Global PrEP Learning Network

Updated WHO Guidance on Laboratory Monitoring for PrEP and the GEMS Project’s HIV Drug Resistance Monitoring

September 30, 2021
Access French interpretation / Accès à l’interprétation vers le Français

1. Cliquer sur le globe et choisir le Français

2. Puis cliquer sur “Mute Original Audio”

English speakers: please do choose English so you don’t miss anything!
Opening & Introductions

Updates from the 2021 WHO Consolidated HIV Guidelines

HIV Drug Resistance (HIVDR) and PrEP: Key Concepts

Panel Discussion: Country Experiences with Implementing a National HIV Drug Resistance Monitoring Protocol

Overview of GEMS Toolkit Materials

Q&A

Up Next
Today’s Speakers

**Urvi Parikh**, University of Pittsburgh

Urvi Parikh, PhD is an Assistant Professor of Medicine in the Division of Infectious Diseases at the University of Pittsburgh and the Associate Director of the Virology Core Microbicide Trials Network. She was the co-lead for the GEMS project.

**Robin Schaefer**, World Health Organization (WHO)

Robin Schaefer works for the Testing, Prevention, and Populations Unit of the Global HIV, Hepatitis, and STIs Programmes of the World Health Organization. He works on PrEP for HIV prevention with a particular focus on simplified service delivery and new PrEP products. He holds a PhD in infectious disease epidemiology and has worked on a range of global health issues, including sexual and reproductive health and malnutrition.
Anita Hettema, FHI 360

Anita Hettema, RN, MA is a Technical Advisor for FHI 360’s biomedical prevention product portfolio in Eswatini. She was the GEMS project lead for the Eswatini HIVDR project.

Bhavna Chohan, Kenya Medical Research Institute, Nairobi

Bhavna Chohan, PhD, MSc is a Senior Research Scientist in the Center for Virus Research at the Kenya Medical Research Institute, Nairobi, and a Clinical Assistant Professor in the Department of Global Health at University of Washington. She also holds a Visiting Scientist and Honorary Lecturer position at University of Nairobi. She was the GEMS project lead for the Kenya HIVDR project.
Everline Bosek, University of Pittsburgh

Everline Bosek, MsC, MPH is a project management professional with experience in implementation science, community health, and mobile projects. She was the GEMS project manager for the Kenya HIVDR project.

Lisa Levy, FHI 360

Lisa Levy, MPH is the Associate Project Director for the MTN (Microbicide Trials Network) and IMPAACT (International Maternal Pediatric and Adolescent AIDS Clinical Trials) Network with the Science Facilitation department at FHI 360. She also led the policy team for the GEMS project.
Reminder: Use “Chat” Function

Please feel free to ask questions and add comments to the chat box at any point during today’s presentations. At the end of the session, we will dedicate time to Q&A.

Choose “all panelists and attendees” from the drop-down menu when adding a question or comment to the chat box.
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Updates from the 2021 WHO Consolidated HIV Guidelines on laboratory monitoring and testing for oral PrEP

30 September 2021
WHO PrEP recommendations and guidance

- PrEP for SDC, MSM & TG (conditional rec in the context of demo projects)
- PrEP for people at substantial HIV risk (strong rec)
- PrEP for MSM (strong rec); other KP (conditional rec) no recommendation for PWID
- Imp tool
- Updates on oral PrEP + dapivirine vaginal ring
- Revised PrEP implementation guidance, including for simplified PrEP service delivery


PrEP for MSM (strong rec); other KP (conditional rec) no recommendation for PWID

WHO recommends the dapivirine vaginal ring as a new choice for HIV prevention for women at substantial risk of HIV infection
WHO PrEP recommendations and guidance

### WHO guidance in 2015-17

<table>
<thead>
<tr>
<th>Rationale</th>
<th>Issues</th>
</tr>
</thead>
<tbody>
<tr>
<td>“Cautious”: Limited implementation outside of HIC and pilots</td>
<td>Guidance was “suggestions”</td>
</tr>
<tr>
<td>“Do not harm” principle: Reassure countries anxious about new product for people without HIV</td>
<td>Not based on evidence per see but on “practice” – what was done in the trial and pilots and consensus from experts</td>
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</tbody>
</table>

