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THE CQUIN NETWORK
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Delivering Sustained, Effective, and Efficient HIV Testing Services Amidst Dwindling Financial Resources

CQUIN 8th Annual Meeting | December 9-13, 2024 – Johannesburg, South Africa

Overview of the dHTS CMM and Quality HIV Testing

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Outline

- **The dHTS community of Practice-Scope of work**
- The dHTS CMM and Quality of dHTS Domains
  - 3-test algorithm
  - Site and Tester Certification
  - Proficiency Testing
  - Clinical
- Reflections on Quality and Sustainability of dHTS
- Next steps

The dHTS Community of Practice (CoP) was launched on May 9, 2023.
Caption: dHTS meeting July 9-12, 2024, Durban

Scope of work of the CoP

- Identify priority gaps and common challenges related to dHTS at the national level
- Exchange best practices and resources for dHTS across the HIV cascade (mobilizing, testing, linking)
- Contribute to the design and implementation of HIV testing and linkage strategies for different population groups
- Provide ongoing feedback and technical support for dHTS to DSD programs
- Promote cross-learning among CQUIN member countries

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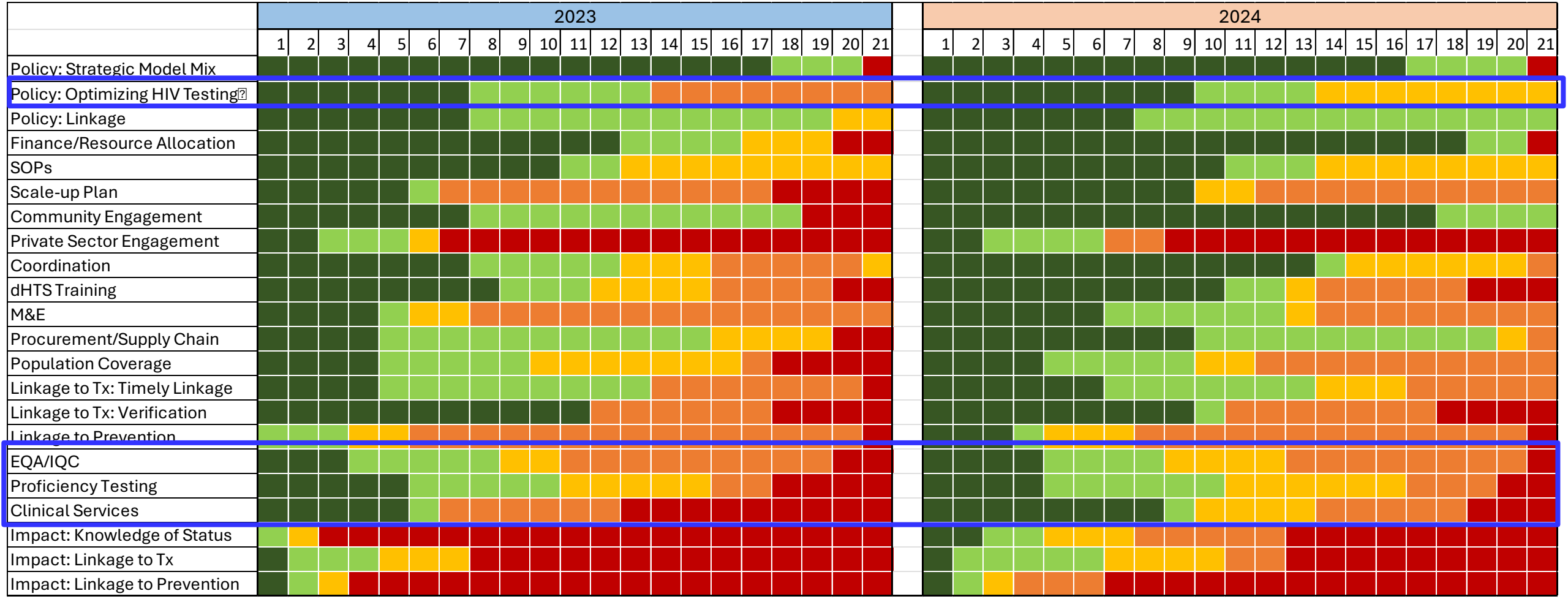
dHTS CMM 2023-2024: Stacked by Maturity (not by country)



