

# A Population-based public health approach: Population- versus facility-level metrics for measuring engagement in the HIV care cascade

Becky Genberg, Edwin Sang, Monicah Nyambura,  
Beth Rachlis, Kara Wools-Kaloustian, Joseph Hogan,  
Paula Braitstein

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# Authors and affiliations

- Becky Genberg<sup>1</sup>
  - Edwin Sang<sup>2</sup>
  - Monicah Nyambura<sup>2</sup>
  - Beth Rachlis<sup>3</sup>
  - Kara Wools-Kaloustian<sup>2,4</sup>
  - Joseph Hogan<sup>1,2</sup>
  - Paula Braitstein<sup>1,2,3,4,5</sup>
- 1: Brown University, School of Public Health, Providence, RI, USA
  - 2: Academic Model Providing Access to Healthcare (AMPATH), Eldoret, Kenya
  - 3: University of Toronto, Dalla Lana School of Public Health, Toronto, Canada
  - 4: Indiana University, School of Medicine, Indianapolis, IN, USA
  - 5: Moi University, College of Health Sciences, Eldoret, Kenya



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# Introduction

- Why population perspective?
  - Implementation of treatment-as-prevention (TasP) requires identifying, engaging and retaining in HIV care all people living with HIV in communities, not just those seeking care
  - Most studies to date on engagement and retention in HIV care report on facility-based estimates
  - Home-based counseling and testing (HBCT) identifies individuals earlier in the course of their infection, but are healthier individuals identified in the community entering and staying in care?

# Objective

- To take advantage of population-based data from HBCT in western Kenya to examine engagement and retention in the HIV care continuum, comparing:
  - Facility-level estimates: losses occurring in the HIV care continuum from the point of enrolling in care onwards
  - Population-level estimates: engagement in care among all HIV-positive individuals living in a community

# Methods: Study setting

- AMPATH (Academic Model Providing Access to Healthcare)
  - Partnership between Moi Teaching and Referral Hospital, Moi University, a consortium of North American institutions, and the Ministry of Health in Kenya since 2001
  - Actively following 85,000 patients in HIV care from 22 sub-counties
  - HBCT since 2007
- Data from HBCT in one high prevalence sub-County (Bunyala) from December 2009 through January 2011
- All households were visited and assessed for eligibility



- Eligible participants who accepted testing received counseling and rapid HIV testing

# Methods: Study sample and analysis

- Included all individuals identified as HIV-positive during HBCT
- Data was merged with AMPATH medical records to determine outcomes through June 2014
- Descriptive statistics were used to compare facility and population-based metrics
- Outcomes
  - Enrolled in care: Initial visit with HIV care provider
  - CD4 testing: At least one during care
  - Initiated ART: Began receiving ART during care
  - Retained on ART: Retained in care and actively on ART
  - Retained overall: Retained in care (pre and post-ART)

# Results

- Of 66,723 individuals living in Bunyala sub-County during 2009 census:
  - 88% were enumerated by HBCT and
  - 98% of those eligible agreed to participate (n=56,670).
- A total of 3,788 HIV-positive individuals were identified.
  - 61% were previously diagnosed (n=2306)
- As of June 2014, 2,247 (59%) had engaged in care.