<table>
<thead>
<tr>
<th>Year</th>
<th>PrEP for SDC, MSM &amp; TG (conditional rec in the context of demo projects)</th>
<th>PrEP for people at substantial HIV risk (strong rec)</th>
<th>PrEP for MSM (strong rec); other KP (conditional rec)</th>
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<tr>
<td>2014</td>
<td>Imp tool</td>
<td>WHO guidance in 2015-17</td>
<td>WHO guidance in 2015-17</td>
<td>WHO guidance in 2015-17</td>
</tr>
<tr>
<td>2015/16</td>
<td>Imp tool</td>
<td>WHO guidance in 2015-17</td>
<td>WHO guidance in 2015-17</td>
<td>WHO guidance in 2015-17</td>
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### WHO PrEP recommendations and guidance

**Revised PrEP implementation guidance, including for simplified PrEP service delivery**

**WHO guidance going forward**

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<thead>
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<tr>
<td><strong>Much more experience</strong></td>
<td><strong>Lack of RCTs to make usual WHO “recommendations”</strong></td>
</tr>
<tr>
<td><strong>Current WHO guidance is seen as a barrier to implementation</strong></td>
<td><strong>WHO reviewing current practice</strong></td>
</tr>
<tr>
<td>- Criticism from global funders</td>
<td>- WHO seeking expert opinion</td>
</tr>
<tr>
<td>- Some countries ignore</td>
<td>- Balance of benefits vs harms</td>
</tr>
<tr>
<td>- Some countries use it as an ‘excuse’ not to implement</td>
<td>- A menu of options?</td>
</tr>
<tr>
<td>- Many people accessing PrEP informally without any ‘checks’</td>
<td></td>
</tr>
<tr>
<td>- C-19 has led to necessary adaptations</td>
<td></td>
</tr>
<tr>
<td>- Community and pharmacy delivery are proposed</td>
<td></td>
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</tbody>
</table>
Highlights from the 2021 WHO HIV Guidelines

- Guidance on the **dapivirine vaginal ring** as an additional PrEP option for cisgender women
- Updates on testing and monitoring for oral PrEP:
  - Renal function monitoring
  - HIV self-testing
  - Viral hepatitis
Renal function monitoring for oral PrEP

Impaired kidney function, indicated by a creatinine clearance of <60ml/min, is a contraindication for using oral PrEP containing TDF.

Systematic review of published literature

In 11 different RCTs, significant increase in risk of kidney-related adverse events

Risks are small and grade 2+ adverse events are rare (16 grade 2+ events among 6764 PrEP users vs. 4 events among 6782 control).

<table>
<thead>
<tr>
<th>Grade 1+ adverse events (mild +)</th>
<th>Grade 2+ adverse events (moderate +)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Study</td>
<td>Experimental Events Total</td>
</tr>
<tr>
<td>Peterson et al., 2007</td>
<td>13 363</td>
</tr>
<tr>
<td>Muida et al., 2012</td>
<td>3 24</td>
</tr>
<tr>
<td>Thijssen et al., 2012</td>
<td>1 611</td>
</tr>
<tr>
<td>Van Damme, 2012</td>
<td>68 1025</td>
</tr>
<tr>
<td>Groothof et al., 2013</td>
<td>1 201</td>
</tr>
<tr>
<td>Kibango et al., 2013</td>
<td>1 24</td>
</tr>
<tr>
<td>Solomon et al., 2014</td>
<td>37 563</td>
</tr>
<tr>
<td>Martin et al., 2014</td>
<td>37 1196</td>
</tr>
<tr>
<td>Mugwanya et al., 2015</td>
<td>60 1545</td>
</tr>
<tr>
<td>Marrazzo et al., 2015</td>
<td>16 1003</td>
</tr>
<tr>
<td>Molina et al., 2013</td>
<td>35 199</td>
</tr>
</tbody>
</table>

Fixed effect model: 6754 6759
Random effects model: 6764 6782
Renal function monitoring for oral PrEP

Impaired kidney function, indicated by a creatinine clearance of <60ml/min, is a contraindication for using oral PrEP containing TDF.

