



Home-Based Counselling and Testing and Linkage to Care in South Africa and Uganda

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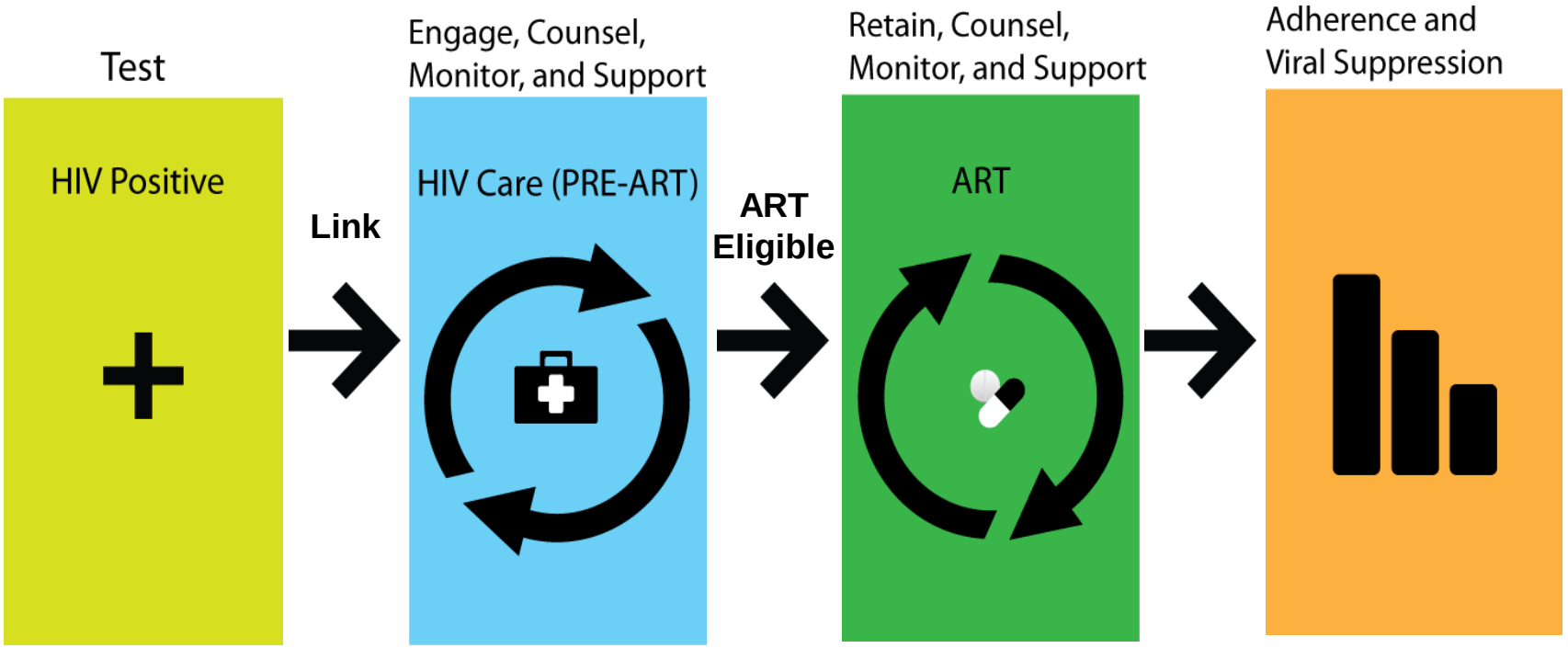
Human Sciences Research Council (HSRC), University of Washington, and Integrated Community Based Initiatives (ICOBI)

HIV Testing and Linkage to Care Cascade



The ultimate aim of our work is to identify effective and efficient strategies for HIV testing and linkages, in high prevalence settings.

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Slide courtesy of Waafa El-Sadr: CROI plenary

Aim: Phase 1

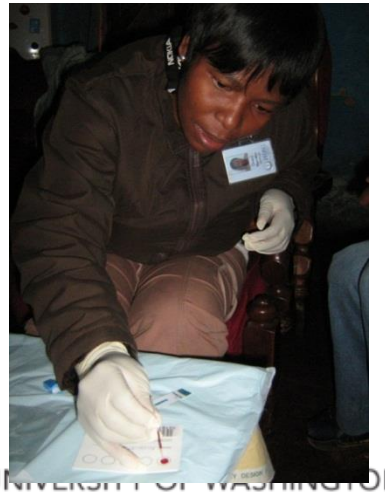
- **HBCT as a platform to:**
  - **achieve high HIV testing coverage**
  - **deliver point-of-care (POC) CD4 tests**
  - **identify HIV+ persons and actively refer to HIV care**
  - **provide follow-up visits to retain HIV+ persons in care**

