SHOULD HEALTH-FACILITY SERVICE DATA ALONE BE USED TO LOCATE THE HIV EPIDEMIC?

EXPERIENCE FROM A HEALTH FACILITY CATCHMENT AREA MAPPING STUDY IN NIGERIA

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INTRODUCTION

Locating the epidemic is critical to any disease control effort. In Nigeria, PEPFAR utilized patient-level data to prioritize scale-up interventions in 32 of the 774 Local Government Areas (LGA) towards controlling the HIV epidemic. While PEPFAR relied on health-facility service data to determine its focus, failure to take patients' residence into consideration challenged the accuracy of the prioritization. A Health Facility Catchment Area Mapping (HFCAM) was conducted to inform program and policy decisions regarding epidemic control activities performed by PEPFAR Implementing Agencies and their partners in Nigeria.

METHODS

The study sampled caseloads from comprehensive HIV care and treatment centers in the PEPFAR supported scaleup LGAs to determine where people were accessing HIV services in relation to their homes. The sampling frame per facility was decided based on the number of adults and children currently on antiretroviral therapy (ART) in the PEPFAR scale-up LGAs.

An assigned focal person at the health facilities—which included clinics that provide ART or help prevent mother-tochild transmission (PMTCT) — facilitated access to the client records. At the facility, data was collected from client folders or electronic medical records and entered into the pre-defined data collection tool. Information was then collected on each facility, including the LGA, the level of health facility (categorized as primary, secondary or tertiary), and the facility location geocode.

The data was synced from the mobile data collection devices into a geographic information system (GIS) database. After the collection phase, these data were downloaded, cleaned, analyzed and mapped using ArcGIS.

RESULTS

The HFCAM collected demographic information, geo-location of patient residence (LGA) and health facility data along with HIV treatment records from 26,365 (7,163 Male; 19,202 Female) beneficiaries between June and August

2016 in 176 PEPFAR-supported facilities across 31 priority LGAs. The data collected was used to develop catchment maps. The maps show the spatial distribution of clients who reside in PEPFAR prioritized LGAs overlaid with that of clients who cross LGA boundaries to access care in the prioritized