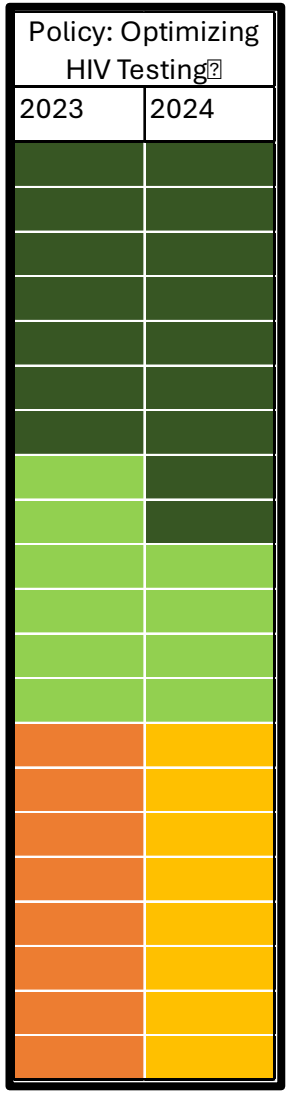
dHTS CMM Quality Domains: Overview-1

Domain-Policies and Guidelines 2-Optimizing HIV Testing

*National policies and **guidelines recommend normative guidance on HIV rapid testing algorithms**, active case finding, and prioritized groups for repeat testing, and recommend integrating HTS into other services*

1. **National testing algorithms that consist of three serial validated rapid diagnostic tests to confirm HIV positive status (3-Test Strategy)**
2. Verification testing prior to ART initiation for newly identified clients.
3. Dual HIV/syphilis testing for priority groups such as pregnant and breastfeeding women and members of key populations (KP);
4. Early infant diagnosis testing algorithms.
5. Recommendations for repeat testing (with consent) for groups at high risk of HIV acquisition such as sexually active individuals, key and priority populations, and clients re-engaging in care.
6. Integration of HTS with prevention services including PrEP and/or VMMC.
7. Integration of HTS into other services such as family planning, STI services, TB services, MCH, NCD services, emergency services etc

Do your national testing algorithms consist of three serial validated rapid diagnostic tests to confirm HIV-positive status? March 2024 responses



Based on the 2024 self-staging results:

- 13/21 countries had adopted the 3-test strategy

dHTS CMM Quality Domains: Overview-2

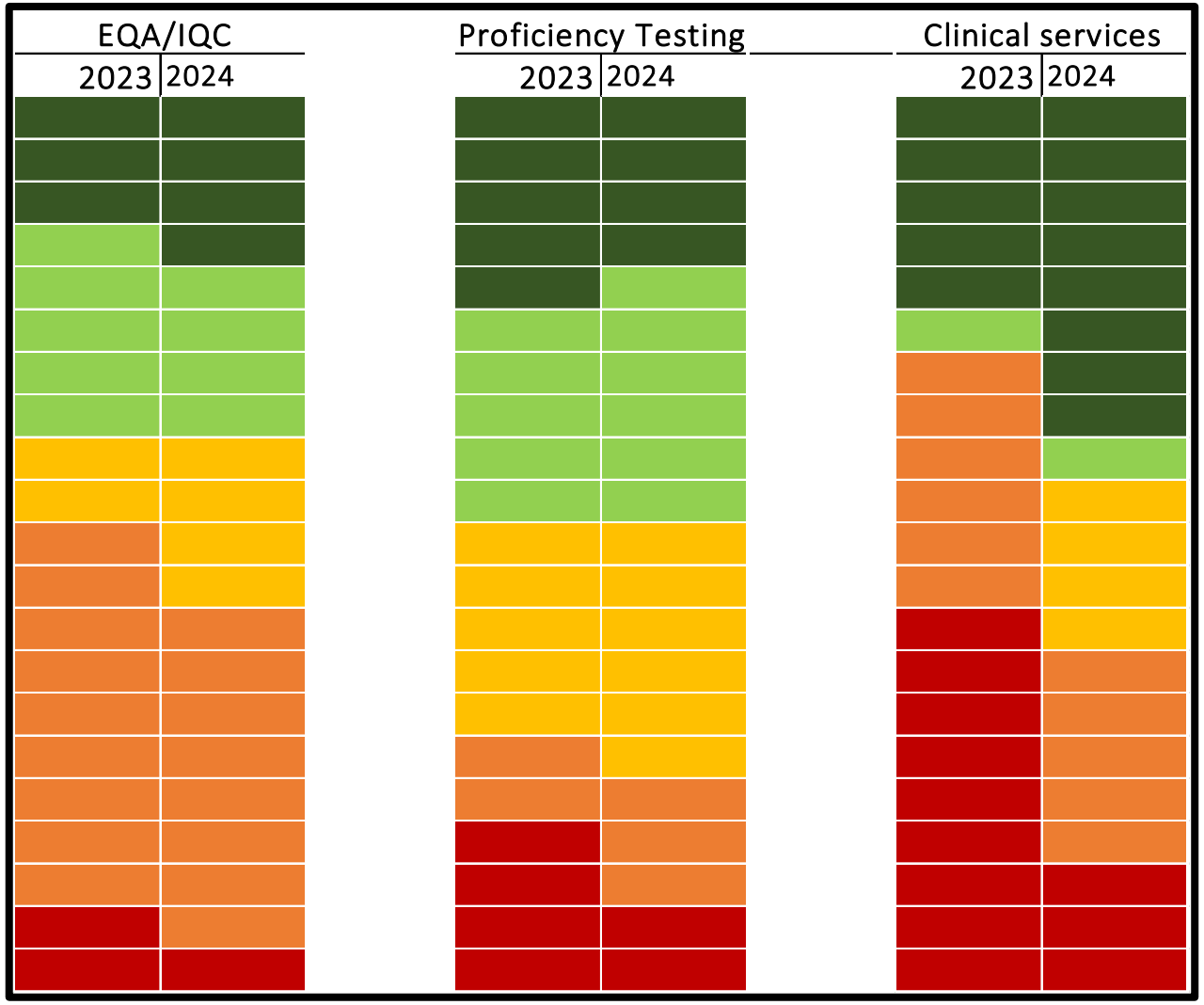
Three domains that assess the quality of testing in the dHTS CMM:

1) **Quality 1-EQA/IQC:** *The country has an external quality assessment/ internal control (EQA/IC)* ***program which regularly assesses the quality of testing sites and ensures that they meet national standards***

2) Quality 2-Proficiency testing: *The country has a proficiency testing* ***(PT) program which regularly assesses tester competency and ensures that it meets national standards***

3) Quality 3-Clinical services: *There is strong* ***evidence that dHTS meet quality standards based on the 5Cs*** *(consent, confidentiality, counseling, correct results, and linkage to post-test services) and that sites offering dHTS meet minimum standards for safe and ethical HTS*

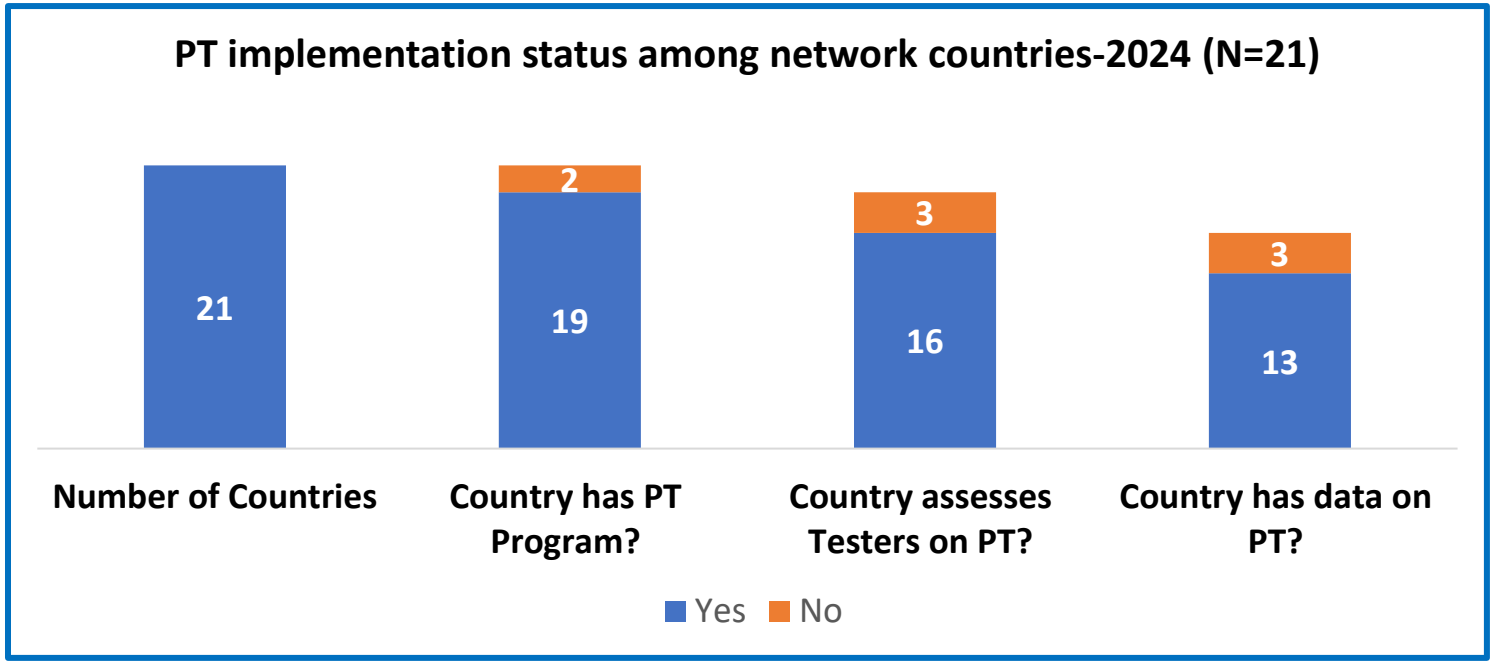
Quality Domains dHTS CMM Scores 2023 vs. 2024 (21 countries)