Methods: Intervention package (1)

Community Sensitization → **Household Consent** → **Individual**
- Consent
- Questionnaire
- Pre-test counseling
- HIV test

HIV+
Linkage to care and treatment

HIV-
- Linkage to prevention



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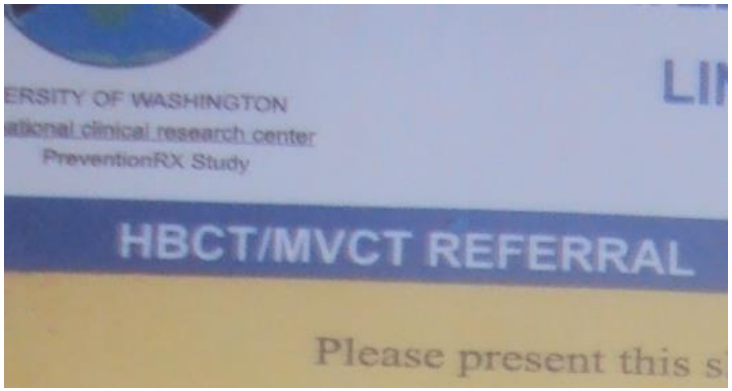
Methods: Intervention package (2)

HIV+

- **Post-test counseling**
- **POC CD4 test**
- **Referral for HIV care & ART**
- **Follow-up visits at month 1 and then quarterly**



Referral card with CD4 result and symptom screens for symptomatic HIV, STIs and TB

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Pilot: South Africa and Uganda

IMPLEMENTATION AND OPERATIONAL RESEARCH: EPIDEMIOLOGY AND PREVENTION

High HIV Testing Uptake and Linkage to Care in a Novel Program of Home-Based HIV Counseling and Testing With Facilitated Referral in KwaZulu-Natal, South Africa

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	Uganda: N(%)	South Africa: N (%)
HIV testing coverage	1558 (80%)	671 (91%)
HIV prevalence	152 (9.8%)	201 (30%)
Median CD4 count	467 cells/µL	425 cells/µL

Pilot: Results at 6 months

	Uganda: N(%)	South Africa: N (%)
Visited an HIV Clinic	133 (88%)	195 (97%)
ART uptake among those eligible	22 (79%)	15 (80%)
MC uptake in Uganda	75 (62%)	-
Proportion with viral load <1,000 copies/mL among ART eligible participants	-	Increased from 20% at baseline to 80% at 6 months*
Change in mean viral load over 6 months among ART eligible participants	-	-2.46 $\log_{10}$ copies/mL*

