



## **GUIDANCE FOR POPULATING THE HARARE HIV PREVENTION CASCADE**

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**Prepared by: Louisa Moorhouse & Simon Gregson**

## 1. Steps to populating the HIV Prevention Cascade

The following steps should be taken to populate this HIV prevention cascade:

- 1) **Priority population:** Establish the priority population as a population that would benefit from using HIV prevention according to the population or research question of interest
- 2) **Main bars:**
  - a. **Use:** Calculate the number within the priority population using the HIV prevention method of interest according to the chosen definition of effective use. Suggested definitions are listed in Table 1.
  - b. **Motivation:** Calculate the number within the priority population who are motivated to use the HIV prevention method of interest according to the chosen definition of motivation. Suggested definitions are listed in Table 1. Recode all individuals who are reporting use but not motivation to be motivated.
  - c. **Access:** Calculate the number within the priority population who are motivated to use and report access to the HIV prevention method of interest according to the chosen definition of access. Suggested definitions are listed in Table 1. Recode all individuals who are reporting use but not access to have access. Where data is available, recode all individuals reporting motivation and at least one barrier to access as not having access.
  - d. **Calculate motivation, access, and use as proportions:** Each main bar of the cascade is presented as a proportion with the calculations:

$$\text{Proportion motivated} = \frac{\text{number of individuals reporting to be motivated to use a prevention method}}{\text{number of individuals in priority population}}$$

$$\text{Proportion with access} = \frac{\text{number of individuals reporting to be motivated to use and have access to a prevention method}}{\text{number of individuals in priority population}}$$

$$\text{Proportion effectively using} = \frac{\text{number of individuals reporting to be motivated to use, have access to and be effectively using a prevention method}}{\text{number of individuals in priority population}}$$

95% confidence intervals for each main bar proportion can be calculated and displayed around the main bars of the HPC framework.

- 3) **Explanatory sub bars:** Where data are available explanatory sub bars for each step can be populated using suggested definitions in Table 2. The explanatory sub bars should be limited to those falling within the gaps between each of the main bars in the cascade. Motivation related sub-bars should only be experienced by those who are in the priority population but unmotivated. Access related sub-bars should only be experienced by those in the priority population who are motivated but do not report access. Effective use sub-bars should only be experienced by those in the priority population who are motivated and have access but do not report using the prevention method of interest.
- 4) **Combination prevention:** Where data are available, the measures of individual prevention method motivation, access and use can be combined to produce combination prevention cascades. Depending on the population of interest and research questions, criteria for combination motivation, access or use can either be:

- a. **Using at least one prevention method** – bars for combination use should be created where individual meeting the criteria for the respective bar for at least one prevention method fall within that bar
- b. **Using multiple prevention methods at the same time** - bars for combination use should be created where individuals meeting the criteria for the respective bar for at all prevention methods of interest fall within that bar

Main bars only should be populated for combination prevention cascades. If gaps are identified from this analysis, the cascades should be split into individual prevention methods and at this point explanatory sub bars should be populated to understand the barriers relevant to each prevention method. At this point, common barriers across prevention methods within the priority population could be identified.

- 5) **Comparison to national/international targets** – calculate the percentage of the priority population who report motivation, the percentage of those motivated who report access and the percentage of those motivated and with access who report effect use. Compare these with the 90-90-90 equivalent targets if and where available, such as those set out in the UNAIDS HIV Prevention 2025 Road Map<sup>1,2</sup>.