Global data analysis

Data on 18,676 individuals screened for PrEP initiation across 15 countries

79 out of 18,676 (0.42%) individuals who were screened for PrEP had CrCl <60ml/min

Among 14,368 individuals who initiated PrEP and had follow-up measurements, 349 (2.43%) developed <60ml/min CrCl

Baseline CrCl of <90ml/min and increasing age associated with increased risk
## Renal function monitoring for oral PrEP

Impaired kidney function, indicated by a creatinine clearance of <60ml/min, is a contraindication for using oral PrEP containing TDF.

<table>
<thead>
<tr>
<th>Population</th>
<th>Age</th>
<th>Initiation</th>
<th>Follow-up</th>
</tr>
</thead>
<tbody>
<tr>
<td>Kidney-related comorbidities</td>
<td>&lt;30</td>
<td>Optional</td>
<td>Optional (until age 30 or kidney-related comorbidities develop)</td>
</tr>
<tr>
<td>No</td>
<td>30-49</td>
<td>Conduct once within 1-3 months after oral PrEP initiation</td>
<td>If baseline done and CrCl &lt;90ml/min, conduct follow-up ever 6-12 months</td>
</tr>
<tr>
<td>No</td>
<td>Any age</td>
<td>Conduct once within 1-3 months after oral PrEP initiation</td>
<td>If CrCl ≥90ml/min, optional (until age 50 or kidney-related comorbidities develop)</td>
</tr>
<tr>
<td>Yes</td>
<td>50+</td>
<td>Screening every 6-12 months</td>
<td>If CrCl &lt;90ml/min, screening every 6-12 months</td>
</tr>
<tr>
<td>No</td>
<td>50+</td>
<td></td>
<td>Screening every 6-12 months</td>
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Renal function monitoring for oral PrEP

Impaired kidney function, indicated by a creatinine clearance of <60ml/min, is a contraindication for using oral PrEP containing TDF.

Suggested procedure applies to daily and event-driven oral PrEP use.

Waiting for creatinine screening result should not delay starting oral PrEP and results can be reviewed at follow-up visit.

Abnormal creatinine clearance results of <60ml/min should be repeated on a separate day before stopping oral PrEP.

Abnormal creatinine clearance usually returns to normal levels after stopping oral PrEP.

Oral PrEP can be restarted if creatinine clearance is confirmed to be ≥90ml/min 1-3 months after stopping PrEP.

If creatinine clearance does not return to normal levels after stopping PrEP, other causes of renal insufficiency should be evaluated.
HIV testing for oral PrEP

HIV testing is required prior to starting or restarting PrEP and should be conducted regularly (e.g., every 3 months) during PrEP use.

- Use WHO serial testing strategies, within a validated testing algorithm, using WHO prequalified assays.
- Individuals may be tested at POC following the national testing algorithm, usually a combination of 3rd generation RDTs.
- If the initial HIV test -ve and no history or signs/symptoms of an acute viral syndrome, offer same day initiation.
- Once initiated on PrEP, HIV testing is suggested every 3 months and whenever restarting PrEP after a gap in use.
- Additional HIV testing 1 month after starting or restarting PrEP may also be beneficial.
HIV testing for oral PrEP

HIV testing is required prior to starting or restarting PrEP and should be conducted regularly (e.g., every 3 months) during PrEP use.

HIV self-testing

Current guidance: HIV ST suggested for demand creation but not for monitoring during oral PrEP use

March 2020 WHO guidance for maintaining essential health services during COVID-19 suggested HIV ST to sustain PrEP programmes

Numerous programmes were adapted to include HIV ST during COVID-19

Several trials ongoing looking at HIV ST in PrEP programmes

Blood-based HIV ST may be preferable over oral fluid-based HIV ST

PrEP and viral hepatitis

In many settings, populations at risk of HIV are also at high risk of hepatitis B and C infection.

PrEP services provide a unique opportunity to screen for hepatitis B and hepatitis C infection and address multiple public health issues

### Hepatitis B

Testing oral PrEP users for hepatitis B surface antigen (HBsAg) once, around PrEP initiation, is suggested.

Rapid point-of-care tests are available for HBsAg, and WHO has prequalified several rapid diagnostic tests.

