



Most Breastfeeding Women with High Viral Load Are Still Undiagnosed in Sub-Saharan Africa

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David Maman has no financial relationships with commercial entities to disclose



Background:

- Few studies have assessed cascade of care & population viral load among pregnant/breastfeeding (PBF) women
- Key indicators are needed to inform and plan PMTCT programs



Study objectives:

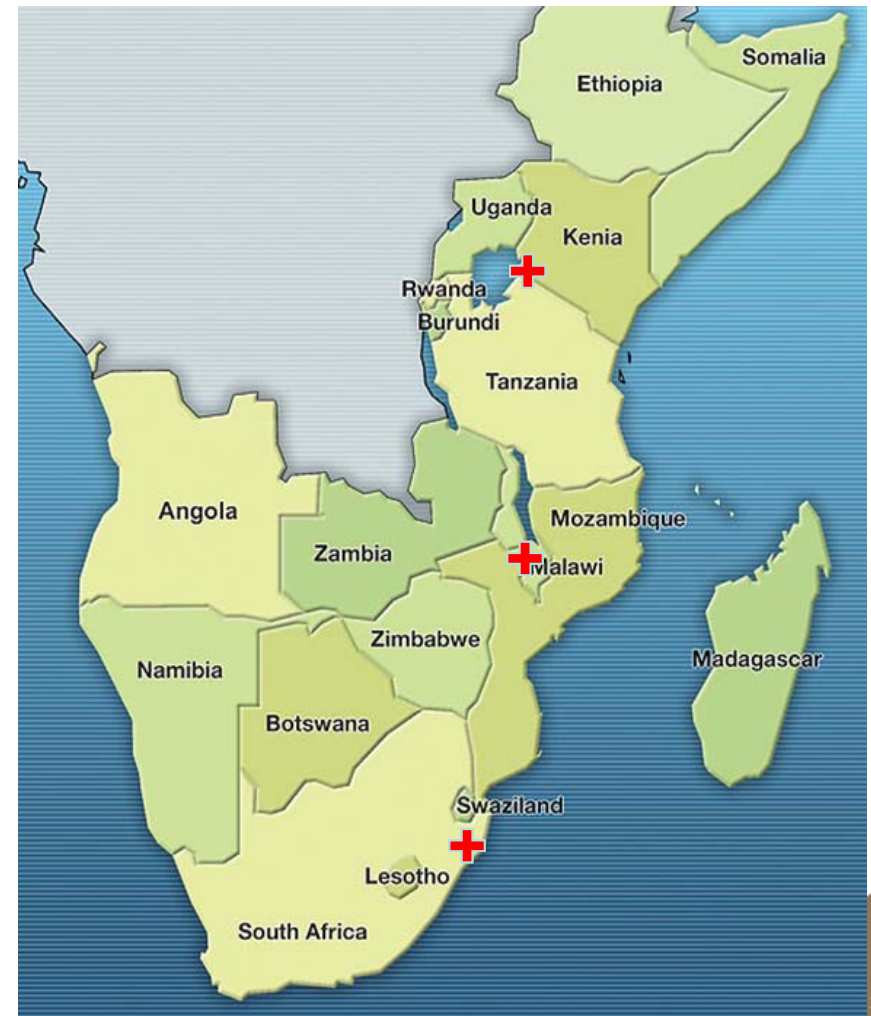
Among pregnant/breastfeeding women:

- Primary objective: To assess population viral load
- Secondary objectives:
 - To assess each step of the cascade of care
 - To assess HIV prevalence
 - To estimate proportion of women infected during pregnancy and breastfeeding