Based on the 2024 self-staging results:

- There is improved maturity across all the 3 quality domains in 2024 compared to 2023
- **But:** More than half of the countries are below maturity (LG or DG scores)

Country Responses to Assessment Questions on Proficiency Testing Domain



Country	# Testers assessed	#Assessed who passed	% Pass rate
Sierra Leone	147	66	**45**
Tanzania	7867	4893	**62**
Rwanda	4854	3512	**72**
South Africa	7967	6620	**83**
Kenya	18058	15299	**85**
Liberia	101	87	**86**
Mozambique	1123	979	**87**
Cote d'Ivoire	258	229	**89**
Zambia	397	358	**90**
Uganda	30000	27720	**92**
Malawi	4206	4089	**97**
Lesotho	310	304	**98**
Nigeria	1887	1865	**99**

Observations:

- Pass rates vary across countries (45%-99%)
- # Testers assessed vary significantly and may not be nationally representative (101 to 30,000)

Twelve Countries Prioritized at Least One of The Three Quality of dHTS Domains

Country	Quality 1: EQA/IQC (n=11)	Quality 2: Proficiency Testing (n=9)	Quality 3: Clinical services (n=6)
• Cameroon	X	X	X
• Burundi	X	X	X
• Ghana	X	X	X
• Liberia	X	X	X
• Tanzania	X	X	X
• Eswatini	X	X	
• Mozambique	X	X	
• Rwanda	X	X	
• Uganda	X		X
• Senegal	X		
• Sierra Leone	X		
• South Africa		X	