Consider people with detectable HBsAg for treatment

People at risk of acquiring hepatitis B with non-reactive HBsAg test may be considered for hepatitis B vaccination depending on endemicity and country recommendations.

Current guidance suggests that hepatitis B infection is a contraindication for event-driven oral PrEP use. **This guidance is currently under review.**

### Hepatitis C

Hepatitis C antibody testing can be considered at PrEP initiation and every 12 months, especially when PrEP services are provided to men who have sex with men, people who use drugs and people in prisons and other closed settings.

Individuals with reactive serology test results should be referred for further assessment and treatment for hepatitis C infection.

Hepatitis C infection is not a contraindication for daily or event-driven oral PrEP use, and PrEP can be initiated before hepatitis C test results are available.

WHO has recently released guidelines on hepatitis C self-testing
Making PrEP more efficient and effective: Balancing costs, efficiency, and impact

HIV risk and incidence matters – screening tools?
What about other gaps – STIs, unmet contraceptive need, IPV, others…..
Positivity rate at screening – linkage to ART

Basic services
- HIV testing
- PrEP pills
- “Effective use” support
- Condoms and lube

Ideal package
- HIV testing
- PrEP pills
- Creatinine
- Hep B / C
- STI-Syndromic or lab based
- GBV
- PEP
- Contraception
- And more…

Context

Safety & impact
Upcoming WHO guidance

Simplification of oral PrEP: end 2021/early 2022

- Renal function monitoring
- Viral hepatitis
- HIV self-testing
- Community-based delivery of PrEP, including telehealth for PrEP
- M&E

Updates to the WHO PrEP Implementation Tool: 2022
Thank you!

I thank the Testing, Prevention, and Populations team for contributions to this presentation.

Contact me for questions or comments: Robin Schaefer, schaefer@who.int

WHO Global HIV, Hepatitis and STIs Programmes:
https://www.who.int/teams/global-hiv-hepatitis-and-stis-programmes/overview

WHO Global PrEP Network:
https://www.who.int/groups/global-prep-network
Q&A
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PrEP and Risk of HIV Drug Resistance:
Key Concepts

Urvi M Parikh, PhD
University of Pittsburgh
Topics

• How does a PrEP user get drug resistant HIV?

• What can PrEP programs and projects do to monitor for HIV drug resistance?

• What have we learned from PrEP resistance monitoring in the countries that have implemented it?
PrEP Prevents HIV

NO INFECTION = NO RESISTANCE

An HIV negative person cannot have HIV drug resistance
Concern about HIVDR should not be a reason to limit use of PrEP

>104,000 people initiated PrEP in Kenya, Zimbabwe, Eswatini and South Africa

229 reported seroconversions over 4 years in the GEMS project

The rate of HIV infection on PrEP is low

No infection = no drug resistance

Parikh et al. IAS 2021
Resistance Risk with Seroconversion on PrEP

**Transmitted Drug Resistance**

- A PrEP user could get infected with drug resistant HIV from a partner
Resistance Risk with Seroconversion on PrEP

Acquired Drug Resistance

- An HIV positive person could keep using PrEP before they know their HIV status
  - If they started PrEP before realizing they were HIV infected
  - If they stopped PrEP, became infected, and re-started PrEP
  - If they didn’t have enough PrEP doses to prevent infection
  - If PrEP didn’t work (rare)
HIV testing is important

“Window” period before HIV is detected by diagnostic tests

X represents when a person’s HIV test result is positive
HIVDR monitoring with PrEP is important

- Ensure effectiveness of National PrEP program and to understand if additional support is needed for PrEP adherence and/or routine HIV testing
- Assess whether the frequency of HIV testing is adequate to capture seroconversions as quickly as possible
- Support national HIV prevention and treatment programs by understanding the HIVDR frequency with PrEP use
Monitoring Strategies for HIVDR

1. Implement national research protocol to assess HIVDR in PrEP seroconverters.
2. Partner with existing PrEP Demo Projects to add DRM to their protocol or procedures.
3. Expand national surveillance for PDR and ADR to include PrEP DRM specifically.