**2. Final proposed module of HIV Prevention Cascade questions to populate main bars**

Table 1 - proposed definitions of each main bar of the HIV prevention cascade

Prevention method	Prevention Cascade Domain	Measure to populate bar
Male condoms	Motivation	<p><u>Regular partners:</u> Wants to use male condoms with regular partner if they were freely accessible</p> <p><u>Non-regular partners:</u> Wants to use male condoms with non-regular partner if they were freely accessible</p> <p><u>Regular and non-regular:</u> if respondent has both regular and non-regular they need to be motivated for both of these partners, so combine the two measures above.</p>
	Access	<p>Respondent responds if/when they want to use male condoms they know a place where they can get them (plus those who are effectively using but do not meet access criteria)</p> <p><b>AND</b></p> <p>Not reporting any barriers to access to male condoms</p>
	Use	<p>Respondent reports using male condoms at last sex as HIV prevention method now (if available, with the relevant type of partner (regular/non-regular))</p>
PrEP	Motivation	<p>At least one of:</p> <ul style="list-style-type: none"> <li>- Respondent wants to use PrEP if it was freely accessible</li> </ul> <p><b>IF CAPACITY FOR SECOND QUESTION</b></p> <ul style="list-style-type: none"> <li>- Respondent plans to start using PrEP</li> </ul>
	Access	<p>Respondent responds if/when they want to use PrEP they know a place where they can get them (plus those who are effectively using but do not meet access criteria)</p> <p><b>AND</b></p> <p>Not reporting any barriers to access to PrEP</p>

		Use	Respondent reports full medical male circumcision <b>AND IF AVAILABLE FOR PRIORITY POPULATION</b> Clinic confirmed PrEP use or adherence testing
VMMC		Motivation	At least one of: - Respondent reports they would get VMMC if it was freely accessible <b>IF CAPACITY FOR SECOND QUESTION</b> - Respondent plans to get VMMC
		Access	Respondent responds if/when they want to use VMMC they know a place where they can get them (plus those who are effectively using but do not meet access criteria) <b>AND</b> Not reporting any barriers to access to VMMC
		Use	Respondent reports full medical male circumcision <b>AND IF AVAILABLE FOR PRIORITY POPULATION</b> Clinic confirmed VMMC, or respondent shows VMMC certificate

### 3. Final proposed module of HIV Prevention Cascade questions to populate sub bars

Table 2 - proposed definitions of each explanatory sub-bar in the HIV prevention cascade

Prevention method	Prevention Cascade Domain	Barrier	Definition
<b>Male condoms</b>	Motivation	Lacks knowledge	At least one of: - Respondent has not heard of male condoms, either spontaneously or when probed. - Respondent responds that male condoms reduce a person's risk of getting HIV infection by <80%
		Lacks risk perception	Respondent perceives no or small future risk of HIV infection in the next 12 months
		Perceives consequences	At least one of: - Respondent is discouraged from using male condoms due to loss of own sexual pleasure
		Social unacceptability	At least one of: - Respondent is discouraged from using male condoms due to making them feel irresponsible or ashamed - Respondent reported views of any of religious leaders discouraged male condom use - Respondent reported views of any of parents/family elders discouraged male condom use - Respondent reported friends/community thinking they have HIV discouraged male condom use - Respondent reported friends/community views discouraged male condom use - Respondent disagrees it is acceptable for a husband and wife to use condoms (i) always, or (ii) if at least one of them is HIV+, or (iii) if one spouse has other partners, or (iv) if one spouse has an STI.
	Access	Lack of availability	Respondent doesn't know a place where male condoms are available.

			<i>Depending on context, there may be populations where male condoms are widely available and so it could be assumed that male condoms are always available, and nobody experiences this barrier.</i>
		Lack of affordability	Respondent reports high costs making it impractical to access male condoms
		Lack of easy access	At least one of: - Respondent reports limited opening hours make it impractical to access male condoms - Respondent rates access as ‘difficult’ or ‘very difficult’ to access male condoms if/when you they want to use them (unless using this question as the Simple measure for the main access bar) - Respondent feels unable to access male condoms from any of: - Health clinic - Community based distributor - Bars or beer halls - Shops - Sexual partner - Friends
		Lack of acceptable provision	At least one of: - Respondent responds that it is impractical or unsuitable to access male condoms due to lack of privacy/confidentiality - Respondent responds that it is impractical or unsuitable to access male condoms because embarrassed to go/ask - Respondent did not access male condoms because of judgemental staff/stigma