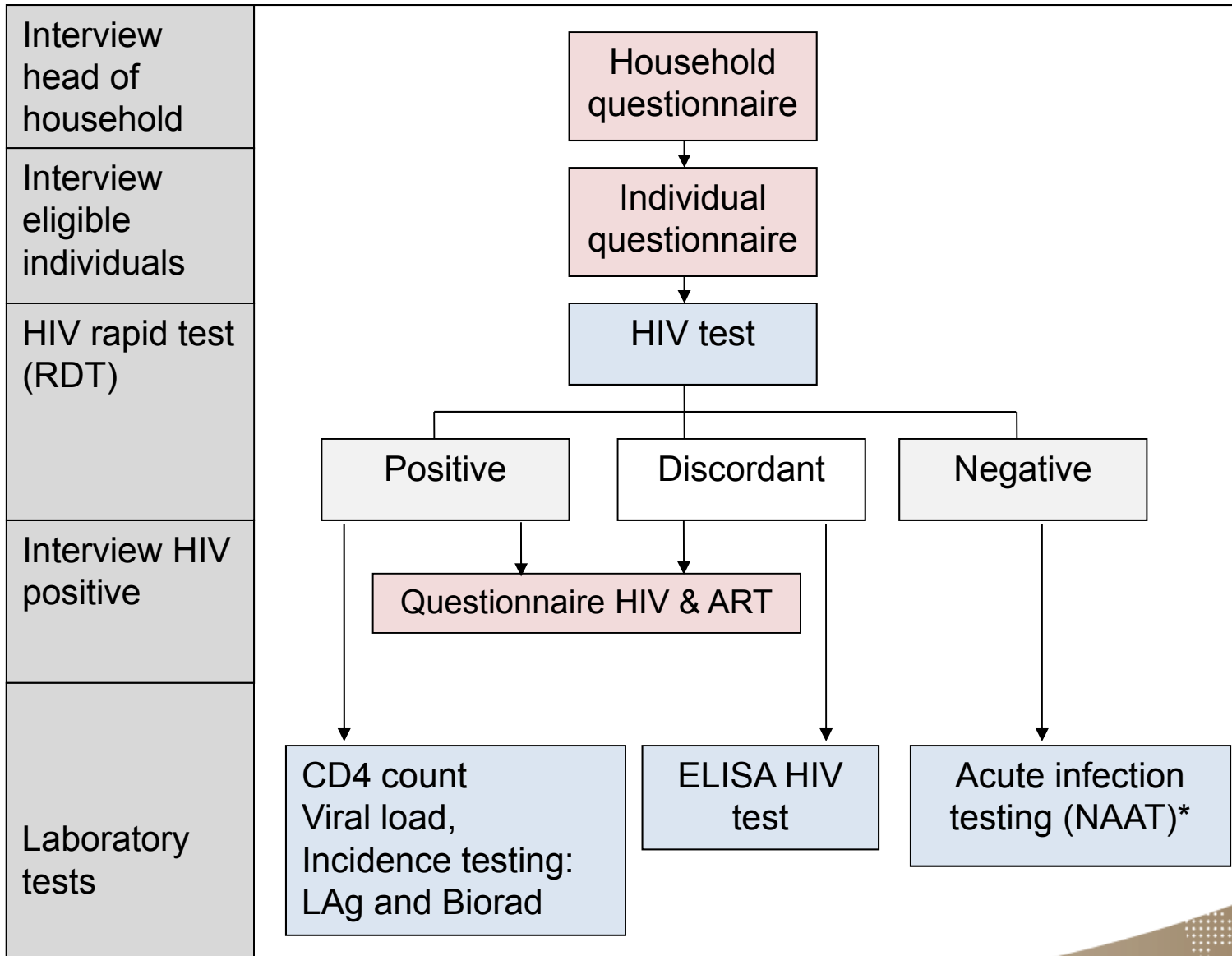


Methods:

- **Surveys' areas:**
 - Chiradzulu (Malawi) PMTCT **Option B+**
 - Eshowe (KZN, South Africa): PMTCT **Option B**
 - Ndhiwa (Kenya) PMTCT **Option A**
- **Design:** cross-sectional multistage household based surveys
- **Population:**
 - Aged 15-59 years
 - Living in selected households
- **Survey duration:** 13 weeks (Sep 2012 and Nov. 2013)



Methods: Study Procedures



* Only South-Africa and Kenya

Methods: Definitions

- Infection during pregnancy or breastfeeding was defined as a HIV-positive test among a breastfeeding woman who was unaware of her status and reported a negative HIV test during Ante Natal Care



Results: Inclusion

- **9,802** HH visited → **12,461** women eligible → **11,550** included and tested (**92.7%**)
- Proportion of women pregnant or breastfeeding
 - Kenya: 37.8% (1,413/3,760)
 - Malawi: 33.8% (1,444/4,275)
 - South Africa: 12.5% (439/3,515)



Results: Characteristics

Table: Characteristics

	Kenya	Malawi	South-Africa
Median Age (years)+IQR	25 [21-30]	26 [21-31]	24 [20-28]
HIV Prevalence (%+ 95%CI)	22.2% (20.1-24.5)	13.4% (11.8-15.3)	23.0% (19.3-27.2)
Attended at least one ANC* (%)	94%	98.8%	96.4%
Attended at least 3 ANC* (%)	75.5%	86.1%	73.1%
HIV test as part of ANC** (%)	85.0%	89.8%	93.2%