*p ≤0.01

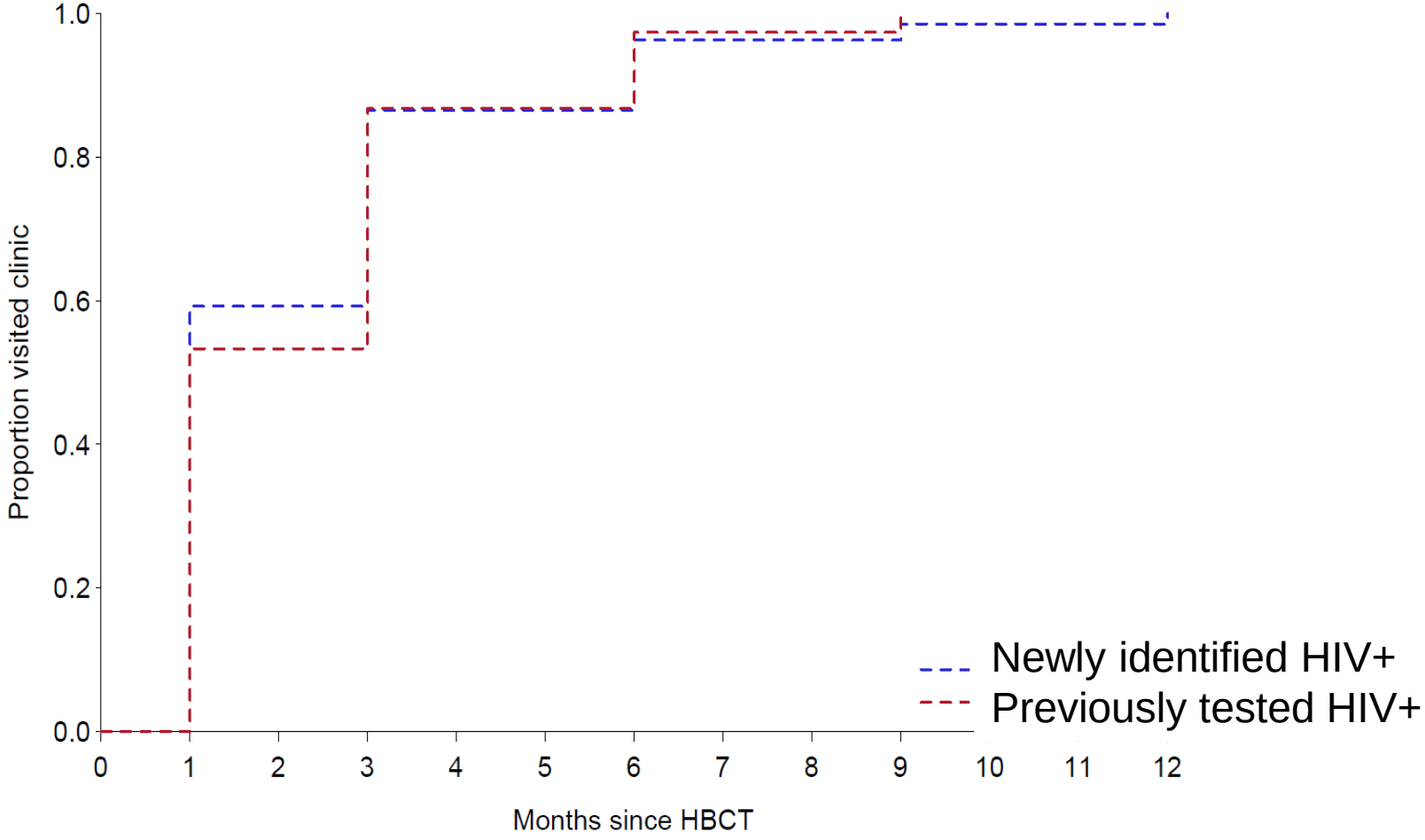
Aim: Phase 2

- **To estimate the impact of a package of interventions (community-based home HCT, point-of-care CD4 testing, referral to care, follow-up visits) on:**
  - **Linkage to HIV clinic**
  - **ART initiation following national guidelines**
  - **Viral load suppression 12 months after testing**

Phase 2: Baseline results

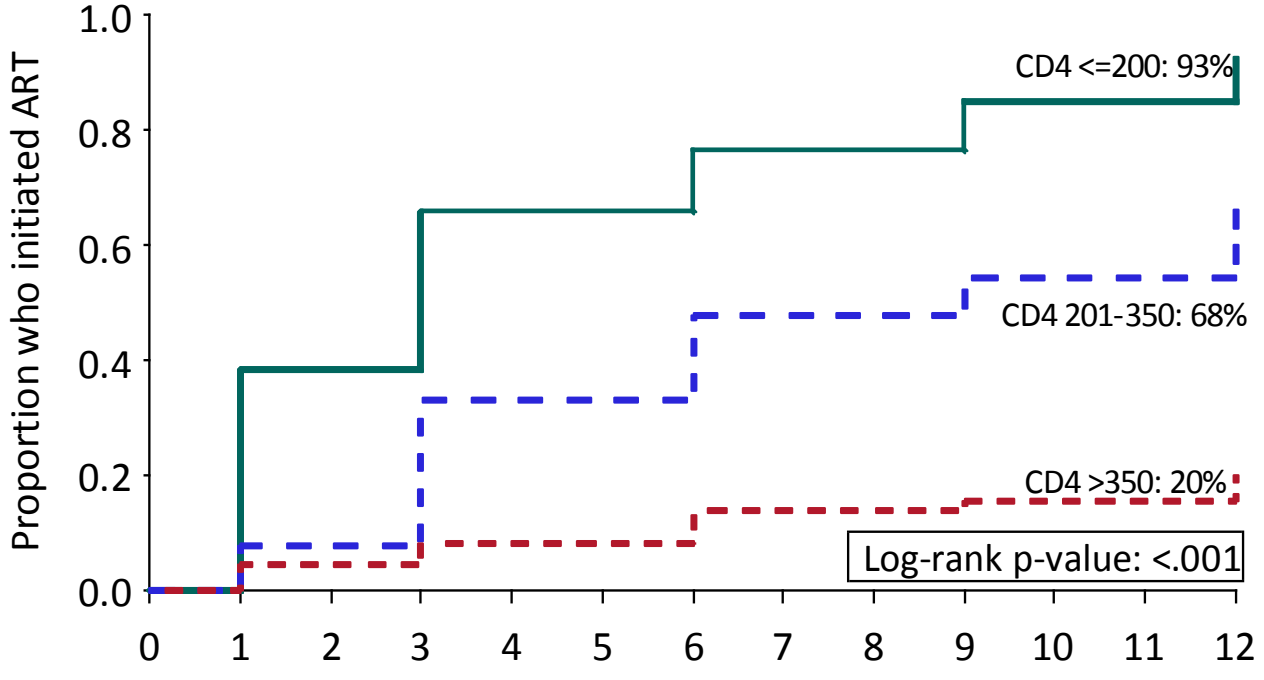
Baseline findings	N (%)
Adults tested	3,393 (96%)
HIV+ identified	635 (19%)
On ART at enrollment among all HIV+ participants	254 (40%)
Known HIV+ not on ART	152 (24%)
Newly identified HIV+	229 (36%)
Median CD4 baseline (not on ART)	456 (IQR 289-631)

