

# Private Sector PrEP Delivery Policy And Regulatory Landscaping In Sub-Saharan Africa

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STRATEGIC ANALYSIS,  
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# PROJECT OVERVIEW

**Motivation:** This work aims to assist the Bill & Melinda Gates Foundation in developing a more holistic view of the opportunity in using private pharmacies and clinics as an innovative delivery channel for PrEP and inform possible scale-up strategies.



## Project Objectives & Aims

- **Project Objective:** Conduct a landscape assessment of regulatory and policy barriers to PrEP (oral and long-acting) delivery through private sector pharmacies and clinics across Sub-Saharan Africa.
- **Aim 1:** Understand the landscape of existing national strategies, policies, and funding related to HIV prevention, including PrEP.
- **Aim 2:** Describe the landscape of pharmacy services and capabilities related to, but not limited to, PrEP and contraceptive care.
- **Aim 3:** Explore the public-private partnerships in key geographies and the existing delivery channels for health services.

## Background

● **HIV** – 37.7 million adults and children are living with HIV/AIDS and the highest burden comes from sub-Saharan Africa (two-thirds). In 2020, about 1.5 million new infections occurred with estimated deaths of 680,000.

● **PrEP** – PrEP is highly effective for HIV prevention (roughly 99%), and currently exists as either a pill, vaginal ring, or an injection. Currently, there is a lack of accessible and cost-effective delivery methods for PrEP. Pharmacies may be able to fill this gap given their increased privacy, user preference, shorter wait times, and diverse clientele. However, in some countries, pharmacists are not allowed to prescribe PrEP.

## METHODS

### SCOPING

#### Country Selection\*

- Number of people with HIV/AIDS
- Number of adolescents (10-19) with HIV/AIDS
- Number of women (15+) with HIV/AIDS
- Adult prevalence of HIV/AIDS
- Annual deaths from HIV/AIDS
- Catalyst Global results

#### Research Questions

- What is the burden of HIV/AIDS?
- What is the current availability of PrEP?
- What is the funding distribution for HIV/AIDS?
- What are the current pharmacy services and pharmacist capabilities?
- What are the delivery channels for health services and community-focused work?
- What are the existing public-private partnerships?

### RESEARCH METHODS

### DATA ANALYSIS

### SYNTHESIZE FINDINGS

#### Grey Literature

Searched grey literature including but not limited to: National Strategic Frameworks (NSF) and Country Operational Plans (COP); Reports from WHO & MSF; PEPFAR & Global Fund documents; Global PrEP tracker; Country-specific drug guidelines.

#### Subject Matter Experts

Contacted content and in-country experts, through email and ZOOM (Appendix 2).

#### Rapid Review of Published Literature

Conducted PubMed/MEDLINE search with 6 unique search strings (Appendix 1). Identified 187 articles, of which 15 were of relevance after title and abstract screening.

## Organization of Findings

### Country Overview

- HIV Epidemiology
- PrEP Overview

### PrEP Landscape

- Injectable PrEP
- Key stakeholders
- National strategies including PrEP

### Private-Public Partnerships

- Private pharmacy landscape
- Pharmacists role in PrEP
- Case studies

### Summary

- Barriers
- Facilitators

\*Malawi, South Africa, and Kenya were excluded due to existing research in these countries

# COUNTRY SPECIFIC FINDINGS

Tier	Country	Government contribution towards HIV prevention funding	Proportion of total HIV funding that goes towards prevention	Availability of multiple forms of PrEP	Presence of DREAMS	Presence of MOSAIC	Delivery channels for health services and community-focused work	Political will
1	Zimbabwe							
	Uganda							
	Eswatini							
2	Mozambique							
	Zambia							
	Nigeria							
3	Tanzania							
	Ghana							

Tiers were determined by the indicators, of which key variables are listed in the columns of the above table. We ranked tiers by the following: Burden of HIV/AIDS (Incidence Rate, Prevalence); Availability of PrEP (PrEP Presentation and Availability, Injectable PrEP and use of CAB-LA, Key Stakeholder Engagement, National Strategic Focus on PrEP); HIV Funding (Total Annual Funding, Sources of Funding for Treatment and Prevention, Share of Funding Allocated to Prevention and/or PrEP); Pharmacy Landscape and Pharmacist Capabilities (Number and Distribution of Pharmacies, Catalyst Global Rankings, Pharmacists Ability to Dispense and Prescribe); Public-Private Partnerships (Regulations Related to PrEP Approvals and Distribution, Private Supply Chain Logistics).



COUNTRY OVERVIEW



PrEP LANDSCAPE



PRIVATE-PUBLIC PARTNERSHIPS



PRIVATE SECTOR PrEP DELIVERY

Zimbabwe

**Burden of HIV:** 1.34 million people are currently living with HIV  
**Prevalence and Incidence rate:** currently stands at 9% and 0.4% respectively  
**AGYW (15 -24yrs):** Are mostly affected by HIV epidemic with a prevalence rate of 5%, almost double of that of males in the same age range.  
 PrEP demand is high amongst MSM and FSW KP  
**AGYW at risk of HIV acquisition in DREAMS districts:** 407,332

**Oral PrEP:** Currently available for use in the country.  
**CAB LA and PrEP ring:** Have been approved and awaiting roll-out.  
**National strategic framework and COP22:** suggests greater attention towards PrEP and new PrEP products.  
**Funding:** 12% of HIV funds goes into prevention with PEPFAR driving most PrEP spendings. Domestic funding is mostly channeled towards health systems strengthening while external funding (PEPFAR and GF) is heavily skewed towards commodities and supply chain costs

**MOSAIC\*:** Exists, and Catalyst

**DREAMS\*\*:** Exists

**Other Channels:** Government provides overall stewardship towards PrEP and new PrEP products. The Public-Private partnership strategy towards universal access to quality for HIV and AIDS and TB services in Zimbabwe

**Pharmacist Capabilities:**

Administer injections: No  
 Administer birth control injections: Yes  
 Dispense oral PrEP: No  
 Prescribe PrEP: No  
 Self-injectable Contraceptive: Yes  
**Other Pharmacy Landscape:** Sexual Gender Based Violence Clinics and Population Services International Clinics distribute oral PrEP  
 HIV testing: pharmacy-based distribution was preferable to clinic-based distribution in urban areas