# Facility Perspective

Testing

linkage

retention

100%

92%

89%

93%

86%

HBCT

Enrolled  
in care

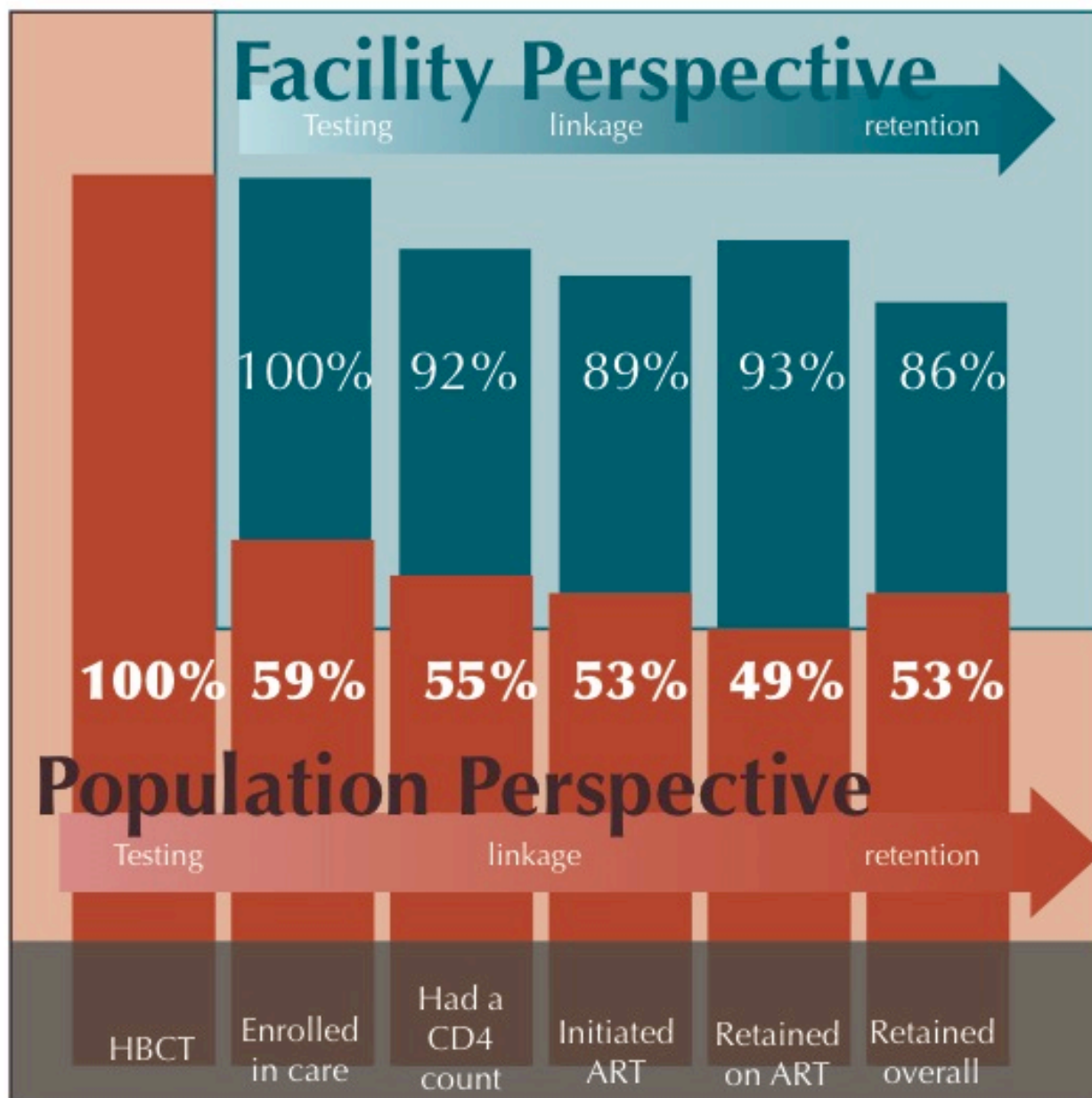
Had a  
CD4  
count

Initiated  
ART

Retained  
on ART

Retained  
overall





# Discussion and conclusions

- Facility-based estimates of the HIV care cascade overestimate engagement in care
  - Missing diagnosed individuals who do not initiate care
- Effectiveness of TasP requires achieving 90-90-90, measured at the population-level.
- Population-based strategies for testing, linking and retention are needed for full potential of TasP to be realized.
- Limitations:
  - Errors in data merge
  - Deaths, migration, transfers, care from other facilities

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