Leveraging subnational data for target-setting using PrEP-it SHIPP

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Background

Setting appropriate prevention targets for the general population, including adolescent girls and young women and pregnant and breastfeeding women, are more challenging than for key populations. An individual's risk of HIV acquisition reflects both 1) personal characteristics and behaviors, and 2) the epidemiological context in which they are situated, primarily HIV prevalence and incidence in the surrounding population. As such, existing HIV risk-screening tools have shown variable predictive performance across populations and settings and may not reliably identify everyone who could benefit from PrEP.[1]

To address this methodological challenge, sub-national data on HIV prevalence and incidence, along with comprehensive survey data on sexual behaviors, can be leveraged to more accurately assess the population that should be prioritized for PrEP interventions. The *Sub-national HIV Estimates in Priority Populations (SHIPP)* data incorporates disaggregated data from the Naomi model, stratified by age, sex, and geographic location, and extends this disaggregation to include sexual behavior patterns. The dataset applies behavioral proportions based on household survey data and generates HIV-negative population sizes, estimated new infections, and incidence rates across these multiple dimensions of stratification.

PrEP-it SHIPP Feature

PrEP-it SHIPP is an optional feature in PrEP-it for 24 African countries that integrates the SHIPP dataset into PrEP-it's functionality. By doing so, PrEP-it can better estimate the "denominator" for PrEP—the number of individuals at higher risk of HIV acquisition who should be prioritized for PrEP. PrEP-it SHIPP incorporates disaggregated population size estimates and incidence data from SHIPP to facilitate evidence-based, national-level target setting based on HIV acquisition risk, categorized by incidence thresholds: High/Very High (>1%) and Moderate (0.3-.99% incidence). This feature enables more precise geographic targeting compared to national-level estimates alone.



Figure 1: Countries with PrEP-it SHIPP

[1] Oo MM, Rudd M, Shukalek C, Kishibe T, Hull M, Tan DHS. Diagnostic performance of HIV risk assessment tools for identifying pre-exposure prophylaxis candidates: a systematic review and meta-analysis. EClinicalMedicine. 2025 Sep 17;88:103487.

How to Use PrEP-it SHIPP

Most inputs and functionality in PrEP-it SHIPP are the same as the original PrEP-it tool. Step-by-step instructions on how to use original PrEP-it can be found on at the PrEP-it resources page: https://www.prepwatch.org/resources/prep-it/

There are three key differences when inputting data into PrEP-it SHIPP.

1. **Priority populations** – The priority populations are not customizable in PrEP-it SHIPP; they only include general population men and women, female sex workers (FSW), men who have sex with men (MSM), and people who inject drugs (PWID). Users must indicate the subnational areas where FSW, MSM, and PWID are located at this step based on their own national data.

2. **Prior program data** – When entering prior program data, in addition to the number of prior initiations by population and PrEP method (including oral PrEP, CAB-LA, dapivirine ring, and lenacapavir), users must include an age/sex breakdown and subnational breakdown of all included prior initiations. This is to allow the tool to appropriately calculate and disaggregate targets based on the SHIPP data.

3. **Target setting** – The tool estimates the number of people in need of PrEP and provides a suggested default endline coverage based on UNAIDS guidelines[2]. Users can edit the default coverage as appropriate for their specific needs.

Further information

For more details on how to use PrEP-it and PrEP-it SHIPP, please see the following resources:

- Step-by-step instructional presentations for original PrEP-it are available at https://www.prepwatch.org/resources/prep-it/.

- Users can also join the PrEP-it Community of Practice at https://prep-it-community-of-practice.mn.co to engage with other users on strategies for using the tool

- For questions using PrEP-it or PrEP-it SHIPP, please email prepithelp@avenirhealth.org.

- As technical experts on PrEP-it in the African region, the University Teaching Hospital HIV AIDS Program (UTH-HAP) in Lusaka, Zambia is available to provide technical assistance in using the tool. They can be reached through the Avenir Health help email address listed above.

[2] https://hivpreventioncoalition.unaids.org/en/resources/hiv-prevention-2030-global-access-framework-country-led-responses