Uganda

**Burden of HIV:** About 1.4million people are currently living with HIV  
**Prevalence and Incidence rate:** currently stands at 5.5% and 0.4% respectively  
**AGYW (15 -24yrs):** Are mostly affected by HIV epidemic with a prevalence rate of 2.79%, as against males (0.9%) in the same age range.  
**PrEP demand:** is high amongst key populations with an increased target demands of reaching 180k of AGYW in COP 22

**PrEP forms:** Oral, ring and CAB LA forms of PrEP are approved in Uganda but oral PrEP, seems to still be the only form utilized currently.  
**National strategic framework and COP22:** suggests greater attention towards PrEP and new PrEP products with expectations to include CAB LA in future policy documents  
**Funding:** 12% of HIV funds goes into prevention with PEPFAR driving most PrEP spendings. PEPFAR and the Global Fund together accounted for about 97 percent of total HIV spending in FY 2018/19 with PEPFAR contributing 60% of total country HIV expenditure.

**MOSAIC\*:** Exists, and Catalyst

**DREAMS\*\*:** Exists

**Other Channels:** PrEPvacc Trial: Uptake and Objective Longitudinal Adherence among HIV-exposed Women with Personal or Partner Plans for Pregnancy in Rural Uganda

**Pharmacist Capabilities:**

Administer injections: Yes  
 Administer birth control injections: No  
 Dispense oral PrEP: Yes  
 Prescribe PrEP: No  
 Self-injectable Contraceptive: Yes  
**Other Pharmacy Landscape:** Personnel are very willing to prescribe and dispense PrEP. Issues: 1) a lack of privacy and 2) a lack of space in the clinic to administer injections new guidelines are expected to be published any day that demedicalize PrEP and allow pharmacists to prescribe oral PrEP

\*Partnership To Reduce HIV/AIDS In Adolescent Girls And Young Women

\*\*Maximizing Options to Advance Informed Choice for HIV Prevention

\*\*\*Catalyzing Access to New Prevention Products to Stop HIV



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# COUNTRY SPECIFIC FINDINGS



**COUNTRY OVERVIEW**



**PrEP LANDSCAPE**



**PRIVATE-PUBLIC PARTNERSHIPS**



**PRIVATE SECTOR PrEP DELIVERY**

**Eswatini**

**Burden of HIV:** About 215,208 people are currently living with HIV.  
**Prevalence and Incidence rate:** currently stands at 27% and 1.4% respectively – the highest in the world.  
**AGYW (15 -24yrs):** most infected population with a prevalence rate of 14% as against 4.1% for males in the same age bracket.  
**PrEP demand:** is high amongst key with targets set to increase for new KP initiated PrEP from 2,328 in COP21 to 2,829 in COP22.

**PrEP forms:** Oral PrEP is currently in use in Eswatini with ongoing CAB LA studies.  
**National strategic framework and COP22:** Shows an increased political will to scale new PrEP products.  
**Funding:** GOE contributes largely towards its HIV programs, spending up to 11% of total HIV funds towards prevention. Eswatini is one of the few countries that spends an increased amount of its budget (38%) on HIV programs with largest investments in clinical care, testing and treatment support. PEPFAR contributes largely towards PrEP services and takes a portion of DREAMS funding in 12 districts.

**MOSAIC\*:** Exists

**DREAMS\*\*:** Exists

**Other Channels:**  
 Veru Inc. has partnered with governments, donor agencies (including African countries) “to build successful reproductive and sexual health programs and policies that integrate [the] FC2 female condom”

**Pharmacist Capabilities:**  
 Administer injections: Unknown  
 Administer birth control injections: Unknown  
 Dispense oral PrEP: Unknown  
 Prescribe PrEP: Unknown  
 Self-injectable Contraceptive: No  
**Other Pharmacy Landscape:**  
 No relevant documentation of standardized registration and regulation process of private health providers and pharmacies.

**Mozambique**

**Burden of HIV:** About 2.1 million people are currently living with HIV.  
**Prevalence and Incidence rate:** currently stands at 6.4% and 0.2% respectively  
**AGYW (15 -24yrs):** most infected population with a prevalence rate of 5.0% as against 2.4% for males in the same age bracket.  
**PrEP demand:** PrEP targets increased from 55,000 in COP21 to 90,012 new enrollees in COP22

**PrEP forms:** Oral PrEP is currently in use in Mozambique  
**National strategic framework and COP22:** Shows an increased political will to scale PrEP program in the country  
**Funding:** 12% from HIV programs goes into prevention. Overall, PrEP budget has increased by 38% from COP21 to COP22, with a higher increase in PrEP funding for commodities at 47%. They increased their health budget up to 20% in FY21 with PEPFAR being the largest ‘vertical’-budget donor in Mozambique. PEPFAR and GF are the main sources of funds for the HIV response, accounting for approximately 83% of HIV expenditures.

**MOSAIC\*:** No

**DREAMS\*\*:** Exists

**Other Channels:**  
 Project Last Mile: GPS and medicine storage partnership

**Pharmacist Capabilities:**  
 Administer injections: No  
 Administer birth control injections: No  
 Dispense oral PrEP: Unknown  
 Prescribe PrEP: No  
 Self-injectable Contraceptive: Yes  
**Other Pharmacy Landscape:**  
 The private health sector is regulated and both private and public facilities require licenses for operating.

**Zambia**

**Burden of HIV:** About 1.3million people are currently living with HIV in Zambia  
**Prevalence and Incidence rate:** currently stands at 1.3% and 0.2% respectively  
**AGYW (15 -24yrs):** In 2021, over 40% of new HIV infections in Zambia occurred among AYP (15-24) with AGYW bearing the greatest burden: AGYW comprise 78% of new infections for this growing population.  
**PrEP demand:** Demand and initiations are high, but retention decreases to 12% after 12 months of initiation

**PrEP forms:** Oral PrEP is currently in use in Zambia  
**National strategic framework and COP22:** Mentions PrEP and inclusion plans into programs through KPs and the DREAMS program.  
**Funding:** 8% of its HIV funds goes into Prevention services. Govt largest contributions in HIV programming is in Laboratory services and treatment monitoring but PEPFAR and GF drives most of the funding for HIV and PrEP programs.

