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

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

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Authors and affiliations

- Becky Genberg¹
- Edwin Sang²
- Monicah Nyambura²
- Beth Rachlis³
- Kara Wools-Kaloustian²,⁴
- Joseph Hogan¹,²
- Paula Braitstein¹,²,³,⁴,⁵

1: Brown University, School or 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
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?

Wachira et al. 2012
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.
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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