Locating the Epidemic: Harnessing Geographic Data for HIV Epidemic Control

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Presentation Outline

• Background
• Methodology
• Results
  – Sample Maps of Clients from other LGAs
  – Key findings
• Implications for Epidemic Control
• Recommendations
• Conclusion
Background

- Nigeria is a country of approx. 182,201,100 population

- HIV prevalence of 3.2%; about 3.5 Million PLHIV

- 227,000 new infections and 180,000 AIDS-related death
Background

• PEPFAR Nigeria’s geographical pivot
  – UNAIDS Vision 90-90-90 & PEPFAR 3.0
  – Scale Up vs Sustained Support
  – epidemic control by end of FY18 in Scale-up LGAs
  – Facility-based data driven
  – 32 Target LGAs account for 13% of burden= Scale-up LGAs

• Importance of Community-Based Services
  – Adult and Pediatric Case Finding and Linkage to Treatment
  – Support treatment adherence
  – Reduce risk of new infections through care and support interventions

Is the health facility-generated data truly representative of the epidemic?

To what extent does the pivot affect community-based interventions for PLHIV?
• Coordinating Comprehensive Care for Children
  – Global Capacity Building/Systems Strengthening Consortium
  – Provides evidence based-Technical Assistance to PEPFAR OVC IPs in Nigeria to support responsible graduation and transition of active beneficiaries

• Catchment Area Mapping
  – Determine if PEPFAR supported community-based interventions are being appropriately located or not.
  – Inform Policy and Program decisions towards epidemic control in Nigeria.
Methodology

- Data extracted from 26,365 records of TX_CURR (<15, 15+) and PMTCT_ARV from 182 Comprehensive TX sites in 31 SU LGAs

- **Survey 123 for ArcGIS on android-based devices used for data entry**

- **Flickr for taking and storing geocoded pictures**

- **ArcGIS software used for developing the catchment maps**
Key Findings

• Travel across LGA boundaries
  • 27.9 % of ART Clients
  • 1 in 5 HIV-positive pregnant women (20.9%)
  • 3.5% more males than females
  • Tertiary >Secondary > Primary

• Highest contributing LGAs (about 70%) are from contiguous LGA

• Some clients travel across state boundaries to access services

* Significant @ P=0.05
Catchment area for HIV services in Scale Up LGAs

Map of all LGAs which send clients into the health facilities within the 31 project LGA's.

Patient count in each LGA:
- 1 - 50
- 51 - 200
- 201 - 400
- 401 - 800
- 801 - 1200
- 1201 - 3400

All States in Project Area
Sample LGA Catchment Map

Catchment Map for Ikeja LGA

HIV client summary, from enumeration by CRS in Nigeria, based on patient chart review in health facilities in six states and the FCT.

Client Catchment

- Dark Gray: Clients in LGA
- Orange: Clients from Other LGAs

Ikeja LGA

Key

- Light Gray: Scale Up LGA in view
- Red: Highest Contributing LGA
- Orange: High
- Yellow: Moderate
- Light Yellow: Low

LGA Code 25011
Implications of Findings

- More than a quarter of the PLHIV in scale up LGAs may lack access to community-based HIV prevention services due to their LGA of residence.

- Concern for Treatment Adherence & Viral suppression
  - Over a quarter (27.5% or n=5852) of those who were currently in treatment reside in LGAs other than those of health facilities where they receive HIV services.
  - 275(5.5%) of PMTCT_ART Clients discontinued ART after breastfeeding
    - 26(9.5%) reside outside the Scale-up LGA
Recommendations

• **Softer boundaries for community-based services**
  – The right thing at the *right place* in the right time

• **Monitoring and evaluation of catchment, treatment and adherence data**
  – Facility-level systems and granular analysis
  – Re-strategize evidence-based targeting for community-based interventions

• **Continuous Quality Improvement (CQI) for facility-based services**
  – Focus on primary and secondary facilities
Conclusion

• Cartographic results challenge the potential efficacy of the geographical pivot

• ‘Cluster-based targeting’ being explored by PEPFAR Nigeria leading to “Sustained Support Plus” Category

• Opportunities for further research
  – *Push factors for crossing LGA and State Boundaries to access services*
THANK YOU

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