Levy et al. IAS 2018
Monitoring Strategies for HIVDR

Implement national research protocol to assess HIVDR in PrEP seroconverters

KENYA

ESWATINI

ZIMBABWE
Procedures for HIVDR Monitoring with PrEP

**PROTOCOL**

Establish resistance monitoring protocol

**SAMPLE COLLECTION**

Collect blood from consenting HIV positive individuals who had been prescribed PrEP in the last 3 months

**TESTING**

Test for PrEP drug levels and HIV resistance mutations
GEMS monitored HIV drug resistance (HIVDR) in PrEP rollout programs in Sub-Saharan Africa

- Observational Cross-Sectional Study (Dec 2017 – Jul 2019)
- Current PrEP user (collected initial supply or resupply of PrEP)
- Identified as HIV positive per national HIV testing algorithm after PrEP initiation
- Provided informed consent
- Samples collected from 208 HIV positive individuals
Participants were mostly young, female, and in varied populations.

<table>
<thead>
<tr>
<th>Characteristic</th>
<th>N = 208</th>
</tr>
</thead>
<tbody>
<tr>
<td>Female</td>
<td>155 (75%)</td>
</tr>
<tr>
<td>Age at Seroconversion</td>
<td></td>
</tr>
<tr>
<td>16 – 24</td>
<td>108 (52%)</td>
</tr>
<tr>
<td>25+</td>
<td>95 (46%)</td>
</tr>
<tr>
<td>unknown</td>
<td>5 (2%)</td>
</tr>
<tr>
<td>Population</td>
<td></td>
</tr>
<tr>
<td>Adolescent Girl/Young Woman</td>
<td>87 (42%)</td>
</tr>
<tr>
<td>Serodifferent Couple</td>
<td>50 (23%)</td>
</tr>
<tr>
<td>Female Sex Worker</td>
<td>20 (10%)</td>
</tr>
<tr>
<td>Men Who Have Sex with Men</td>
<td>15 (7%)</td>
</tr>
<tr>
<td>Transgender Woman</td>
<td>12 (6%)</td>
</tr>
<tr>
<td>Pregnant or Lactating</td>
<td>8 (4%)</td>
</tr>
<tr>
<td>Incarcerated</td>
<td>1 (&lt;1%)</td>
</tr>
</tbody>
</table>
The majority of participants initiated PrEP more than 3 months prior to becoming HIV positive.
Key Findings – HIV Drug Resistance

<table>
<thead>
<tr>
<th>MUTATION PROFILE</th>
<th># PARTICIPANTS</th>
</tr>
</thead>
<tbody>
<tr>
<td>No resistance mutations</td>
<td>65/118 (55%)</td>
</tr>
<tr>
<td>Not associated with PrEP</td>
<td>26/118 (22%)</td>
</tr>
<tr>
<td>PrEP-associated (K65R, K70E, M184IV)</td>
<td>27/118 (23%)</td>
</tr>
</tbody>
</table>

118 out of 208 samples (57%) were successfully tested for HIVDR

LIMITATIONS

- Timing of taking PrEP and HIV infection not known
- There may be a gap in seroconversion and sample collection for some participants
Summary

- **PrEP WORKS!** The number of reported infections (229) was very small compared to the estimated number of people who initiated PrEP (>104,000)
- Resistance is a risk for people who become HIV positive on PrEP.
- Improved HIV diagnostics to detect HIV earlier, and monitoring for HIVDR are important for both PrEP and treatment programs.
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</table>
PANEL DISCUSSION: Country Experiences with HIVDR Monitoring with PrEP Rollout

Bhavna Chohan, PhD, MSc
Kenya HIVDR Team Lead

Everline Bosek, MSc, MPH
Kenya HIVDR Program Manager

Anita Hettema, RN, MA
Eswatini HIVDR Team Lead
Resistance Monitoring Set-up

Talk about the process of including HIVDR monitoring in your country’s PrEP program
Why did you decide to use a research protocol to conduct monitoring rather than adding to an existing surveillance program?
Resistance Monitoring Logistics

Were there any in-country systems for specimen collection and shipment that you were able to utilize?
PrEP Seroconverter HIV Drug Resistance Test Flowchart