Clinic uptake: 96% at 6 months among HIV-infected participants not on ART at baseline



No. at risk:					
Known HIV+	152	71	20	4	0
Unaware	228	91	22	5	1

ART uptake by CD4 count among those not on ART at enrollment



No. in followup:

CD4 <=200	47	47	29	16	11	6
CD4 201-350	79	79	73	50	38	31
CD4 >350	252	250	235	211	192	181

- 74% of eligible persons (CD4≤350) initiated ART by month 12
- Significant differences for ART by CD4 count – lower uptake for HIV+ persons with higher CD4

ART Uptake by CD4 count

- Common reasons for not linking:
  - "I was told I was not eligible" in SA (64%) and Uganda (22%)
  - Clinics repeating CD4 counts (both)
  - Waiting for 3 officially required visits (Uganda)
- Trend toward higher ART initiation if tested as a couple

Population viral load suppression increased at 12 months

	Baseline	M12	Change	p-value
Change in mean HIV VL (log_{10} c/mL)	Mean HIV VL (log_{10} c/mL)		VL (log_{10} c/mL)	
All HIV+ participants	2.95	2.40	-0.54	<0.001
HIV+ not on ART at baseline	3.86	2.93	-0.93	<0.001
CD4≤350 (excluding baseline ART)	4.49	2.53	-1.96	<0.001
Change in suppressed VL (<1,000 c/mL)	% w/ suppressed VL (<1,000 c/mL)		%	
All HIV+ participants	50%	65%	15%	<0.001
CD4≤350 (excluding baseline ART)	8%	61%	53%	<0.001

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Limitations

- **Household residents enrolled – did not account for migration e.g. for employment**
- **Lower uptake of testing among couples, men and youth in South Africa**
- **Data not linked to clinic records**
- **ART uptake not evaluated from the provider perspective**

Discussion (1)

- **Community-based home HCT, POC CD4 testing, referral to care, and follow-up visits achieved:**
  - **High testing coverage in South Africa and Uganda**
  - **Identified HIV+ persons unaware of serostatus & at high CD4 count**
  - **Facilitated linkage to HIV care and ART initiation**
  - **Significant increase in viral suppression at population level**
- **Despite high HIV clinic attendance, ART uptake lagged behind engagement in care for HIV+ persons with higher CD4**
- **Asymptomatic individuals may require different strategies, including support of ART providers and reinforcement of revised ART initiation criteria**

Discussion (2)

- Client support, such as simplified ART delivery & couples counseling, may be required to increase ART uptake and adherence
  - May require client support & follow-up, messaging about ART benefits when asymptomatic, & provider training
- How to reach youth, men working away from homes, and to promote couples testing and disclosure?
- Next steps: what model elements lead to success?
- Scaling up: minimum package for linkage to ART and VL suppression; how to transfer to community health workers?

Thank you

Study Participants

ICOBI and HSRC Partners

Jared Baeten, Jim Hughes, Patrick Ndase, Carol Levin, Roger Ying, Geoff Garnett, Monisha Sharma, Meighan Krows, Hilton Humphries, Lucia Knight, Norma Ware, Bosco Turyamureeba, Elioda Tumwesigye, Heidi van Rooyen, Judy Wasserheit, & Connie Celum

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