* On women on have delivered in the 5 years prior to the survey

** On women who delivered in the 2 years prior to the survey



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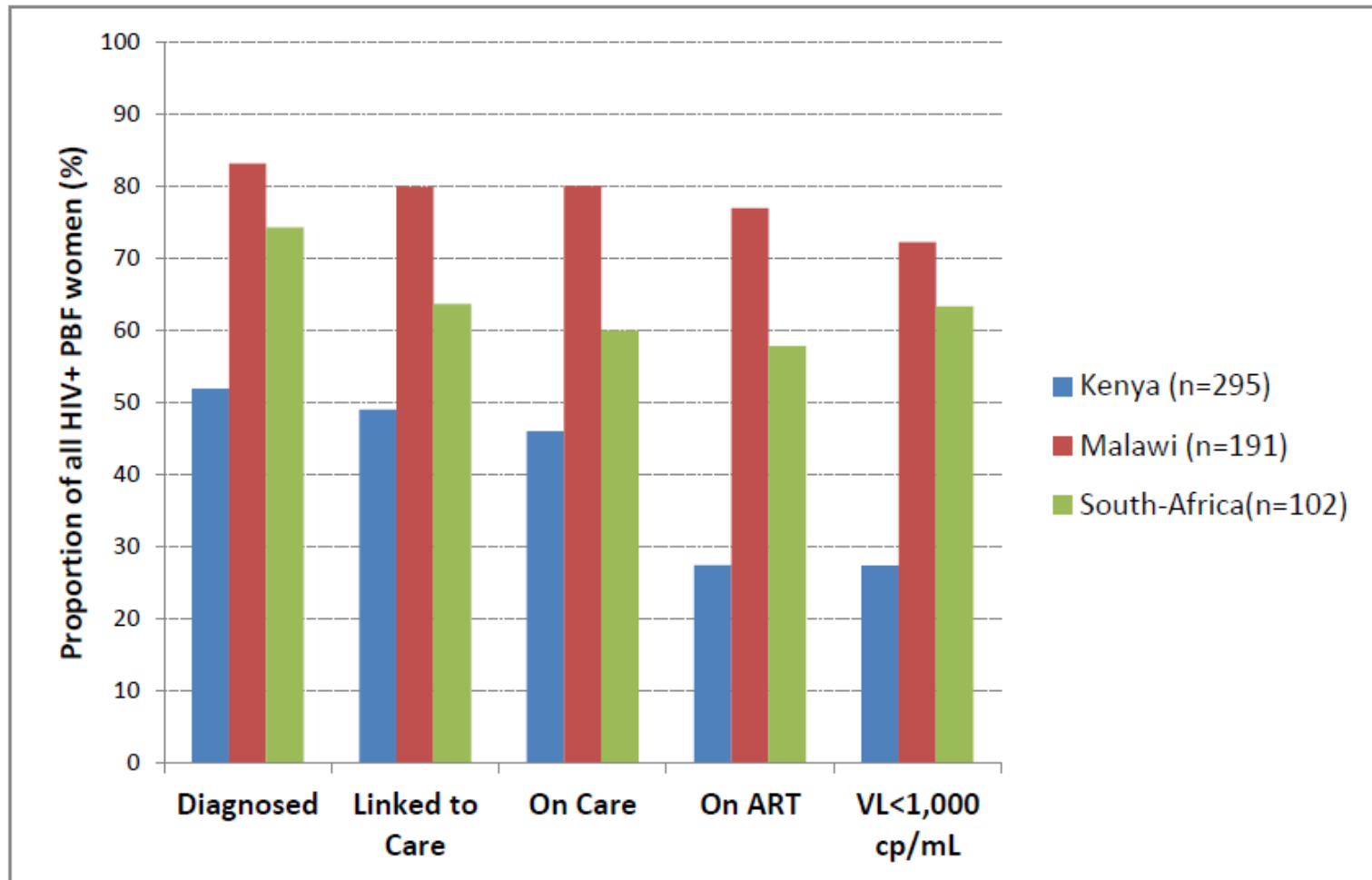
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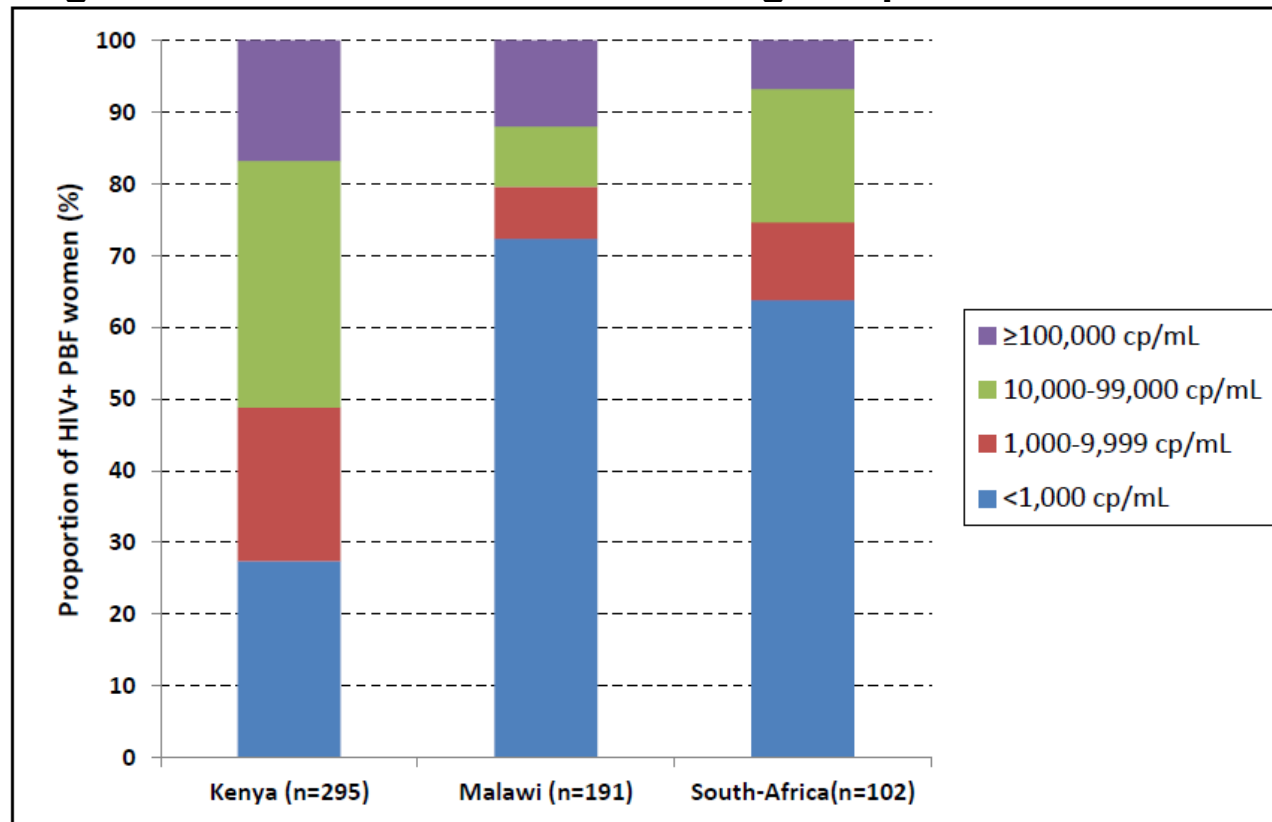
Results: Cascade of Care