HIV test performed on PrEP client

HIV-negative

No further evaluation needed; continue PrEP as indicated

HIV-positive

- Inform client about the survey
- Fill in the clinical summary form and send to Uliza NASCOP
- Consent for DBS collection
- Link to ART

Consented

Yes

- Request for the Seroconversion kit from CASCO, collect sample per the package insert and job aid and follow the process outlined:
  - Complete Lab Requisition Form (LRF)
  - Collect blood via venipuncture
  - Prepare two DBS cards
  - Package dried DBS cards
  - Call GIS to ship sample to Kisumu KEMRI lab (addressed envelope in the kit)
  - *sample must be shipped within 3 days*

No

Thank client and link to ART

Return of HIV Drug Resistance Test Results:

- Results returned from KEMRI Lab to requesting PrEP sites
- Results sent to Uliza NASCOP (ulizanascope@gmail.com)

NR: PrEP sites are encouraged to seek guidance from their County HIV Clinical TWG/PrEP or Uliza NASCOP for management of PrEP seroconverter if mutations detected.

Abbreviations:
ART - Antiretroviral Treatment;
DBS - Dried Blood Spot;
LRF - Lab requisition form;
PrEP - Pre-exposure Prophylaxis

Contact:
Dorcas Abya | NHRL Laboratory | Tel: 0720520190
Everline Bosek | Program Coordinator | Tel: 0748785924

Version 1.1 November 2018
Resistance Monitoring Procedures at PrEP Sites

What were the steps taken by health care workers after identifying a PrEP user who seroconverted?
### Laboratory Requisition Form for PreP Seroconverters

**Name of Facility:**
- MFL Code

**Client PreP barcode no. (do not write name):**
- Date of Request:

**Blood collection Date:**
- Time:

**DSS Preparation Date:**
- Time:

**Client Details:**
- Year of Birth: ______
- Gender: ______
- PreP initiation date: ______
- Date PreP bottle was last collected: ______
- Date PreP was last taken: ______
- Date of first HIV positive test: ______
- Date of last HIV negative test: ______

**Clinician’s Name:**

**Facility Contacts:**
- Tel: ______
- Email: ______

**High-risk assessment criteria for reason on PreP:**
- Discordant couple
- Adolescent/Young women
- MSM
- FSW
- Sex with unknown partner
- Other (specify) ______

**Is sexual Partner HIV positive?**
- Yes [ ]
- No [ ]
- Don’t know [ ]

**If partner HIV positive, what ARV regimen is the partner currently taking?**
- Don’t know [ ]

**Adherence Evaluation: Per client report, was the client adherent to PreP?**
- [ ] Good, missed 0-3 doses in part month
- [ ] Fair, missed 4-5 doses in part month
- [ ] Bad, missed 6-7 doses (or more) in part month

---

**CLINICAL INSTRUCTIONS:**
- Clinical site to do: Please record each visit and reporting time below:

- **Lab Marker:**
  - **Card A:**
    - **Barcode:**
    - **Sample Code:**
    - **Direct Test:**
    - **Test Method:**
    - **Test Result:**
    - **Test Date:**
  - **Card B:**
    - **Barcode:**
    - **Sample Code:**
    - **Direct Test:**
    - **Test Method:**
    - **Test Result:**
    - **Test Date:**

---

**GLOBAL CENTRAL LABORATORY**

**Barc**

**Patient Code:**
- **Patient Name:**
- **Date of Birth:**
- **Gender:**
- **Blood Group:**
- **HIV Status:**
- **HIV Test:**
- **HIV Test Date:**

**Molecular Details:**
- **ctDNA:**
  - **Sample Type:**
  - **Sample Volume:**
  - **Sample Source:**
  - **Sample Date:**

---

**Sponsor:**
- **USPID:**
- **PDPSP:**
- **Ggim:**
- **Ggms:**

**Contact Person:**
- **Name:**
- **Title:**
- **Organization:**

**Contact Information:**
- **Phone:**
- **Email:**

---

**NOTE:**
- Please return this form with all required samples after completion.
- Samples must be received within 72 hours of collection.

