Gaps in care among adults receiving HIV care in western Kenya

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5. Moi University, College of Health Sciences (Kenya)
BACKGROUND - LOSSES VERSUS GAPS

- Disruption in care (e.g., missed visits) and discontinuation of ART can lead to drug resistance, AIDS-related illnesses and death and undermine social outcomes (e.g., acceptance of status).

- A 2010 review of 39 sub-Saharan African ART cohorts: 25% (30% in sensitivity analysis) were no longer in care after 2 years (most LTFU).

- High proportion may only experience transient gaps in care (they miss a scheduled visit but return to care within a defined period of time).
  - This has been reported to occur in high income settings in approximately 20% of patients although is less understood in low- and middle-income settings.
**Objective**

To describe gaps in care among a cohort of adult patients enrolled in an HIV care program in western Kenya.
**Methods - AMPATH**

- Initiated in 2001: joint partnership between Moi University School of Medicine, Moi Teaching and Referral Hospital, several universities led by IU
  - PEPFAR funding initiated in 2004
- >85,000 actively followed
  - Supporting Ministry of Health facilities in 22 sub-counties of 8 counties
- TB and HIV care provided free
- Patients managed according to Kenyan and WHO guidelines
  - Monthly clinic visits for ART patients, bi-monthly based on immunologic status for pre-ART patients
- Data managed by a computerized medical record system developed by AMPATH called *OpenMRS* now used globally (www.openmrs.org)
  - AMPATH system called the AMPATH Medical Records System (AMRS)
**Methods- Analyses**

- **Inclusion criteria:**
  - all adults (18+) enrolled in AMPATH-supported sites between January 2008-August 2013 confirmed to be HIV-positive and had >1 follow-up visit in AMRS.

- **Definitions:**
  - Short Gap: $\geq 7$ days late for scheduled FU but returned within 3 months;
  - Medium Gap: $\geq 3$ months late for a scheduled FU but returned within 12 months;
  - Long Gap: $\geq 12$ months late for a scheduled FU but returned by database closure;
  - LTFU: $\geq 12$ months late for a scheduled FU and did not return prior to database closure and not known to have died or transferred out.

- **Analyses:**
  - Summary of cross-sectional dataset at time of database closure
  - Summary statistics: medians, IQR, ranges, means and standard deviations
  - Overall and stratified by ART status
**Results**

- n=56,704 patients, n=908,959 visits (Median # of visits: 15)
  - Median Age: 35.1, 66% female, 73% ever on ART
  - Median time since enrollment: 629 days

<table>
<thead>
<tr>
<th></th>
<th>All: n=57,604</th>
<th>pre- ART (n=15,528)</th>
<th>ART (n=42,076)</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Short Gap</strong></td>
<td></td>
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<tr>
<td>- Median Length: 21 days</td>
<td>19,168 (33.3%)</td>
<td>1,808 (11.6%)</td>
<td>17,360 (41.3%)</td>
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<tr>
<td><strong>Medium Gap</strong></td>
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<td></td>
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<tr>
<td>- Median Length: 140 days</td>
<td>9,645 (16.7%)</td>
<td>1,675 (10.8%)</td>
<td>7,970 (18.9%)</td>
</tr>
<tr>
<td><strong>Long Gap</strong></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>- Median length: 595 days</td>
<td>2,576 (4.5%)</td>
<td>392 (2.5%)</td>
<td>2,184 (5.2%)</td>
</tr>
<tr>
<td><strong>LTFU</strong></td>
<td>18,182 (31.6%)</td>
<td>9,764 (62.9%)</td>
<td>8,508 (20.2%)</td>
</tr>
<tr>
<td><strong>Died</strong></td>
<td>4,057 (7.0%)</td>
<td>1,228 (7.9%)</td>
<td>2,323 (5.5%)</td>
</tr>
<tr>
<td><strong>Transferred Out</strong></td>
<td>1,430 (2.5%)</td>
<td>266 (1.7%)</td>
<td>759 (1.8%)</td>
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</tbody>
</table>
DISCUSSION, LIMITATIONS AND NEXT STEPS

• Gaps are common in our setting
• A higher % of ART patients experience gaps although more pre-ART patients become LTFU;
• Strategies that work to reduce gaps and encourage continuous engagement in care are needed;
• **Limitations**: cross-sectional data, not accounting for multiple visits per patient, definitions of gaps may not be generalizable

• **Next steps**:
  – exploring gaps longitudinally accounting for multiple visits/patients;
  – identifying predictors of gaps and outcomes of persons with gaps;
  – link gaps with viral load and other clinical outcomes;
  – determine if patients who are traced through AMPATH’s outreach program have shorter gaps and/or are less likely to become LTFU.
ACKNOWLEDGEMENTS

This research has been supported by the President's Emergency Plan for AIDS Relief (PEPFAR) through USAID under the terms of Cooperative Agreement No. AID-623-A-12-0001. It is made possible through joint support of the United States Agency for International Development (USAID). The contents of this study are the sole responsibility of AMPATH and do not necessarily reflect the views of USAID or the United States Government.