**MOSAIC\*:** Exists

**DREAMS\*\*:** Exists

**Other Channels:**  
*Corridors of Hope 2014:* Private pharmacists provide oral ART. For CIDRZ, 2024 proposing pilot distribution of PrEP through private pharmacies as a differentiated service delivery. Pharmacist receives a stipend of USD \$75 per month, which is equivalent to the amount paid to a lay volunteer at the facility level.

**Pharmacist Capabilities:**  
 Administer injections: No  
 Administer birth control injections: No, unless specially trained  
 Dispense oral PrEP: No  
 Prescribe PrEP: No  
 Self-injectable Contraceptive: Yes  
**Other Pharmacy Landscape:**  
 Private Pharmacies are major and trusted source of health information and services.  
**Central Dispensing Units:**  
 dispensing activities are centralized and generally automated, but delivery/pick-up of medication occurs at lockers, informal retail outlets, churches, supermarkets, health facilities, or Community Pharmacies.

\*Partnership To Reduce HIV/AIDS In Adolescent Girls And Young Women  
 \*\*Maximizing Options to Advance Informed Choice for HIV Prevention  
 \*\*\*Catalyzing Access to New Prevention Products to Stop HIV



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# COUNTRY SPECIFIC FINDINGS



**COUNTRY OVERVIEW**



**PrEP LANDSCAPE**



**PRIVATE-PUBLIC PARTNERSHIPS**



**PRIVATE SECTOR PrEP DELIVERY**

**Nigeria**

**Burden of HIV:** About over 1.8million people are currently living with HIV in Nigeria  
**Prevalence and Incidence rate:** currently stands at 1.4% and 0.03% respectively  
**AGYW (15 -24yrs):** prevalence among AGYW (1.8%) is high when compared to men (1.0%).  
**PrEP demand:** PrEP demand is high among KPs, and adolescents and young people (AYP)

**PrEP forms:** PrEP is being offered as Oral PrEP TDF/XTC since 2020 Q3 with over 400K initiations as at Q3 2022  
**National strategic framework and COP22:** Policy documents indicates focus on KPs and sero-discordant couples.  
**Funding:** PEPFAR, Global fund and GON are the main funders of HIV and prevention programs. Nigeria spends 4% of their HIV funds on prevention with PEPFAR contributing majorly for PrEP activities.

**MOSAIC\*:** Exists  
**DREAMS\*\*:** Does not exist

**Other Channels:** Between 2016 and 2019, USAID's Sustainable Financing Initiative provided funding to establish ARV refill services at 117 private clinics and 320 private pharmacies across four states in Nigeria, enabling nearly 18,000 patients to pick up medication closer to home; 95 percent of patients picked up their refills on time, and 93 percent of patients were retained in the model after one year.

**Pharmacist Capabilities:**  
 Administer injections: Yes  
 Administer birth control injections: No  
 Dispense oral PrEP: Yes  
 Prescribe PrEP: No  
 Self-injectable Contraceptive: Yes  
**Other Pharmacy Landscape:** SHIPS Private/Public Partnerships in Abuja and Lagos (focused on testing and prevention). A baseline assessment in Nigeria found that 92 percent of CPs were willing to provide the services, more than 30 percent of clients were willing to access services at a CP, and up to 20 percent of clients were willing to pay the dispensing fee for ART refills.

**Tanzania**

**Burden of HIV:** About over 1.7million people are currently living with HIV in Tanzania  
**Prevalence and Incidence rate:** currently stands at 4.7% and 0.3% respectively  
**AGYW (15 -24yrs):** prevalence among AGYW (2.28%) is high when compared to men (1.24%).  
**PrEP demand:** Frameworks indicates large unmet need for PrEP in Tanzania and intentions to address this need through advocating for introductions of alternative PrEP options.

**PrEP forms:** PrEP is being offered as Oral PrEP TDF/XTC since 2020 Q3 with over 400K initiations as at Q3 2022  
**National strategic framework and COP22:** Frameworks focus on advocating for more PrEP option for KPs and AGYW  
**Funding:** Domestic financing is a small fraction of the total needed amount for HIV funding, and disbursement does not meet budget levels. 14% of the total HIV funds is targeted towards prevention and is mostly contributed by GF and PEPFAR

**MOSAIC\*:** Does not exist  
**DREAMS\*\*:** Exists  
**Other Channels:** Accredited Drug Dispensing Outlets (ADDO) established in 2003 to improve access to essential medicines and pharmaceutical services to population in rural and per-urban areas with no pharmacies (part II pharmacies, duka la dawa baridi (DLDB)). Tanzania is expanding PrEP services to private pharmacies (From CxOP 2022) PEPFAR/T will intensify distribution of HIVST in male-dominated workplaces, both public and private (as well as formal and informal) workplaces.

**Pharmacist Capabilities:**  
 Administer injections: Unknown  
 Administer birth control injections: Unknown  
 Dispense oral PrEP: Yes, and the ring  
 Prescribe PrEP: No  
 Self-injectable Contraceptive: Yes  
**Other Pharmacy Landscape:** 2014 study: Many drug dispensers said that many pharmacies do not have rooms for counseling patients and clients, which affects confidentiality.

**Ghana**

**Burden of HIV:** About over 347,370 people are currently living with HIV in Ghana  
**Prevalence and Incidence rate:** currently stands at 1.67% and 0.6% respectively  
**AGYW (15 -24yrs):** 73.91% of adolescents and youths living with HIV are females  
**PrEP demand:** Prevention focus indicates more interest in KPs mainly FSW and MSMs as a population with a large unmet need for PrEP.

**PrEP forms:** PrEP is being offered as Oral PrEP TDF/XTC  
**National strategic framework and COP22:** Available frameworks indicates less focus on PrEP than ART. This is indicated by the percent of funds allocated by the govt on PrEP.  
**Funding:** Ghana improved health allocation from last budget but is still largely donor dependent with GF and PEPFAR being the main external HIV program funding channel. GF capped its commitment to fund the cost of commodities to a maximum of 125,000 PLHIV on treatment. As the number of PLHIV on treatment continues to increase, the cost of commodities supply will increase, which means the GoG will need to increase financial resources to pay for the additional supply needs.