---

**MINISTRY OF HEALTH**

**NATIONAL AIDS AND STI CONTROL PROGRAMME**

**LABORATORY REQUISITION FORM FOR PREP SEROCONVERTORS**

**Version 1.0 June 2018**
Resistance Monitoring Training Approach

How did you approach training for the health care workers interacting with PrEP clients and other stakeholders?
Implementation Best Practices

What procedures did you use to ensure successful implementation of resistance monitoring?
Adaptation during COVID lockdowns

How did you adapt so resistance monitoring could still occur during COVID (taking into account lockdowns and restrictions on gatherings)?
Successes of HIVDR monitoring

What is one component of HIVDR monitoring with PrEP that you thought went really well?
Challenges of HIVDR monitoring

What were some challenges of implementing HIVDR monitoring with PrEP?
Key Takeaways

What are some key takeaways from your experience implementing HIVDR monitoring with PrEP?
HIVDR Monitoring Tools and Resources
https://www.prepwatch.org/gems/

- DBS Collection Job Aid and training video
- DBS preparation SOP
- Acute seroconversion assessment
- HIVDR counseling messages

- SOP for Receiving DBS Sample Cards
- HIVDR Testing Factsheet
- SOP for high-throughput Next Generation Sequencing HIVDR Assay

- PrEP and HIVDR Fact sheet
- M&E Plan for monitoring HIVDR with PrEP
- Activity Planner for establishing an HIVDR Monitoring Program

- Generic HIV Drug Resistance Monitoring Protocol
- HIV Testing Factsheet
- Training modules on HIVDR (key concepts)
How do you explain HIV DR to potential study participants?
How do you explain HIVDR to potential study participants?

How do clinically assess for acute seroconversion?
How do you explain HIVDR to potential study participants?

How do clinically assess for acute seroconversion?

What are the steps needed to collect a sample and in what order?
How do you create dried blood spots (DBS)?

Use a transfer pipette to spot the card

gems.pitt.edu/sites/default/files/DBS_Venipuncture_08.06.18.mp4
And much more!

<table>
<thead>
<tr>
<th>Template protocol</th>
</tr>
</thead>
<tbody>
<tr>
<td>Training slides</td>
</tr>
<tr>
<td>M&amp;E indicators</td>
</tr>
<tr>
<td>Standard Operating Procedures</td>
</tr>
<tr>
<td>HIV testing factsheet</td>
</tr>
<tr>
<td>Policy brief on HIVDR modeling findings</td>
</tr>
</tbody>
</table>
Acknowledgements
<table>
<thead>
<tr>
<th>Opening &amp; Introductions</th>
</tr>
</thead>
<tbody>
<tr>
<td>Updates from the 2021 WHO Consolidated HIV Guidelines</td>
</tr>
<tr>
<td>HIV Drug Resistance (HIVDR) and PrEP: Key Concepts</td>
</tr>
<tr>
<td>Panel Discussion: Country Experiences with Implementing a National HIV Drug Resistance Monitoring Protocol</td>
</tr>
<tr>
<td>Overview of GEMS Toolkit Materials</td>
</tr>
<tr>
<td>Q&amp;A</td>
</tr>
<tr>
<td>Up Next</td>
</tr>
</tbody>
</table>
Q&A
Upcoming Sessions – Join us virtually at ICASA!

DEC 6
11:35 SAST

Pathway to PrEP: Expanding Access to HIV Prevention Options for Adolescent Girls and Young Women in Kenya through Integration with Family Planning Services

DEC 6
12:25 SAST

Meet the Ring: Product overview and provider/user perspectives on the dapivirine vaginal ring

DEC 6
13:20 SAST

Launching PrEP-it 2.0 – a multi-functional online tool for planning, monitoring, and evaluation of all forms of PrEP

DEC 6
14:15 SAST

The Dapivirine Vaginal Ring: National planning experience from three countries

DEC 9
12:36 SAST

PrEP for Pregnant and Breastfeeding Women
Visit PrEPWatch

• All webinars are recorded and will be accessible on PrEPWatch within a week post-presentation date.

• Complementary resources will also be shared on PrEPWatch—including relevant research articles and tools.

• Registration for upcoming webinars is also located on PrEPWatch.

Visit [www.prepwatch.org/virtual-learning-network](http://www.prepwatch.org/virtual-learning-network) for up-to-date information.
Thank You!