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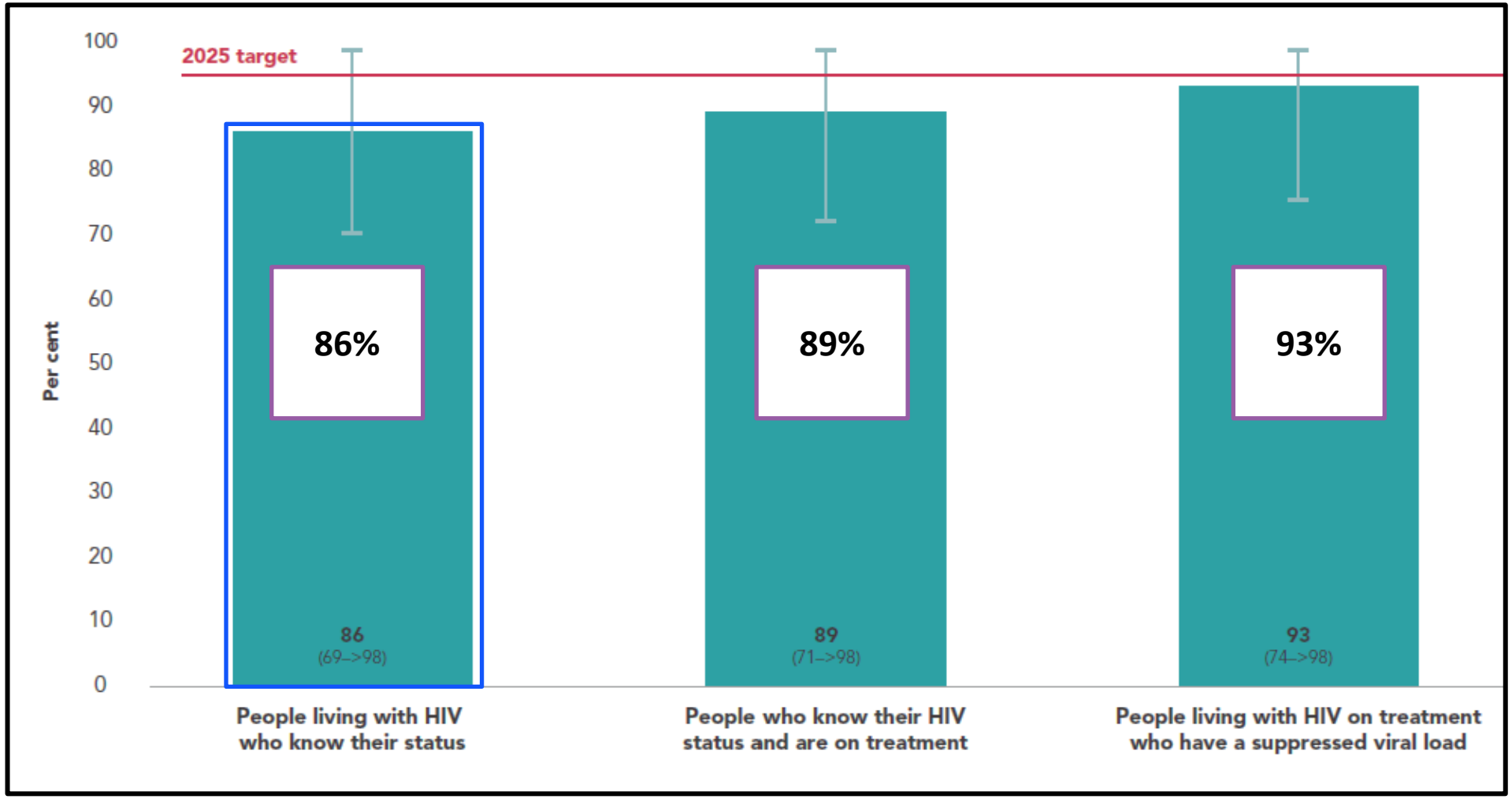
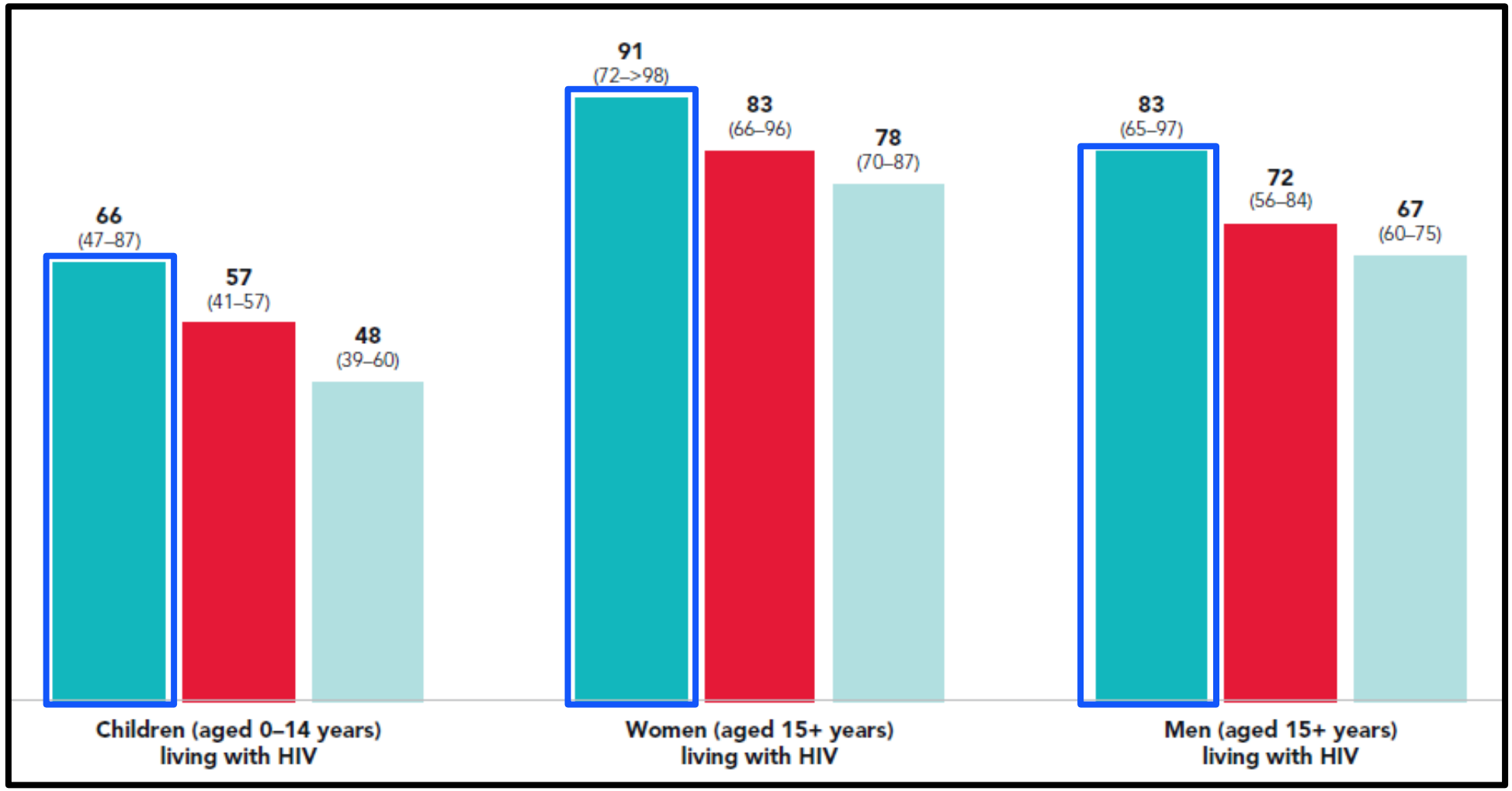
86% of people living with HIV who knew their HIV status, Global 2023 (Source: Further analysis of UNAIDS epidemiological estimates, 2024)