**MOSAIC\*:** Does not exist  
**DREAMS\*\*:** Does not exist

**Other Channels:** WAAF, a private sector partner, was the first of the two EpiC partners to begin offering PrEP.  
  
 In August 2020, WAAF initiated the first individuals on daily PrEP at its on-site clinic in Accra, called the International Health Care Center (IHCC), as well as through its mobile clinics.

**Pharmacist Capabilities:**  
 Administer injections: Yes, COVID  
 Administer birth control injections: No, although 97% of pharmacists dispense birth control injections  
 Dispense oral PrEP: No  
 Prescribe PrEP: Unknown  
 Self-injectable Contraceptive: Yes

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# SUMMARY

## ZIMBABWE



Strong political will: 12% of all HIV funding is allocated towards prevention & fast PrEP approvals

Commitment to AGYW: Presence of **MOSAIC and DREAMS**

History of **strong** public-private partnerships

**Limited pharmacist capabilities**

## UGANDA



Strong political will: 12% of all HIV funding is allocated towards prevention & CAB-LA is approved

Commitment to AGYW: Presence of **MOSAIC and DREAMS**, ongoing research is focused on this population

**Strong network of private pharmacies** and engagement with the community

**Limited pharmacist capabilities** (this is expected to change soon)

## ESWATINI



**Strong political will:** 11% of all HIV funding is allocated towards prevention & ongoing CAB-LA studies exist

Commitment to AGYW: Presence of **MOSAIC and DREAMS**

History of **strong** public-private partnerships

Pharmacies face issues with the **supply chain and lack of standardization** of policies

## MOZAMBIQUE



**Strong political will:** 12% of all HIV funding is allocated towards prevention & fast PrEP approvals

Commitment to AGYW: Presence of **MOSAIC and DREAMS**

History of strong **public-private partnerships**

**Limited pharmacist capabilities**

## ZAMBIA



8% of all HIV funding is allocated towards prevention

Commitment to AGYW: Presence of **MOSAIC and DREAMS**

Pharmacists can distribute ARTs and pharmacy delivery of PrEP is in the pipeline

Low community acceptance of PrEP

## NIGERIA



**DSD are widespread** and there is a **strong private sector**

Pharmacists currently deliver contraceptive injections and oral PrEP

**Lack of regulation** for pharmacies

**Only 4%** of all HIV funding is allocated towards prevention

**No DREAMS programs**

## TANZANIA



While 14% of HIV funding went towards prevention in 2022, this has been **decreasing** over the last 5 years

Has a DREAMS program but no **MOSAIC**

Weakness in **supply chain** and a **large unmet need** for oral PrEP

## GHANA



Have **self-injectable contraception** options

Pharmacies distribute self-testing kits

**Limited DSD**

No DREAMS or MOSAIC

Challenges with **sustainability** threaten HIV prevention and treatment



Tier 1



Tier 2



Tier 3

# INFORMATION GAPS

## Out-of-Date NSF's

PrEP became available after some NSF's were published. Current practices may not be represented in NSF's.

## Pharmacist Capabilities

Many countries do not have this information publicly available.

## Country Insights

Conducting KIIs would validate and enhance findings for improved information on PrEP product availability, pharmacy capability, potential delivery channels and regulatory processes.



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1. CONTENT EXPERTS

CONTENT EXPERTS

- Monisha Sharma (UW: Global Health & Epidemiology)
- Jared Baeten (UW: Allergy and Infectious Disease & Global Health; Gilead Science, Vice President)
- Renee Heffron (UW: Global Health; UAB: CFAR Director)
- Katrina Ortblad (UW: Global Health)
- Andy Stergachis (UW: Global Health, Pharmacy, Epidemiology, Health Metrics, Health Systems)
- Anjali Sharma (UW: Global Health; Center for Infectious Disease Research in Zambia)
- Gabrielle O'Malley (UW: Global Health)
- Sarah Gimbel (UW: Global Health, Center for Global Health Nursing)
- Kenneth Ngure (UW: Global Health)
- Kenneth Mugwanya (UW: Global Health & Epidemiology)
- Connie Celum (UW: Global Health, Epidemiology, Allergy and Infectious Diseases)

COUNTRY-LEVEL EXPERTS

- Uganda
  - Timothy Muwonge (Makerere University)
  - Andrew Mujugira (UW: Global Health & Makerere University)
- Mozambique
  - Maria de Fátima Cuembelo (UW: Global Health & Epidemiology)
- Zambia
  - Margaret Kasaro (UNC: Global Health & Zambia Institute for Global Health)
- Eswatini
  - Harriette Nuwagaba-Biribonwoha (Columbia University: Research Director of ICAP in Eswatini)
- Zimbabwe
  - Nyaradzo Mgodzi (Zimbabwe; University of Zimbabwe)