			Lack of self-efficacy	At least one of: - Respondent not confident can use male condoms if wanted to - Respondent not confident can use male condoms if they have to use them every time - Respondent not confident can use male condoms if partner dislikes/disapproves - Respondent not confident can use male condoms if my friends disapprove - Respondent not confident can use male condoms if parents and family elders disapprove
	Use		Lack of social skills	At least one of: Regular partners: - Respondent is not able to refuse sex with partner if regular partner does not want to use male condoms - Respondent is not able to discuss using male condoms with regular partner Non-regular partners: - Respondent is not able to refuse sex with partner if non-regular partner does not want to use male condoms - Respondent is not able to discuss using male condoms with non-regular partner
			Lack of practical skills	At least one of: - Respondent has not received instructions or counselling on how to use male condoms - Respondent does not replace male condom if it breaks



			Partner	<p>At least one of:</p> <p>Regular partner</p> <ul style="list-style-type: none"> <li>- Regular partner does/would disapprove of using male condoms</li> </ul> <p>Non-regular partner</p> <ul style="list-style-type: none"> <li>- Non-regular partner does/would disapprove of using male condoms</li> </ul> <p>All</p> <ul style="list-style-type: none"> <li>- Respondent was discouraged from using male condoms because partner(s) will think respondent has HIV</li> <li>- Respondent was discouraged from using male condoms because partner will think respondent has other partners</li> <li>- Respondent was discouraged from using male condoms because of partner's views</li> <li>- Respondent is discouraged from using male condoms due to partner's sexual pleasure</li> </ul>
<b>PrEP</b>	Motivation	Lacks knowledge	<p>At least one of:</p> <ul style="list-style-type: none"> <li>- Respondent has not heard about PrEP</li> <li>- Respondent does not think PrEP works</li> <li>- Respondent thinks PrEP reduces risk of HIV infection by &lt;80%</li> </ul>	
		Lacks risk perception	Respondent perceives no or small future risk of HIV infection in the next 12 months	
		Perceives consequences	<p>At least one of:</p> <ul style="list-style-type: none"> <li>- Respondent stopped PrEP/did not use PrEP due to experiencing side effects</li> <li>- Respondent discouraged from using PrEP due to possible side effects</li> </ul>	

		Social unacceptability	At least one of: - Respondent is discouraged from using PrEP due to making them feel irresponsible or ashamed - Respondent reported views of any of parents/family elders discouraged PrEP use - Respondent reported views of any of religious leaders discouraged PrEP use - Respondent reports friends (or their partners) are not using PrEP
	Access	Lack of availability	At least one of: - Respondent stopped using PrEP/does not use PrEP due to stock out drugs at clinics - Respondent has never been offered PrEP
		Lack of affordability	At least one of: - Respondent stopped using/did not use PrEP due to high costs - Respondent discouraged from using PrEP due to high costs involved - Respondent reports it is impractical or unsuitable to access PrEP services because of high costs
		Lack of easy access	At least one of: - Respondent reports not using PrEP, or it is impractical or unsuitable to access PrEP due to limited opening hours - Respondent reports not using PrEP due to distance/travel difficulties - Respondent reports it is difficult or very difficult to accessing PrEP services if/when they want to use it (depending on if this question is used in main bar definition of having access)

		Lack of acceptable provision	<p>At least one of:</p> <ul style="list-style-type: none"> <li>- Respondent stopped PrEP/did not use PrEP due to lack of confidentiality</li> <li>- Respondent stopped PrEP/did not use PrEP due to judgemental staff/stigma</li> <li>- Respondent discouraged from accessing PrEP services due to a lack of privacy/confidentiality</li> <li>- Respondent responds that it is impractical or unsuitable to access PrEP services because embarrassed to go/ask</li> </ul>
	Use	Lack of self-efficacy	<p>At least one of:</p> <p>(With disagreement on a scale of ‘strongly disagrees’ ‘disagrees’, ‘neutral’, ‘agree’, ‘strongly agree’)</p> <ul style="list-style-type: none"> <li>- Respondent (strongly) disagrees that they are confident to use PrEP if they wanted to</li> <li>- Respondent is discouraged from using PrEP if friends disapprove</li> <li>- Respondent is discouraged from using PrEP if family elders/parents disapprove</li> <li>- Respondent (strongly) disagrees that they are confident to use PrEP if community would think they have HIV</li> </ul>
		Lack of social skills	Respondent is not able to discuss taking PrEP with partner
		Lack of practical skills	<p>At least one of:</p> <ul style="list-style-type: none"> <li>- Respondent is discouraged from using PrEP because it is inconvenient to take pills daily</li> <li>- Respondent (strongly) disagrees that they are confident to use PrEP if they have to take it every day (with disagreement on a scale of ‘strongly disagrees’ ‘disagrees’, ‘neutral’, ‘agree’, ‘strongly agree’)</li> <li>- Respondent did not use PrEP/stopped using PrEP due to forgetting to take pills</li> <li>- Respondent did not use PrEP/stopped using PrEP due to running out of pills</li> <li>- Respondent has not received instruction/counselling on how to use PrEP</li> <li>- Respondent does not always or mostly does not take PrEP with a meal</li> </ul>

