell or taste) since April 2020.

COVID-19 vaccine hesitancy: Constructed for survey participants of all ages using responses to Likert scale questions on how strongly respondents agreed that COVID-19 vaccines were safe, effective, compatible with their religious beliefs, and important to take.

COVID-19 vaccine coverage: Measured using a question that asks the respondent whether he or she has received the vaccine themselves. We don't currently have questions specifically about the vaccine type of about first and second doses. The indicator is measured in people aged over 55 years or with underlying health conditions.

Intimate partner violence: A UNAIDS Global AIDS Monitoring Report (2021) indicator for monitoring the 2016 Political Declaration on Ending AIDS based on women's reports of one or more of nine forms of physical or sexual violence in the 12 months preceding the interview.

Mental health problems: The WHO PHQ-9 scale was used to identify those with moderate, moderately severe, or severe depression.

HIV risk indicators

Non-regular partners in last 12 months: Proportion of respondents who have ever had sex reporting one or more non-regular sexual partners in the 12 months preceding the interview.

Multiple partners in last month: Proportion of respondents who have ever had sex reporting more than one sexual partner in the month preceding the interview.

Unprotected sex with recent non-regular partner: Proportion of respondents whose most recent sexual partner was a non-regular partner who report not using condoms all the time or most of the time in the last two weeks.

Gaps in the condom cascade for people with non-regular partners: Proportions of respondents with non-regular partners in the last two weeks who: 1) lacked motivation to use condoms; 2) were motivated but lacked access to condoms; and 3) were motivated and could access condoms but were unable to use them effectively. See the Figure below for a pictorial representation of the HIV prevention cascade formulation used in the study.

VMMC uptake in the last month: Proportion of previously-uncircumcised young men (ages 15-29 years) who took up VMMC in the last month.

Gaps in the VMMC cascade: Proportions of young men who: 1) lacked motivation to take up VMMC; 2) were motivated but lacked access to VMMC; and 3) were motivated and could access VMMC but lacked the capacity to take it up (e.g. due to lack of social/practical skills, self-efficacy, or partner support).

PrEP use in the last month: Number of HIV-negative young women (aged 15-24 years) who were sexually-active in the last month who reported using PrEP currently.

Gaps in the PrEP cascade: Proportions of young women who: 1) lacked motivation to take up PrEP; 2) were motivated but lacked access to PrEP; and 3) were motivated and could access PrEP but lacked the capacity to take it up (e.g. due to lack of social/practical skills, self-efficacy, or partner support).

HIV testing in the last 12 months: Proportion of sexually-active HIV-negative respondents who reported an HIV test in the last 12 months.

Gaps in the HIV testing cascade: Proportions of HIV-negative sexually-active respondents who: 1) lacked motivation to take up HIV testing; 2) were motivated but lacked access to HIV testing; and 3) were motivated and could access HIV testing but lacked the capacity to take it up in the last 12 months.

Delayed seeking STI treatment: Respondents reporting symptoms of sexually transmitted infections who took longer than 7 days to seek treatment.

Gaps in ART adherence: Proportion of people living with HIV initiated on ART who reported having stopped taking the drugs in the last year, taking the drugs occasionally or never in the last month, or forgetting to take the drugs occasionally or quite often in the last month.