2. SEARCH STRINGS

Search String	Results
<p><b>Broadest Search</b>                      (("pre exposure prophylaxis"[Title/Abstract] OR "prep"[Title/Abstract] OR "hiv prophylaxis"[Title/Abstract]) AND ("pharmacy"[Title/Abstract] OR "pharmacies"[Title/Abstract] OR "pharmacist"[Title/Abstract] OR "pharmacy-delivered"[Title/Abstract]))</p>	139
<p><b>Specifying Injectable PrEP/CAB-LA</b>                      ("CAB-LA"[Title/Abstract] OR "injectable pre exposure prophylaxis"[Title/Abstract] OR "injectable prep"[Title/Abstract] OR "injectable hiv prophylaxis"[Title/Abstract] OR "cabotegravir"[Title/Abstract] AND ("pharmacy"[Title/Abstract] OR "pharmacies"[Title/Abstract] OR "pharmacist"[Title/Abstract] OR "pharmacy-delivered"[Title/Abstract]))</p>	7
<p><b>Including Country Names</b>                      ("pre exposure prophylaxis"[Title/Abstract] OR "prep"[Title/Abstract] OR "hiv prophylaxis"[Title/Abstract]) AND ("pharmacy"[Title/Abstract] OR "pharmacies"[Title/Abstract] OR "pharmacist"[Title/Abstract] OR "pharmacy-delivered"[Title/Abstract] OR "Nigeria"[Title/Abstract] OR "Ghana"[Title/Abstract] OR "Uganda"[Title/Abstract] OR "Mozambique"[Title/Abstract] OR "Zambia"[Title/Abstract] OR "Eswatini"[Title/Abstract] OR "Swaziland"[Title/Abstract] OR "Zimbabwe"[Title/Abstract] OR "Ivory Coast"[Title/Abstract] OR "Côte d'Ivoire"[Title/Abstract] OR "Cameroon"[Title/Abstract])</p>	0
<p><b>Broadest Search</b>                      (("pharmacists"[Title/Abstract] OR "pharmacy"[Title/Abstract]) AND ("Tanzania"[Title/Abstract] OR "Nigeria"[Title/Abstract] OR "Ghana"[Title/Abstract] OR "Uganda"[Title/Abstract] OR "Mozambique"[Title/Abstract] OR "Zambia"[Title/Abstract] OR "Eswatini"[Title/Abstract] OR "Swaziland"[Title/Abstract] OR "Zimbabwe"[Title/Abstract] OR "Ivory Coast"[Title/Abstract] OR "Cote d'Ivoire"[Title/Abstract] OR "Cameroon"[Title/Abstract])) AND (2006:2023[pdat])</p>	34
<p><b>Including Delivery</b>                      ("pharmacists"[Title/Abstract] OR "pharmacy"[Title/Abstract]) AND ("deliver"[Title/Abstract] OR "delivery"[Title/Abstract]) AND ("united states"[Title/Abstract] OR "US"[Title/Abstract]) AND ("Tanzania"[Title/Abstract] OR "Nigeria"[Title/Abstract] OR "Ghana"[Title/Abstract] OR "Uganda"[Title/Abstract] OR "Mozambique"[Title/Abstract] OR "Zambia"[Title/Abstract] OR "Eswatini"[Title/Abstract] OR "Swaziland"[Title/Abstract] OR "Zimbabwe"[Title/Abstract] OR "Ivory Coast"[Title/Abstract] OR "Cote d'Ivoire"[Title/Abstract] OR "Cameroon"[Title/Abstract])</p>	5
<p><b>Including Prescription</b>                      ("pharmacists"[Title/Abstract] OR "pharmacy"[Title/Abstract]) AND ("prescription"[Title/Abstract] OR "prescribe"[Title/Abstract]) AND ("united states"[Title/Abstract] OR "US"[Title/Abstract]) AND ("Tanzania"[Title/Abstract] OR "Nigeria"[Title/Abstract] OR "Ghana"[Title/Abstract] OR "Uganda"[Title/Abstract] OR "Mozambique"[Title/Abstract] OR "Zambia"[Title/Abstract] OR "Eswatini"[Title/Abstract] OR "Swaziland"[Title/Abstract] OR "Zimbabwe"[Title/Abstract] OR "Ivory Coast"[Title/Abstract] OR "Cote d'Ivoire"[Title/Abstract] OR "Cameroon"[Title/Abstract])</p>	4



## Zimbabwe

**HIV Epidemiology**

<https://www.prepwatch.org/wp-content/uploads/2022/11/Zimbabwe-COP-2022.pdf>  
<https://zw.usembassy.gov/national-hiv-survey-zimphia-2020-results-indicate-zimbabwe-is-on-track-to-achieve-hiv-epidemic-control-by-2030/>

**PrEP Overview**

<https://www.prepwatch.org/wp-content/uploads/2022/11/Zimbabwe-COP-2022.pdf>

**Stakeholders**

[https://www.zamra.co.zm/#:~:text=Zambia%20Medicines%20Regulatory%20Authority%20\(ZAMRA\)](https://www.zamra.co.zm/#:~:text=Zambia%20Medicines%20Regulatory%20Authority%20(ZAMRA))

**National Strategies**

<https://www.nac.org.zm/sites/default/files/publications/NASF%202017%20-%202021.pdf>

**Funding**

<https://www.prepwatch.org/wp-content/uploads/2022/11/Zimbabwe-COP-2022.pdf>

**PrEP Policies**

<https://bmjopen.bmj.com/content/11/7/e047017>  
<https://pubmed.ncbi.nlm.nih.gov/34244265/>

**Pharmacy Landscape**

[https://pdf.usaid.gov/pdf\\_docs/PA00W73P.pdf](https://pdf.usaid.gov/pdf_docs/PA00W73P.pdf)  
<https://www.lusakatimes.com/2022/11/07/masebo-issues-directive-to-all-public-health-facilities-not-to-host-any-private-pharmacy-or-laboratory/>  
<https://www.fhi360.org/sites/default/files/media/documents/epic-project-strategic-guide-scale-up.pdf>

**Continued**

<https://www.fhi360.org/sites/default/files/media/documents/epic-art-ddd-covid-19.pdf>  
<http://www.times.co.sz/news/128789-another-drugs-shortage-hits-eswatini.html#:~:text=A%20majority%20of%20public%20health,known%20for%20fighting%20bacterial%20infections.>

**Pharmacist Capabilities**

[https://publications.jsi.com/JSIInternet/Inc/Common/download\\_pub.cfm?id=22807&lid=3](https://publications.jsi.com/JSIInternet/Inc/Common/download_pub.cfm?id=22807&lid=3)  
<https://gh.bmj.com/content/7/1/e007312>

**Case Studies**

<https://www.scirp.org/journal/paperinformation.aspx?paperid=44170>  
<https://pubmed.ncbi.nlm.nih.gov/33865471/>  
<https://www.fhi360.org/sites/default/files/media/documents/epic-project-strategic-guide-scale-up.pdf>

**Other Key Information**

<https://www.frontiersin.org/articles/10.3389/frph.2021.684717/full>  
<https://fpoptions.org/wp-content/uploads/AC-ICFP-premeeting-PATH-2019.pdf>

**Consulted Content Experts**

Nyaradzo Mgodli (Zimbabwe; University of Zimbabwe)

## Uganda

**HIV Epidemiology**

<https://www.prepwatch.org/wp-content/uploads/2022/11/Uganda-COP-2022.pdf>  
<https://phia.icap.columbia.edu/wp-content/uploads/2022/08/UPHIA-Summary-Sheet-2020.pdf>