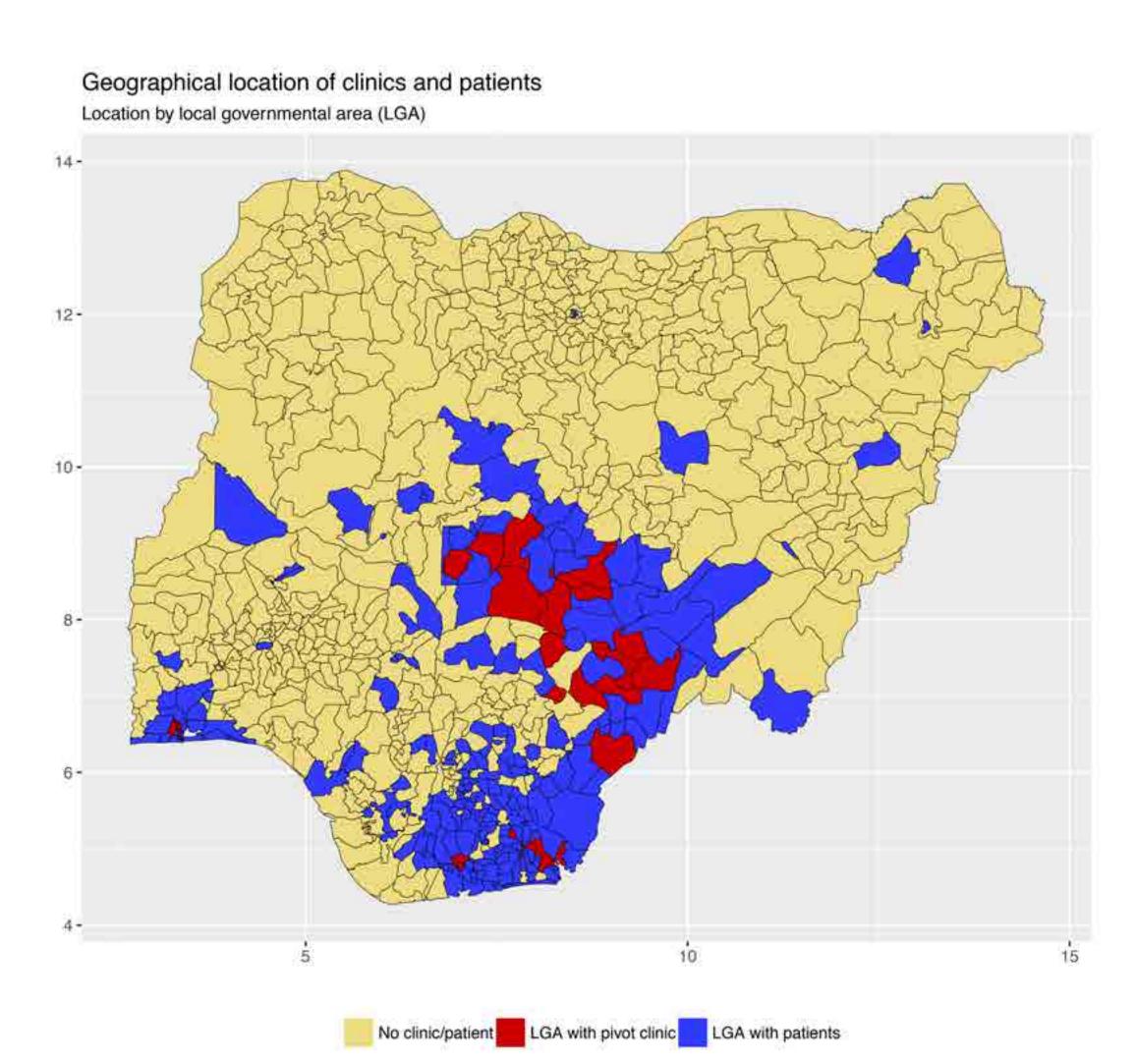


Figure 1 shows the local governmental areas (LGA) in which the PEPFAR geographic pivot clinics are located (red) and those additional LGAs from which patients whose records are analyzed for this study are traveling from their LGA to PEPFAR geographic pivot clinics (blue). This visually highlights that in the context of the regional pivot, patients are drawn from areas considerably beyond the LGAs targeted by the program.

LGAs. The HFCAM concluded that 27.5% of clients access services outside their LGA of residence and 70% of clients who cross LGA boundaries did so from contiguous LGAs to PEPFAR prioritized LGAs.

The results show a statistically significant 3.5% more males than females accessing services outside of their LGA of residence. More than 1 in 5 PMTCT clients travel across LGA boundaries to access HIV care and treatment. Clients less than 15 years old receive services in LGAs other than where they reside 4.3% times more than clients 15 years of age or older. Lagos State presented the highest rate of caseloads, 56.9%, from clients residing in other LGAs. Nasarawa State presented the lowest rate, 14% of caseloads from clients residing in other LGAs.

Health facilities were categorized as primary, secondary and tertiary to reflect their level of services. The rate of travel across LGA boundaries to access HIV treatment was 49.2% for tertiary facilities, 21.8% for secondary facilities and >10% for primary facilities.