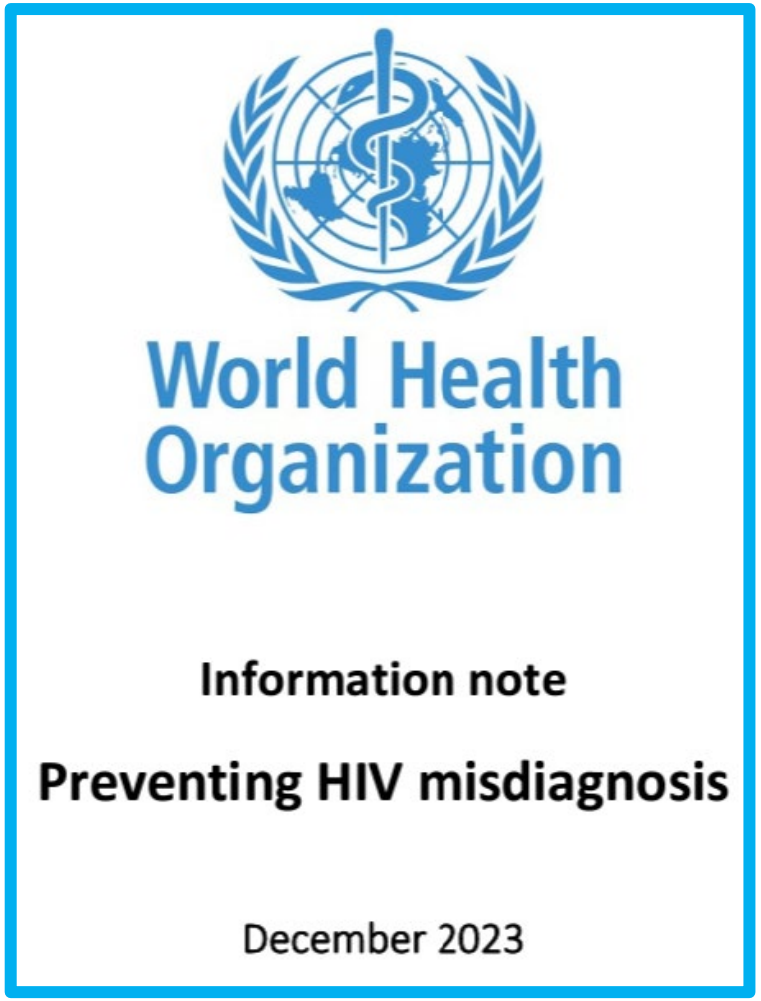
Knowledge of status continues to vary among children, women and men, global, 2023 (Source: Further analysis of UNAIDS epidemiological estimates, 2024)



How do we maximize efficiency and effectiveness of testing?