**PrEP Overview**

<https://www.nda.or.ug/>  
<https://www.voaafrica.com/a/uganda-approves-injectable-hiv-drug-amid-increasing-infections-6893766.html#:~:text=Uganda%20has%20approved%20the%20long,Uganda%2C%20according%20to%20official%20data.>

**Stakeholders**

<https://www.prepwatch.org/wp-content/uploads/2022/11/Uganda-COP-2022.pdf>

**National Strategies**

<https://www.prepwatch.org/wp-content/uploads/2022/11/Uganda-COP-2022.pdf>

**Funding**

<https://www.prepwatch.org/wp-content/uploads/2022/11/Uganda-COP-2022.pdf>

**PrEP Policies**

<https://www.ncbi.nlm.nih.gov/pmc/articles/PMC8843287/>  
<https://prepwatch.org/wp-content/uploads/2022/07/UgandaHIVGuidelines2018.doc>  
<https://www.frontiersin.org/articles/10.3389/fpubh.2022.658826/full>

**Pharmacy Landscape**

<https://www.fic.nih.gov/News/GlobalHealthMatters/march-april-2022/Pages/fogarty-fellow-investigates-nurse-led-PrEP-delivery-uganda.aspx>  
<https://www.ncbi.nlm.nih.gov/pmc/articles/PMC9713199/>  
<https://www.independent.co.ug/uganda-will-not-dispense-prep-over-the-counter-minister/>  
<https://www.psi.org/project/self-care/a-spotlight-on-strengthening-hiv-self-testing-in-the-private-sector-ships/>

**Pharmacist Capabilities**

<https://substanceabusepolicy.biomedcentral.com/articles/10.1186/s13011-020-00261-x>  
<https://bmchealthservres.biomedcentral.com/articles/10.1186/s12913-018-3343-z>  
<https://uniph.go.ug/assessment-of-oral-pre-exposure-prophylaxis-eligibility-and-use-among-persons-at-substantial-risk-of-hiv-acquisition-uganda-2017-2021/>  
<https://www.ncbi.nlm.nih.gov/pmc/articles/PMC5878078/>  
<https://www.ncbi.nlm.nih.gov/pmc/articles/PMC7846921/>

**Case Studies**

<https://www.ncbi.nlm.nih.gov/pmc/articles/PMC7208546/>  
[https://www.thelancet.com/journals/eclinm/article/PIIS2589-5370\(22\)00341-8/fulltext](https://www.thelancet.com/journals/eclinm/article/PIIS2589-5370(22)00341-8/fulltext)  
<https://www.psi.org/project/self-care/a-spotlight-on-strengthening-hiv-self-testing-in-the-private-sector-ships/>  
<https://www.frontiersin.org/articles/10.3389/fpubh.2022.658826/full>

**Other Key Information**

<https://bmcinfectdis.biomedcentral.com/articles/10.1186/s12879-022-07398-z>  
<https://pubmed.ncbi.nlm.nih.gov/36066762/>  
<https://www.prepwatch.org/resources/dapivirine-ring-intro-considerations-uganda/>  
<https://link.springer.com/article/10.1007/s10461-021-03205-z>  
<https://fpoptions.org/wp-content/uploads/AC-ICFP-premeeting-PATH-2019.pdf>

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## Eswatini

- **HIV Epidemiology**
  - <https://www.prepwatch.org/wp-content/uploads/2022/11/Eswatini-COP-2022.pdf>
  - <https://www.beintheknow.org/understanding-hiv-epidemic/data/glance-hiv-eswatini>
- **PrEP Overview**
  - <https://onlinelibrary.wiley.com/doi/10.1002/jia.2.25408>
  - <https://www.prepwatch.org/wp-content/uploads/2022/11/Eswatini-COP-2022.pdf>
- **Stakeholders**
  - [https://www.prepwatch.org/wp-content/uploads/2022/05/PROMISE\\_Output\\_1.1\\_ESWATINI\\_Dapivirine\\_Ring\\_Consultation\\_FINAL.pdf](https://www.prepwatch.org/wp-content/uploads/2022/05/PROMISE_Output_1.1_ESWATINI_Dapivirine_Ring_Consultation_FINAL.pdf)
  - <https://www.ncbi.nlm.nih.gov/pmc/articles/PMC8517741/#CIT0022>
- **National Strategies**
  - <http://www.healthpolicyplus.com/PrEPitTool.cfm>
- **Funding**
  - <http://www.healthpolicyplus.com/PrEPitTool.cfm>
- **PrEP Policies**
  - <https://prepwatch.org/wp-content/uploads/2022/03/Eswatini-National-HIVAIDS-Guidelines-2018-2023.pdf>
- **Pharmacy Landscape**
  - <https://researchspace.ukzn.ac.za/handle/10413/19501>
  - <http://www.rfa.co.za/wp->
- **Continued**
  - <https://www.who.int/publications-detail-redirect/9789240018303>
  - <https://www.ncbi.nlm.nih.gov/pmc/articles/PMC8517741>
- **Pharmacist Capabilities**
  - <http://www.times.co.sz/news/135735-almost-50-of-eswatini-pharmacies-operating-illegally.html>
  - <https://commonwealthpharmacypd.org/member-organisations/kingdom-of-eswatini-pharmacy-association/>
  - <https://www.ncbi.nlm.nih.gov/pmc/articles/PMC7347100/>
- **Case Studies**
  - [https://journals.lww.com/aidsonline/Fulltext/2018/07170/Preference\\_for\\_injectable\\_over\\_oral\\_HIV.20.aspx](https://journals.lww.com/aidsonline/Fulltext/2018/07170/Preference_for_injectable_over_oral_HIV.20.aspx)
  - [https://cquin.icap.columbia.edu/wp-content/uploads/2022/07/Final\\_Policy-Guidelines-for-Eswatini-Differentiated-Service-Delivery.pdf](https://cquin.icap.columbia.edu/wp-content/uploads/2022/07/Final_Policy-Guidelines-for-Eswatini-Differentiated-Service-Delivery.pdf)
  - <https://polisci.rutgers.edu/publications/occasional-paper-series/358-occasional-paper-13-kate-ann-brace-hiv-aids-policies-and-strategies-in-the-kingdom-of-eswatini/file>

