

Leveraging Electronic Health Records and the National Data Repository for Implementation of Case-based Surveillance: Lessons from Nigeria

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BACKGROUND

Patient-centered monitoring and HIV case-based surveillance (CBS) are recommended by the World Health Organization to optimize service delivery and identify gaps. The Federal Ministry of Health and University of Maryland, Baltimore supported the rollout of CBS in August 2020 as part of the Strengthening HIV Field Epidemiology, Infectious Diseases Surveillance, and Laboratory Diagnostics project, with PEPFAR funding and technical guidance from the US Centers for Disease Control and Prevention. We describe Nigeria’s experience using Electronic Health Records (EHR) and the National Data Repository (NDR) to implement HIV-CBS.

LESSONS LEARNED

- The government’s leadership, use of a standardized approach, and technology facilitated the rapid rollout of CBS despite COVID-19.
- Maturity of the EHR-NDR system has contributed to improving patient linkage across systems and implementing a robust, centralized, and integrated surveillance system.

DESCRIPTION

- From August to December 2020, CBS was rolled out in three phases:
1. Planning phase with a multi-agency CBS committee to provide strategic leadership, advocacy and implementation tool development
 2. Site assessment, selection and training by a multi-disciplinary team using hybrid model of training due to COVID-19 pandemic
 3. Activation and rollout of CBS using patient-level data with unique identifier to upload data from facility EHR to NDR. Integrated surveillance dashboards provided access to timely data for decision-making

CONCLUSIONS

Nigeria adopted a systematic approach and embraced technology to roll out CBS nationally to monitor the HIV epidemic and deliver targeted interventions despite the pandemic. The uptake of biometrics will be scale-up for accurate patient identification and monitoring irrespective of service delivery point.

Maturity of the EHR-NDR system has contributed to improved patient linkage across systems and development of a robust, centralized, and integrated surveillance system

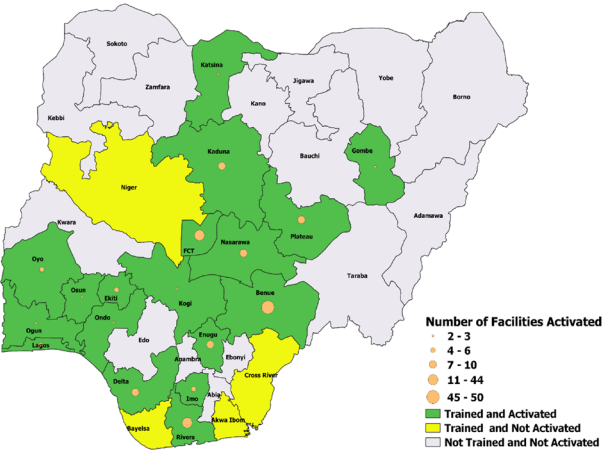
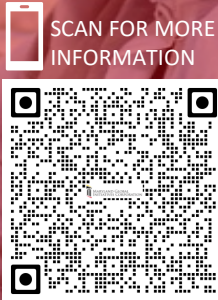


Fig 1: Map of Nigeria indicating summarizing status of CBS activation and training

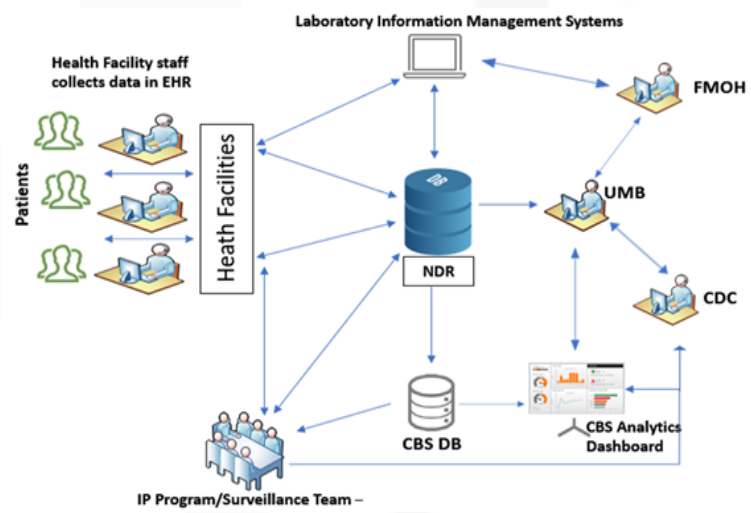


Fig 2: Data flow and exchange between the NDR and EHRs

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