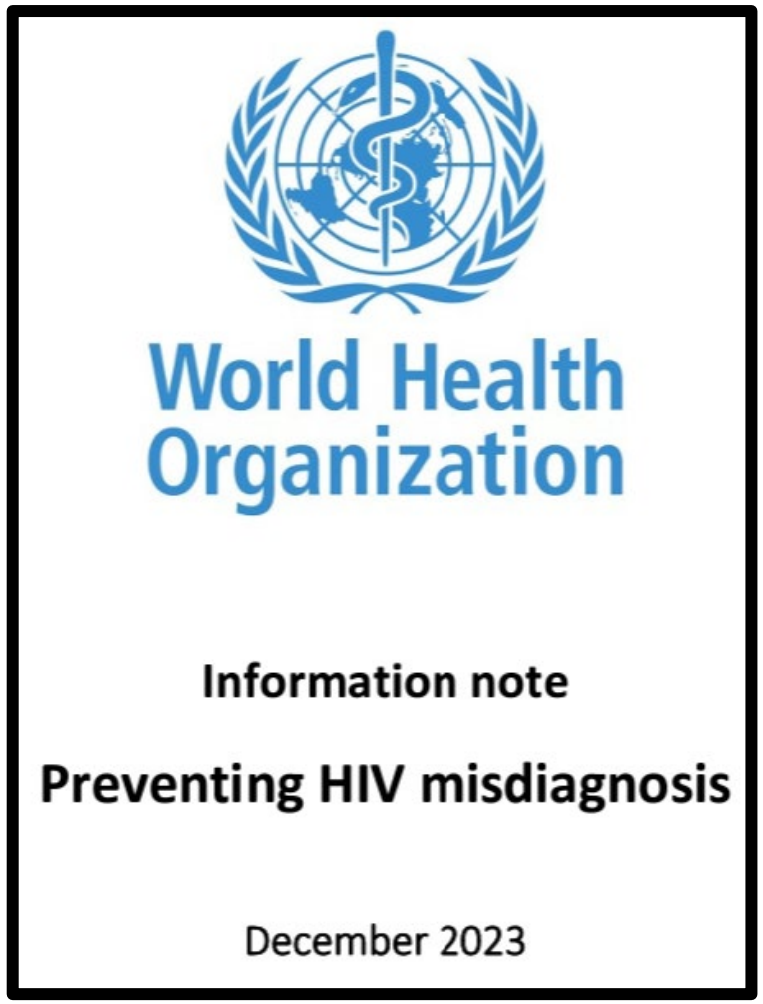
- Adopt, and implement to scale Evidence Based HIV Testing Approaches

A three-test strategy to reduce HIV misdiagnosis



- An estimated 86% of individuals living with HIV are now diagnosed
- HIV testing should be accurate to minimize misdiagnoses
- HIV testing should adhere to the World Health Organization (WHO) 5 Cs of HIV testing:
  - Consent
  - Confidentiality
  - Counselling
  - **Correct test results** and
  - Connection (linkage to prevention, care and treatment services)