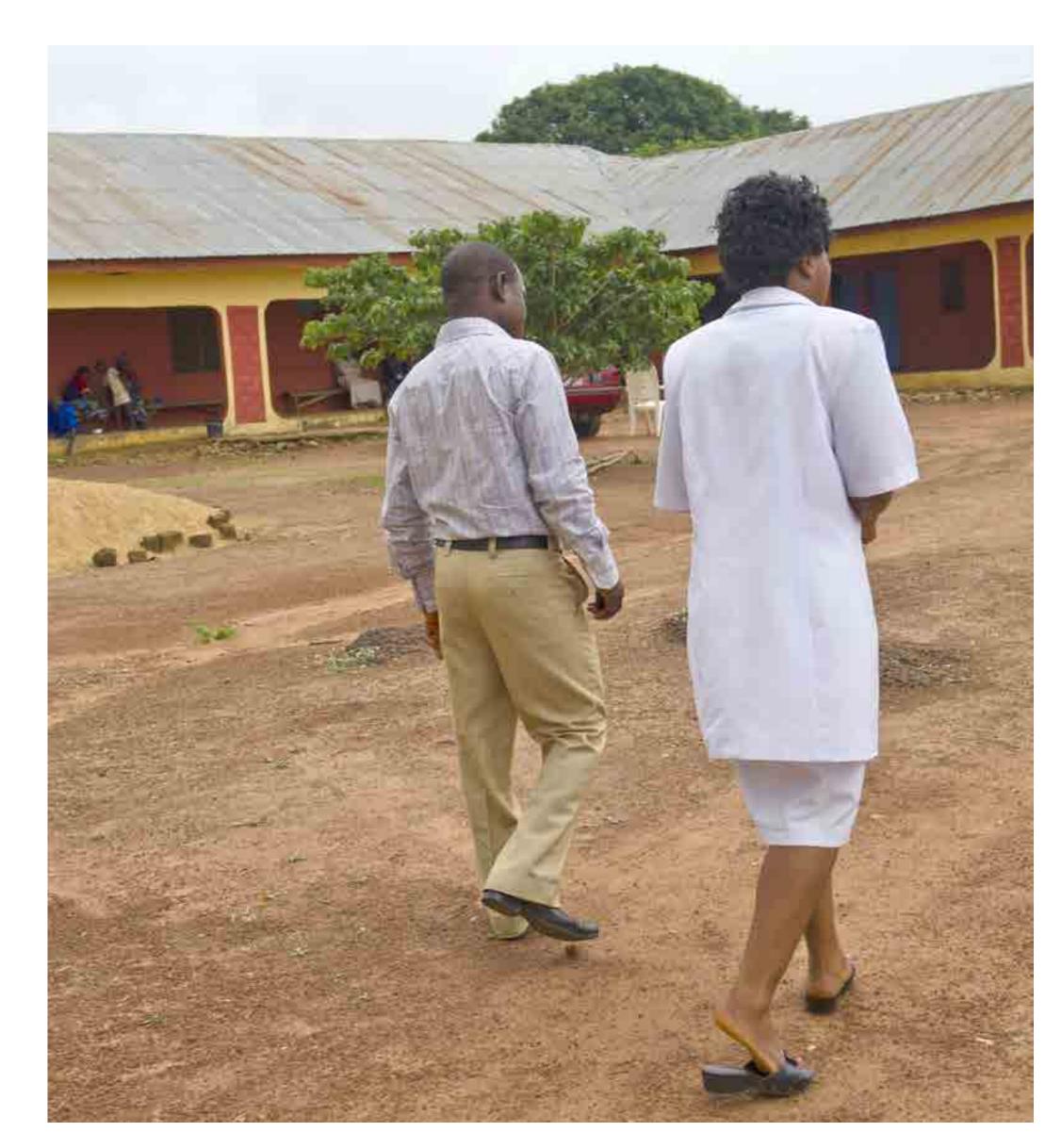
CONCLUSION

In response to the HFCAM findings, PEPFAR created a new category of support in Nigeria – 'Sustain Support Plus' – which joins the other categories of support ('Scale-Up' and 'Sustained Support'). The 13 'Sustain Support Plus' LGAs are contiguous to Scale-Up LGAs and have started to benefit from an expanded range of PEPFAR priority interventions to address the identified challenges in accessing core community-based interventions. PEPFAR has described this as "cluster-based targeting" which considers LGA catchments in planning coverage of interventions. Through the granular analysis of client records and spatial visualization, the HFCAM supported greater precision in targeting services for people living with HIV.

OVERVIEW OF ACHIEVEMENTS

Combining facility-based coverage data with patient-level geographic data leads to improved evidence on the location of the HIV epidemic, improving program decisions towards epidemic control. Future

research will explore the characteristics of individuals who seek care in their LGA versus those who do not, to guide further refinement in effective targeting.



The study revealed that 27.5% of all clients sampled access HIV treatment services outside of their local government area of residence. Photo by Karen Kasmauski for CRS.