## Mozambique

- **HIV Epidemiology**
  - <https://www.prepwatch.org/wp-content/uploads/2022/11/Mozambique-COP-2022.pdf>
- **PrEP Overview**
  - <https://www.prepwatch.org/wp-content/uploads/2022/11/Mozambique-COP-2022.pdf>
- **Stakeholders**
  - <https://nmra.gov.lk/index.php?lang=en>
- **National Strategies**
  - <https://www.prepwatch.org/wp-content/uploads/2022/11/Mozambique-COP-2022.pdf>
- **Funding**
  - <https://www.prepwatch.org/wp-content/uploads/2022/11/Mozambique-COP-2022.pdf>
- **PrEP Policies**
  - <https://www.prepwatch.org/wp-content/uploads/2022/11/Mozambique-COP-2022.pdf>
- **Pharmacy Landscape**
  - [https://cquin.icap.columbia.edu/wp-content/uploads/2022/12/B23.-DD-of-ART-private-pharmacies\\_Follow-up-of-patients-in-Mozambique-1.pdf](https://cquin.icap.columbia.edu/wp-content/uploads/2022/12/B23.-DD-of-ART-private-pharmacies_Follow-up-of-patients-in-Mozambique-1.pdf)
- **Pharmacist Capabilities**
  - <https://www.ncbi.nlm.nih.gov/pmc/articles/PMC6805650/#:~:text=In%20Mozambique%2C%20all%20medicines%20purchased,doctors%2C%20physicians%20or%20qualified%20HCP.>
  - <https://www.nature.com/articles/s41599-019-0385-8>
  - <https://www.fip.org/file/5176>
- **Case Studies**
  - <https://www.fhi360.org/sites/default/files/media/documents/epic-ddd-mozambique.pdf>
  - [https://iop.harvard.edu/sites/default/files/sources/program/IOP\\_Policy\\_Program\\_2019\\_HIV\\_AIDS\\_prevention\\_treatment\\_public\\_private\\_partnerships.pdf](https://iop.harvard.edu/sites/default/files/sources/program/IOP_Policy_Program_2019_HIV_AIDS_prevention_treatment_public_private_partnerships.pdf)
- **Consulted Content Experts**
  - Maria de Fátima Cuembelo (UW: Global Health & Epidemiology)

## Nigeria

- **HIV Epidemiology**
  - <https://www.prepwatch.org/wp-content/uploads/2022/11/Nigeria-COP-2022.pdf>
  - <https://www.cia.gov/the-world-factbook/countries/nigeria>
- **PrEP Overview**
  - <https://www.prepwatch.org/wp-content/uploads/2022/11/Nigeria-COP-2022.pdf>
- **Stakeholders**
  - <https://www.nafdac.gov.ng/drugs/drug-guidelines/>
- **National Strategies**
  - <https://prepwatch.org/resources/nigeria-national-hiv-aids-strategic-plan-2017-21/>
- **Funding**
  - <https://www.prepwatch.org/wp-content/uploads/2022/11/Nigeria-COP-2022.pdf>
- **PrEP Policies**
  - <https://www.prepwatch.org/resources/nigeria-cop-2022/>
- **Pharmacy Landscape**
  - <https://www.usaid.gov/global-health/health-areas/hiv-and-aids/technical-areas/differentiated-service-delivery>
  - <https://www.fhi360.org/sites/default/files/media/documents/epic-project-strategic-guide-scale-up.pdf>
  - <https://www.fhi360.org/sites/default/files/media/documents/epic-art-ddd-covid-19.pdf>
- **Pharmacist Capabilities**
  - <https://www.ncbi.nlm.nih.gov/pmc/articles/PMC8360771/#b0135>
  - <https://www.ncbi.nlm.nih.gov/pmc/articles/PMC8360771/>
- **Case Studies**
  - <https://www.fhi360.org/sites/default/files/media/documents/epic-project-strategic-guide-scale-up.pdf>
  - <https://www.fhi360.org/sites/default/files/media/documents/epic-art-ddd-covid-19.pdf>

## Zambia

- **HIV Epidemiology**
  - <https://www.prepwatch.org/wp-content/uploads/2022/11/Zambia-COP-2022.pdf>
- **PrEP Overview**
  - <https://www.prepwatch.org/wp-content/uploads/2022/11/Zambia-COP-2022.pdf>
- **Stakeholders**
  - [https://www.zamra.co.zm/#:~:text=Zambia%20Medicines%20Regulatory%20Authority%20\(ZAMRA\)](https://www.zamra.co.zm/#:~:text=Zambia%20Medicines%20Regulatory%20Authority%20(ZAMRA))
- **National Strategies**
  - <https://www.nac.org.zm/sites/default/files/publications/NASF%202017%20-%202021.pdf>
- **Funding**
  - <https://www.nac.org.zm/sites/default/files/publications/NASF%202017%20-%202021.pdf>
  - <https://www.ncbi.nlm.nih.gov/pmc/articles/PMC8273462/>
- **PrEP Policies**
  - <https://bmjopen.bmj.com/content/11/7/e047017>
  - <https://pubmed.ncbi.nlm.nih.gov/34244265/>
- **Pharmacy Landscape**
  - [https://pdf.usaid.gov/pdf\\_docs/PA00W73P.pdf](https://pdf.usaid.gov/pdf_docs/PA00W73P.pdf)
  - <https://www.lusakatimes.com/2022/11/07/mas-ebv-issues-directive-to-all-public-health-facilities-not-to-host-any-private-pharmacy-or-laboratory/>
  - <https://www.fhi360.org/sites/default/files/media/documents/epic-project-strategic-guide-scale-up.pdf>
- **Continued**
  - <https://www.fhi360.org/sites/default/files/media/documents/epic-art-ddd-covid-19.pdf>
  - <http://www.times.co.sz/news/128789-another-drugs-shortage-hits-eswatini.html#:~:text=A%20majority%20of%20public%20health,known%20for%20fighting%20bacterial%20infections.>
- **Pharmacist Capabilities**
  - [https://publications.jsi.com/JSIInternet/Inc/Common/\\_download\\_pub.cfm?id=22807&lid=3](https://publications.jsi.com/JSIInternet/Inc/Common/_download_pub.cfm?id=22807&lid=3)
  - <https://gh.bmj.com/content/7/1/e007312>
- **Case Studies**
  - <https://www.scirp.org/journal/paperinformation.aspx?paperid=44170>
  - <https://pubmed.ncbi.nlm.nih.gov/33865471/>
  - <https://www.fhi360.org/sites/default/files/media/documents/epic-project-strategic-guide-scale-up.pdf>
- **Other Key Information**
  - <https://www.frontiersin.org/articles/10.3389/frph.2021.684717/full>
  - <https://fpoptions.org/wp-content/uploads/AC-ICFP-premeeting-PATH-2019.pdf>
- **Consulted Content Experts**
  - Margaret Kasaro (UNC: Global Health & Zambia Institute for Global Health)