A 3-test strategy is for all countries irrespective of their epidemic profile



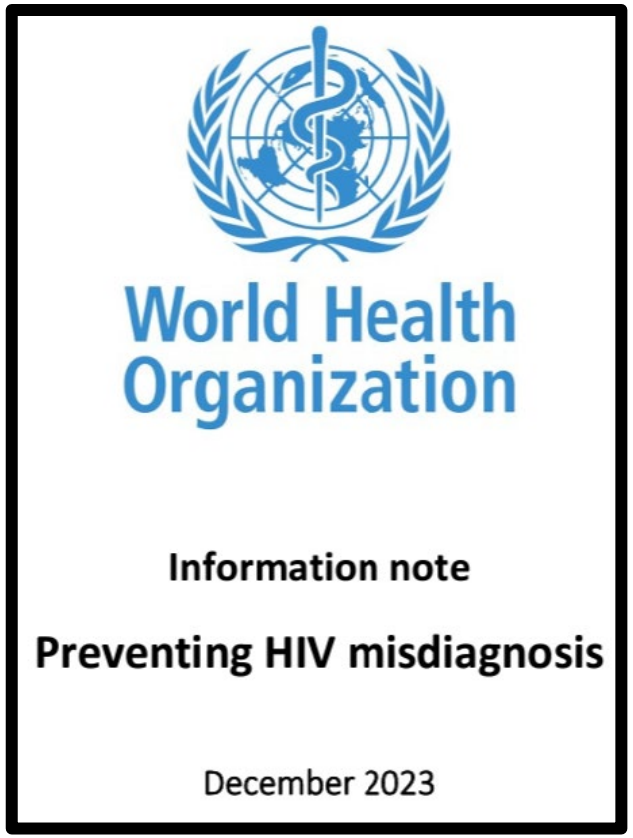
Prior to 2019

- Countries with an HIV prevalence greater than 5% use a two-test strategy
- Countries with an HIV prevalence less than 5% use a three-test strategy

In 2019 to date:

- All countries use a three-test strategy regardless of national HIV prevalence
- Using a three-test strategy as a standard testing practice maintains accuracy of diagnosis in HTS programs and prevents misdiagnosis

Why a 3-test algorithm?

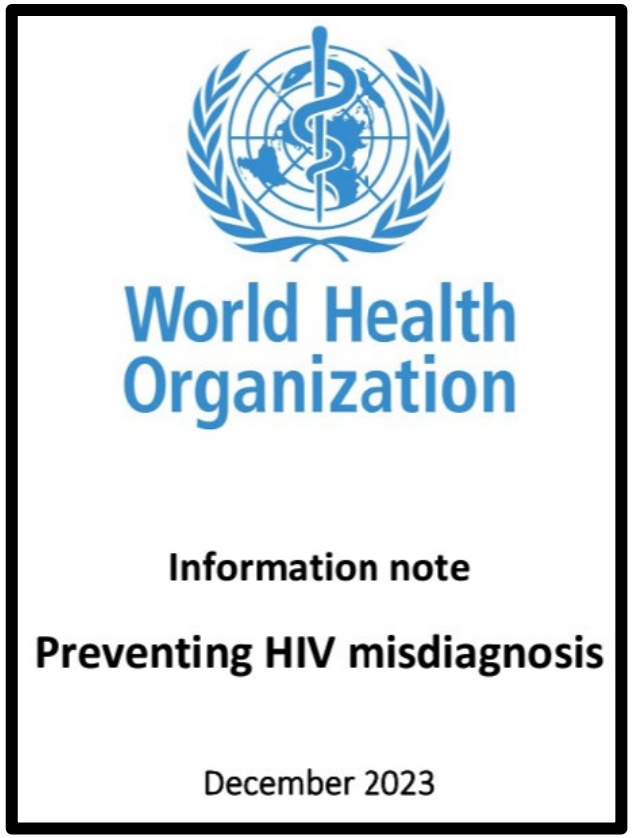


The positive predictive value (PPV) of a test measures the proportion of people who are truly positive among all who test positive

- WHO guidance specifies a PPV of at least 99% to maintain diagnostic accuracy in HIV testing strategies.
    - PPV declines when the HTS positivity rate declines
- With national test positivity under 5% globally, PPVs of 97–98% have been observed where a two-test strategy is used.
- A drop in PPV of 1–2% results in an increase in misdiagnoses (increased numbers of individuals diagnosed HIV positive when they are not truly HIV-positive)

chrome-extension://efaidnbmnnnibpcajpcglclefindmkaj/https://cdn.who.int/media/docs/default-source/hq-hiv-hepatitis-and-stis-library/hiv-testing-information-note.1.12.2023.pdf

Why a 3-test algorithm?



- With a two-test strategy, PPV drops as positivity falls below 5% but is maintained when a three-test strategy is used
  - Goal: To maintain a PPV of at least 99%.
- Without changing to a three-test strategy, the PPV will drop unacceptably, resulting in an increasing proportion of false-positive diagnoses.
- A false-positive diagnosis has consequences
  - **Individuals** : Psychosocial impact of an HIV diagnosis
  - **Health implications:** unnecessary ART,
  - **Public health consequences**: Substantial costs of lifelong ART and related services for false positive, and damage to the reputation of and trust in the HIV program.

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Thank You!