

Who, where, and how?

Developing scenarios for the rollout of oral PrEP in Zimbabwe

¹N. Bhavaraju, ¹K. Muthur, ²M. Dunbar, ²D. Nhamo, ²I. Mahaka, ²J. Murungu, ³Z. Mukandavire, ⁴K. Torjesen, ⁵B. Nkomo, ⁵G. Ncube

¹ FSG, Washington, D.C., USA; ² Pangaea Zimbabwe AIDS Trust, Harare, Zimbabwe; ³ London School of Hygiene and Tropical Medicine, London, UK; ⁴ FHI 360, Durham, North Carolina, USA; ⁵ Ministry of Health and Child Care, Harare, Zimbabwe

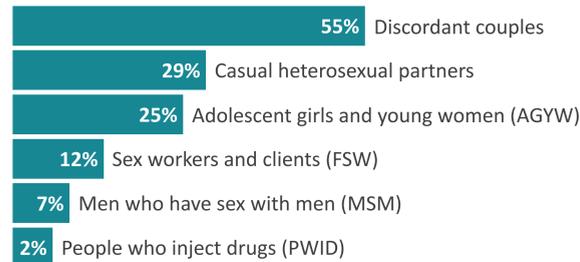
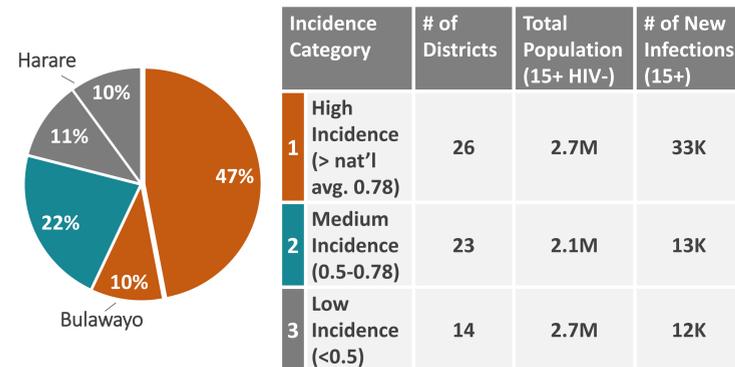
**OPTIONS refers to PrEP as the product category (inclusive of all formulations of ARV-based HIV prevention), and refers to specific products by formulation designation and/or name (e.g. oral PrEP/TDF-FTC, topical PrEP/dapivirine ring, injectable PrEP/cabotegravir, etc).*

BACKGROUND

Planning for national oral PrEP rollout in Zimbabwe

- In early 2017, Zimbabwe was planning for the **introduction of oral PrEP**, the first in a new category of biomedical HIV prevention products
- As the government considered the introduction of oral PrEP, questions were raised about how to **phase rollout across districts and populations**
- While epidemiological and cost-effectiveness **modeling** traditionally guide decisions, these analyses often require significant time and resources and Zimbabwe was seeking **new, rapid analytical methods** that could contribute to implementation planning in the absence of more robust methods

Proportion of National Adult 15+ New HIV Infections, 2015



Populations with unknown incidence, but high prevalence: commercial farmworkers, miners, and truck drivers

METHODS

Rapid analytical methods based on existing data

- We reviewed district-level data and Spectrum model estimates on HIV incidence and population demographics to identify districts with greatest impact potential for oral PrEP rollout
- The OPTIONS Consortium, with work from FSG, London School of Hygiene and Tropical Medicine, and Pangaea Zimbabwe AIDS Trust, worked with the Ministry of Health and Child Care and its national technical working group on oral PrEP to develop these analyses