## Tanzania

- **HIV Epidemiology**
  - <https://www.prepwatch.org/wp-content/uploads/2022/11/Tanzania-COP-2022.pdf>
- **PrEP Overview**
  - <https://www.prepwatch.org/countries/tanzania/>
- **Stakeholders**
  - <https://www.tmda.go.tz/>
- **National Strategies**
  - <https://prepwatch.org/wp-content/uploads/2022/03/Tanzania-National-HIVAIDS-Guidelines-2019.pdf>
- **Funding**
  - <https://www.prepwatch.org/wp-content/uploads/2022/11/Tanzania-COP-2022.pdf>
- **PrEP Policies**
  - <https://www.prepwatch.org/wp-content/uploads/2022/11/Tanzania-COP-2022.pdf>
- **Pharmacy Landscape**
  - <https://journals.plos.org/globalpublichealth/article?id=10.1371/journal.pgph.0000981>
  - <https://apps.who.int/iris/rest/bitstreams/1418002/retrieve>
  - <https://documents.worldbank.org/curated/en/88021468132272587/pdf/Private-health-sector-assessment-in-Tanzania.pdf>
- **Continued**
  - Tanzania Food and Drug Authority. Annual Report. Dar es Salaam: TFDA; 2004.
  - The United Republic of Tanzania. The Tanzania Food, Drugs and Cosmetics Act. Dar es, Salaam: TFDA; 2003.
- **Pharmacist Capabilities**
  - <https://www.ijpsonline.com/articles/dispensing-practice-of-prescribed-medicines-in-the-private-pharmacies-in-urban-areas-of-tanzania.html#5>
  - <https://aidsrestherapy.biomedcentral.com/articles/10.1186/s12981-021-00343-1>
  - <https://www.mdpi.com/2226-4787/8/4/238>
  - <https://pubmed.ncbi.nlm.nih.gov/20208262/>
- **Case Studies**
  - <https://www.state.gov/wp-content/uploads/2022/09/Tanzania-COP22-SDS.pdf>
  - <https://www.pc.go.tz/addo/#:~:text=ADDO%20stands%20for%20Accredited%20Drug,where%20there%20were%20no%20pharmacies.>
- **Other Key Information**
  - <https://www.prepwatch.org/resources/dapivirine-ring-early-intro-considerations-tanzania/>

## Ghana

- **HIV Epidemiology**
  - <https://www.prepwatch.org/wp-content/uploads/2022/11/West-Africa-Region-ROP-2022.pdf>
- **PrEP Overview**
  - <https://www.prepwatch.org/wp-content/uploads/2022/11/West-Africa-Region-ROP-2022.pdf>
- **Stakeholders**
  - <http://www.fdaghana.gov.gh/>
  - <https://www.state.gov/wp-content/uploads/2022/09/West-Africa-Region-ROP22-SDS.pdf>
- **National Strategies**
  - <https://www.prepwatch.org/wp-content/uploads/2022/11/West-Africa-Region-ROP-2022.pdf>
- **Funding**
  - <https://www.prepwatch.org/resources/ghana-national-hiv-aids-strategic-plan-2021-25/>
  - <https://www.prepwatch.org/resources/ghana-national-hiv-aids-policy-2019/>
- **PrEP Policies**
  - <https://www.state.gov/wp-content/uploads/2022/09/West-Africa-Region-ROP22-SDS.pdf>
- **Pharmacy Landscape**
  - <https://joppp.biomedcentral.com/articles/10.1186/s40545-021-00363-2>
  - <https://www.sciencedirect.com/science/article/pii/S0277953619303545>
  - <https://openknowledge.worldbank.org/handle/10986/28117>
  - <https://go.gale.com/ps/i.do?id=GALE%7CA600204230&sid=googleScholar&v=2.1&it=r&linkaccess=abs&issn=20523211&p=HRCA&sw=w&userGroupName=anon%7E4b8ed36c>
  - <https://akzente.giz.de/en/voices/covid-ghana>
- **Pharmacist Capabilities**
  - <https://bmcmededuc.biomedcentral.com/articles/10.1186/s12909-020-02393-x>
  - <https://www.aidsmap.com/about-hiv/post-exposure-prophylaxis-pep#:~:text=PEP%20is%20available%20from%20sexual%20health%20clinics%20and%20accident%20%26%20emergency%20departments.>
  - <https://www.gutmacher.org/journals/ipshr/2014/03/injectable-contraceptive-sales-licensed-chemical-seller-shops-ghana-access>
  - <https://www.prepwatch.org/resources/ghana-national-hiv-aids-strategic-plan-2021-25/>
  - <https://pubmed.ncbi.nlm.nih.gov/11358916/>
- **Case Studies**
  - <https://www.fhi360.org/sites/default/files/media/documents/resource-epic-ghana-success-story.pdf>
- **Other Key Information**
  - <https://www.ncbi.nlm.nih.gov/pmc/articles/PMC6980967/>
  - [https://journals.lww.com/md-journal/Fulltext/2022/02040/Willingness\\_to\\_take\\_and\\_ever\\_use\\_of\\_pre\\_exposure.54.aspx](https://journals.lww.com/md-journal/Fulltext/2022/02040/Willingness_to_take_and_ever_use_of_pre_exposure.54.aspx)