		Partner	At least one of: (With disagreement on a scale of ‘strongly disagrees’ ‘disagrees’, ‘neutral’, ‘agree’, ‘strongly agree’) - Respondent (strongly) disagrees that they are confident in using PrEP even if they have to hide it from partner - Respondent reports partner would disapprove if they used PrEP - Respondent does not use/stopped using PrEP due to sexual partner disapproval
<b>VMMC</b>		Lacks knowledge	At least one of: - Respondent has not heard of VMMC - Respondent has not been offered VMMC - Respondent thinks reduction of risk in infection offered by VMMC is less than 50%
		Lacks risk perception	Respondent perceives no or small future risk of HIV infection in the next 12 months
	Motivation	Perceives consequences	At least one of: - Respondent is discouraged from having VMMC due to pain - Respondent is discouraged from having VMMC because operation cannot be reversed - Respondent is discouraged from having VMMC because of loss of own sexual pleasure
		Social unacceptability	At least one of: - Respondent is discouraged from having VMMC because of views of religious leader - Respondent is discouraged from having VMMC because of views of parents or family elder - Respondent reports friends (or their partners) have not had VMMC
	Access	Lack of availability	Respondent reports that it is difficult or very difficult to access VMMC services if they wished to

		Lack of affordability	At least one of: - Respondent reports it being impractical or unsuitable to access VMMC services due to high cost including loss of income - Respondent reports it being impractical or unsuitable to access VMMC services due to inability to work during/after procedure
		Lack of easy access	At least one of: - Respondent reports it is impractical or unsuitable to access VMMC services due to distance/travel difficulties - Respondent reports it is impractical or unsuitable to access VMMC services due to limited opening hours
		Lack of acceptable provision	At least one of: - Respondent responds that it is impractical or unsuitable to access VMMC services because of lack of privacy/confidentiality - Respondent responds that it is impractical or unsuitable to access VMMC services because healthcare workers are female
	Use	Lack of self-efficacy	At least one of: (With disagreement on a scale of 'strongly disagrees', 'disagrees', 'neutral', 'agree', 'strongly agree') - Respondent (strongly) disagrees that they are confident they can get VMMC if they want to - Respondent (strongly) disagrees that they are confident they can get VMMC if friends disapprove - Respondent (strongly) disagrees that they are confident they can get VMMC if parents and family elders disapprove
		Lack of social skills	Respondent cannot discuss getting VMMC with partner

			Partner	<p>At least one of:</p> <ul style="list-style-type: none"> <li>- Respondent reports that partner would disapprove if they had VMMC</li> <li>- Respondent is discouraged from having VMMC because of partner's sexual pleasure</li> <li>- Respondent (strongly) disagrees that they are confident they can get VMMC if partner disapproves (with disagreement on a scale of 'strongly disagrees' 'disagrees', 'neutral', 'agree', 'strongly agree')</li> <li>- Respondent is discouraged from having VMMC because of partner's views</li> </ul>
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## **References**

1. UNAIDS. *HIV PREVENTION 2025 ROAD MAP*. (2022).
2. UNAIDS. *2025 AIDS TARGETS*. (2022).