LARGE-SCALE, RAPID TRANSFER OF HIV-INFECTED PATIENTS FROM HOSPITAL-BASED TO PRIMARY HEALTH CLINICS IN SOUTH AFRICA

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Supported by the National Institute of Mental Health
Background: HIV care in South Africa

- Largest ART program in the world
- PEPFAR cuts by 50% over next 5 years
- Patients will need to transfer from non-government to public clinics
- HIV care shift:

Hospital Physician-based PEPFAR-funded \[\rightarrow\] Primary health clinic Nurse-led Government-funded

PEPFAR, 2012; South African ART Guidelines, 2013
Background: Transfer of care to primary health clinics

- Limited data from sub-Saharan Africa show good outcomes after transfer
- Data focus on slow transfer of stable, selected patients
  - 1st line ART, suppressed, few comorbidities
- Highest rates of LTFU to first clinic visit

Brennan 2011; Long 2011; O’Connor 2011; Fairall 2012; Humphreys 2010; McGuire 2011; Mukora 2011
Open Questions

- What is the impact of rapid, large-scale transfer of ART patients?
- Do patients make it to transfer clinic?
- Is ART interrupted?
- Do complex patients fare worse?
Objective

- To evaluate a rapid, large-scale transfer from a hospital-based HIV clinic in South Africa to government-funded community-based clinics
Transfer Process: McCord Hospital

- Hospital-based HIV clinic in Durban
- Semi-private, government subsidized, supported by PEPFAR since 2004
- Patients paid a monthly fee for care
- Initiated >10,000 people on ART
- Considered Center of Excellence
- PEPFAR funding ended in June 2012
Transfer Process

- ~4000 patients transferred to public sector, March-June 2012
- Target clinics and allotted spaces identified with the municipal and provincial DOH
- Clinic choice based on area and care needs:
  - Primary Health Clinic (PHC) 1st line ART
  - Community Health Clinic (CHC) 2nd line ART
  - Hospital-based Clinic (Hospital) comorbidity
- Transferred to 171 clinics
Transfer Process

- Most patients transferred at first visit during the transfer period
- Complex patients received “red dot” and were not transferred until a subsequent visit:
  - Ill or medically complex
  - Concerns about drug resistance
  - New ART initiates or regimen change
Patient presented for consultation, labs or pharmacy

- **Counselor**: Group session, Contact details
- **Clinician**: Assigned red dots, Chose transfer clinic, Transfer letter
- **Pharmacy**: Issued medication (buffer supply)
- **M&E**: Transition forms entered on database, Update clinic schedule list
Methods: Study Population

- Adults (≥18y) patients on ART
- English or Zulu speaking
- Visited HIV clinic March-June 2012
Methods: Data Collection

- Patients called chronologically, beginning in August 2012
- Standardized survey during phone interview
- Surveyed regarding attendance at assigned clinic, reasons for delayed/failure to transfer, treatment interruption
Methods: Data Validation

- Checked patient’s self-report against clinic ART register
- We randomly selected 10 clinics from the 80 closest clinics to McCord
Methods: Outcomes

1. Linkage to care
   - Self-report of 1st transfer clinic visit

2. Validated transfer clinic visit
   - Visit documented in clinic register

3. Weighted average
   - Validated clinic visit for reached and unreached subjects
Visit during transfer period
March – June 2012
3,940

Reached after transfer
Transfer cohort
3,386

Unreached
509
Refused survey
5
Lost to follow up
22
Known deaths
18
## Results: Transfer Cohort Characteristics (N= 3,386)

<table>
<thead>
<tr>
<th>Characteristic</th>
<th>Value</th>
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<tbody>
<tr>
<td>Female</td>
<td>60%</td>
</tr>
<tr>
<td>Age, mean (sd)</td>
<td>40 (10)</td>
</tr>
<tr>
<td>Pre-ART CD4 µl, (IQR)</td>
<td>111 (46-174)</td>
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<tr>
<td>Most recent CD4 µl</td>
<td>376 (251-529)</td>
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<tr>
<td>Assigned to PHC</td>
<td>67%</td>
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<tr>
<td>“Red dot” status</td>
<td>15%</td>
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<tr>
<td>Median time to call</td>
<td>8 mo</td>
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Results: Self-reported linkage to care

- 3,378 (99.8%) attended a transfer clinic
- 3,363 (99.3%) did not miss ART doses since transfer
Results: Self-reported attendance at different clinic

- 865 (26%) visited a different clinic than assigned
- Most common reasons (N=865):
  - 23% told by receiving clinic to go elsewhere
  - 16% stigma concerns
  - 14% inconvenient location
Results: Validation

- 3 of planned 10 clinics validated so far
- 460 patients assigned to these 3 clinics
  - 88% reached by phone survey, 64 report attending a different clinic
- Of reached subjects (N=342) reporting attendance at clinic
  - 89% in clinic record
- Of unreached subjects (N=54) referred
  - 69% in clinic record
Results: Validation

- Reached & In record: 77%
- Reached & Not in record: 10%
- Unreached & In record: 9%
- Unreached & Not in record: 4%
Weighted average entire cohort

\[(\text{reached})(\text{validated}) + (\text{unreached})(\text{validated}) = (0.87)(0.89) + (0.13)(0.69)\]

Estimated success of transfer = 87%
Limitations

- Site may not be representative of public sector hospital-based clinics in South Africa
- 13% of transferred patients were unreachable, plan for death registry
- Primary outcome relies on self-report
- No data on clinical outcomes or longer term retention in care following initial visit
Conclusions

- 99.8% self-report a first visit following a large-scale transfer
- Unreachable patients less likely to attend transfer clinic, based on ART registers
  - 69% vs 89%
- “Red dot” status did not effect success of transfer
Implications

- Why might this program have been so successful?
  - Coordination with DOH for transfer clinic slots
  - Consideration of patient preferences, clinical indications for level of care
  - Ability to dispense extra medication
  - Coordination between counselors, clinicians, pharmacists, monitoring and evaluation team
  - Motivated and counseled patients
Implications

- Updated contact information may help facilitate transfer interventions
- Transfer to public clinic sites requires:
  - collaboration with receiving clinics
  - consideration of individual patient needs
- Long-term retention in care should be evaluated to assess transfer process
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