RESULTS

8 scenarios for oral PrEP rollout

| Geographic Rollouts | | | | Population Rollouts | | | |
|---|--|---|--|---|---|--|--|
| 1 | 2 | 3 | 4 | 5 | 6 | 7 | 8 |
| Highest incidence districts | ZNASP hotspot districts | Districts with >1,000 annual new infections | Districts with >500 annual new infections | Sero-discordant couples | Adolescent girls and young women | Miners and commercial farm workers | FSW, MSM, and truck drivers |
| - 13 districts - 1.6M 15+ population - Incidence 1.2 – 1.9% | - 26 districts - 3.0M 15+ population - Incidence 0.4 – 1.9% | - 15 districts - 3.6M 15+ population - Incidence 0.5-1.7% | - 38 districts - 6.0M 15+ population - Incidence 0.4-1.9% | - 13 districts - ~580K PLHIV 15+ | - 7 districts - ~250K AGYW population | - 36 districts - ~260K workers | - 32 districts - ~115K key populations |
| ~40% new adult infections covered | ~55% new adult infections covered | ~55% new adult infections covered | ~85% new adult infections covered | ~20% new adult infections covered | >5% adult new infections covered | >5% adult new infections covered | >10% adult new infections covered |
| Captures 40% of new infections in a narrow, relatively low cost rollout to 13 highest incidence districts | Captures over half of new infections, but requires ~2x resources than Scenario #1 to reach more districts and people | Captures same new infections as Scenario #2 with rollout to similar population size but fewer districts (15 vs. 26) | Captures most new infections (85%), but is the most resource-intensive scenario with the biggest rollout | Captures 20% of new infections; PrEP can be offered to discordant partners via ART channels | Leverage learning from DREAMS to deliver PrEP to AGYW; small but difficult to target pop. | Engage private sector to provide PrEP to employees at little cost to government and donors | Captures small subset of new infections, but would be lower-cost, narrower rollout |
| MODERATE IMPACT | HIGHER IMPACT | HIGHER IMPACT | HIGHER IMPACT | LOWER IMPACT | LOWER IMPACT | LOWER IMPACT | LOWER IMPACT |
| LOWER TOTAL COST | MODERATE TOTAL COST | MODERATE TOTAL COST | HIGHER TOTAL COST | LOWER TOTAL COST | LOWER TOTAL COST | LOWER TOTAL COST | LOWER TOTAL COST |

Recommended scenarios

- Based on **district-level incidence and population data**, eight scenarios for oral PrEP rollout were identified
- There were **two types of scenarios**: four scenarios based on district-level HIV incidence data and four scenarios based on populations that span districts
- Scenarios differ** by the number of districts and people they would cover as well as the number of new infections that originate in those districts or populations
- Based on the number of new infections originating in the districts in each scenario, a relative **impact estimate** for oral PrEP rollout was determined (high / medium / low impact)
- Based on the number of districts and population size in each scenario, a relative **cost of oral PrEP rollout** was determined (high / medium / low total cost)
- Based on this analysis, the following **recommendations** were made:
 - Population-specific rollouts** will not reach a significant number of HIV infections, although some (e.g., miners and commercial farmworkers) may be able to leverage private sector funding and existing delivery channels
 - District-level rollouts** do reach significant numbers of new HIV infections. In particular, Scenario #1 provides the highest impact in a low-resource situation and Scenario #3 provides high impact for a moderate-resource situation

CONCLUSIONS

A rapid, low-cost approach to developing cost and impact comparisons effectively informed Zimbabwe's national implementation planning

- The rollout scenarios were used in Zimbabwe's national implementation planning for oral PrEP rollout by the national technical working group and the Ministry of Health and Child Care
- While the need for further cost-effectiveness and impact modeling was recognized, this interim analysis was helpful in articulating the general parameters and trade-offs of different scenarios for phased rollout of oral PrEP and helped inform decisions based on differing levels of resource availability
- The scenarios were developed with minimal effort and resource requirement. As such, this type of analysis can be an effective complement to more resource-intensive modeling analysis, especially when those analyses require additional resource and time to complete
- These scenarios informed Zimbabwe's 2017 application to the Global Fund and this approach will be used to support planning for oral PrEP rollout in other countries in 2017 and 2018

Sources: Zimbabwe 2015 HIV Estimates, Spectrum/EPP Model, Avenir Health, 2015; Smart Investment to End HIV/AIDS in Zimbabwe based on Hotspot Analysis, Zimbabwe National Aids Council (NAC), Ministry of Health and Child Care (MOHCC), World Food Program (WFP), UNAIDS, and PEPFAR, 2015; Zimbabwe National HIV and AIDS Strategic Plan (2015-2018), 2015; PEPFAR Zimbabwe Country Operational Plan (COP), 2016; Analysis of HIV Epidemic, Response, and Modes of Transmission, Zimbabwe National Aids Council (NAC), Ministry of Health and Child Care (MOHCC), World Bank, and UNAIDS, 2011; Zimbabwe Global AIDS Response Progress Report, UNAIDS, 2016; National Survey of HIV and Syphilis Prevalence Among Women Attending Antenatal Clinics in Zimbabwe, Ministry of Health and Child Care (MOHCC), 2013.



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