Figure: Cascade of care among HIV-positive PBF women



Results: Population Viral Load

Figure: Viral Load distribution among HIV-positive PBF women



Proportion with VL $< 1,000$ cp/mL

- Kenya: **27.3%** (95%CI 22.5-32.9)
- Malawi: **72.3%** (95%CI 65.5-78.2)
- South-Africa: **63.4%** (95%CI 54.0-72.3)

Results

Table: Distribution of Breastfeeding Women with VL>1,000cp/mL (n=220)

	% (+95%CI)	
Tested Negative at ANC	37.8% (31.5-44.3)	} Total Undiagnosed: 58.6% (52.0-65.0)
Other undiagnosed	20.9% (16.0-26.8)	
Diagnosed but not on ART	27.3% (21.8-33.6)	} Total Undiagnosed: 41.4% (35.0-48.0)
On ART	14.1% (10.1-19.4)	



Results

Table: Among breastfeeding women reporting negative test at ANC, HIV prevalence

Kenya (n=925)	Malawi (n=1,054)	South-Africa (n=264)
7.4%	2.1%	4.9%

HIV Incidence among Women 15-29 years using Incidence Assays:

- Kenya: 3.8 /100 PY (95%CI: 2.1-5.5)
- Malawi: 0.9 /100 PY (95%CI: 0.1-1.7)
- South Africa: 3.2 /100 PY (95%CI: 1.4-4.9)



Discussion

- Population VL suppression among PBF ranged from 27 to 72%
- The proportion of PBF women undiagnosed was higher where incidence was high suggesting the importance of HIV infection during PBF
- The majority of PBF with VL>1,000copies/mL were undiagnosed



Discussion

Strengths and limitations:

- Strengths: representative of the population, high inclusion rate
- Limitations: all data were self-reported, no data on infants HIV+ prevalence, low numbers.

Recommendations:

- Implement option B+
- Reduce HIV Incidence among young women (TASP and PREP)
- Diagnose women and their infants where they are!!
 - ANC, Delivery, EPI, Nutrition, Pediatrics



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Emilie Wang

MSF SAMU South Africa

Tom Ellman

Eric Goemaere

Emmanuel Fajardo

Carole Metcalf

Kemri/CDC Kisumu

Clement Zeh

Andrea Kim

MoH Kenya

Irene Mukui

Ojwang Lusi

MoH Malawi

Davie Zolowere

Benson Chilima

NICD Johannesburg

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