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The progress and utility of HIV case-based surveillance in Kenya for public health response, 2014-2022

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Background

Description and purpose:

- HIV case-based surveillance (CBS) is a person-centric system.
- CBS provides timely data across the HIV cascade from diagnosis, treatment, and longer-term health care and outcomes (fig. 3).
- The CBS system has individual-level robust data for sentinel events-driven **p**ublic **h**ealth **r**esponse (PHR)
- Achieving the complete data collection cycle and use for improving treatment outcomes is possible.

Aim:

- To present the Kenyan experiences, 2014 to date, and the system's utility for PHR

Description

Establishing the CBS system:

- In Kenya, CBS pilot activities were started in 2014-15 in two counties, followed by a proof of concept in 2016-17 (fig. 1).
- Since 2018, the national data warehouse (NDW) data have been used for CBS after an extraction, loading, and transformation (ETL) process (fig. 2).
- To support CBS, county and health facility staff are routinely trained through an interactive eLearning platform.
- CBS implementation is monitored through quarterly progress review meetings.

Figure 1 Kenya's CBS implementation timeline

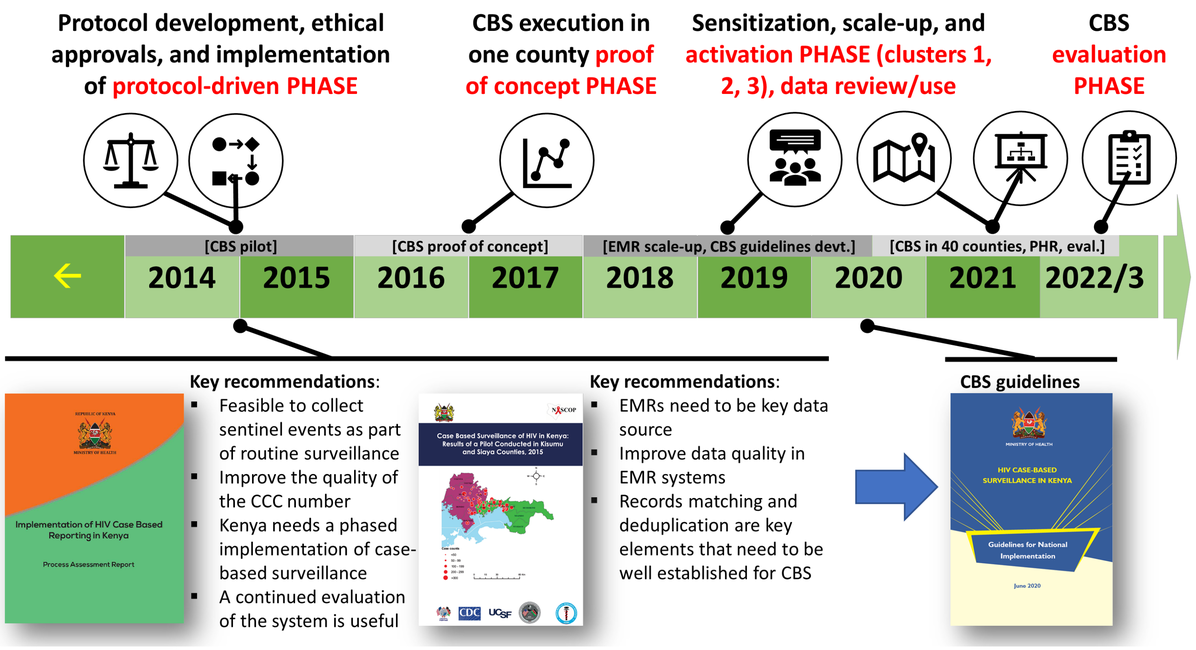


Figure 2 CBS data flow

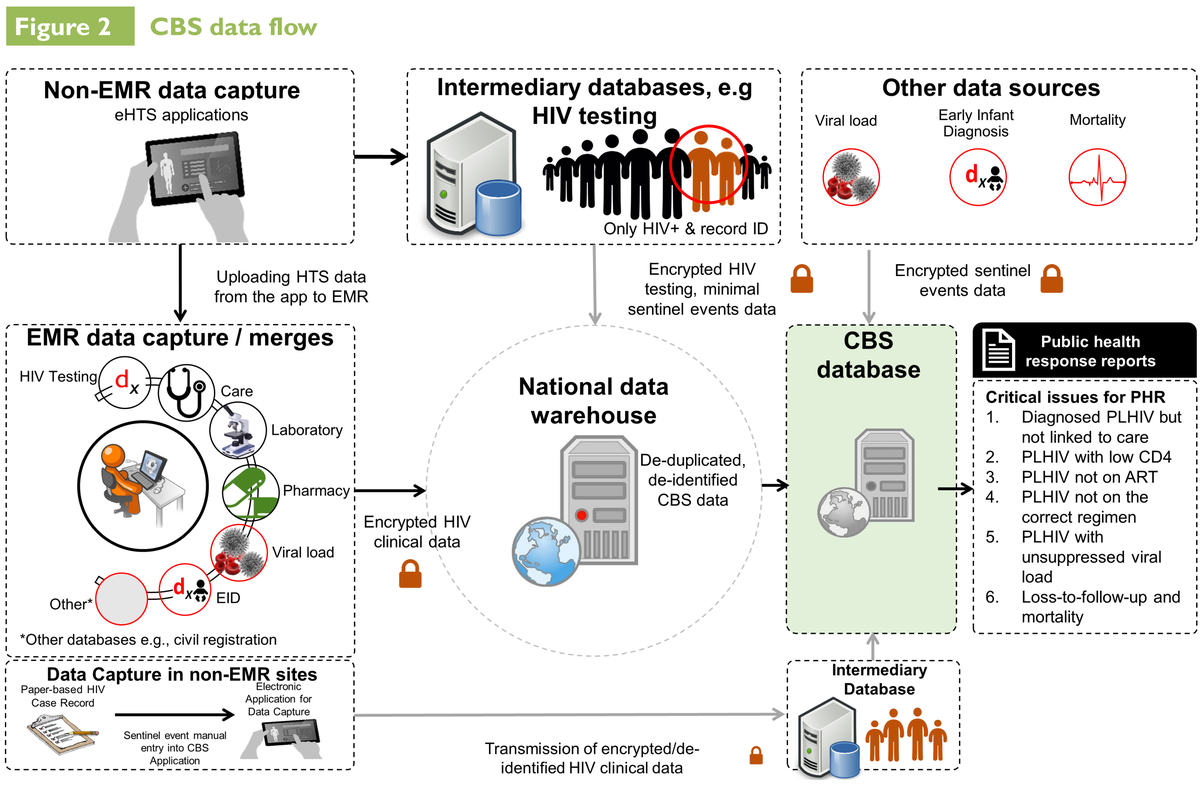
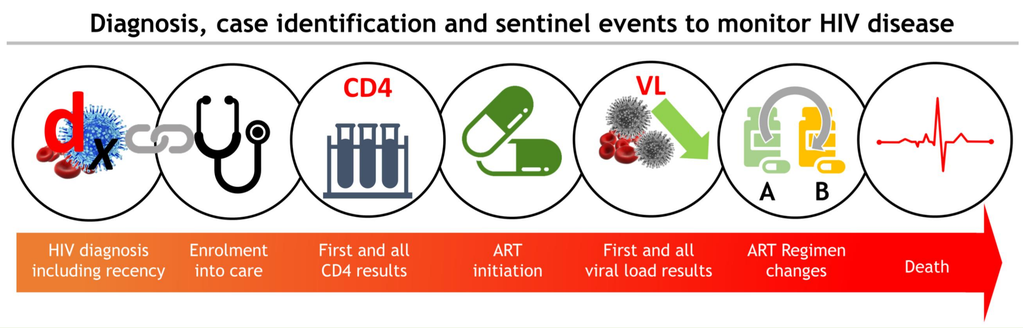


Figure 3 Kenya's seven CBS sentinel events

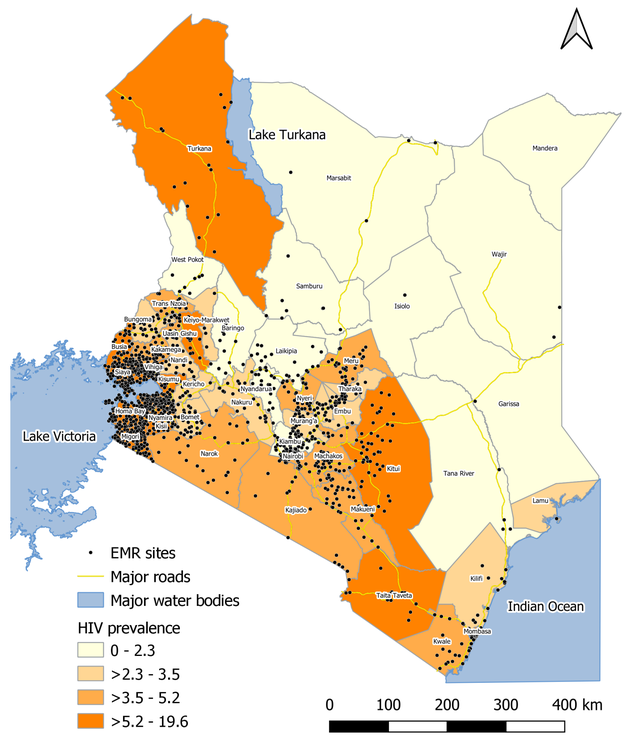


Lessons learned

Coverage:

- By 2021, data from 40/47 counties accounting for ~95% (1,107,173) of PLHIV currently on treatment were part of the CBS system.
- Reporting rates to NDW are consistently ~89% (fig. 4).

Figure 4 Coverage of EMR sites & reporting rates



EMR distribution as of Nov 2022

- **1754** Active EMR Sites (all); **1,676** Active KenyaEMR* Sites;
- **89%** DWH reporting rates (Oct 22)
- **1,053** Active HTS Sites; **80%** (846) have reported to DWH- Oct 2022

**KenyaEMR is the national EMR system. Some sites have other EMR types.*

Utility of CBS for PHR & dissemination:

- Case-level data are used to generate individual-level PHR reports identifying every client needing attention, e.g., diagnosed but not linked to care, not virally suppressed
- PHR reports are shared with the facilities for timely decision-making.
- CBS data are extracted from NDW and analyzed for scientific dissemination (13 manuscripts underway).
- Through deeper analysis, key epidemiologic questions and identifying areas for programmatic strengthening and focus can be achieved.

Conclusions and next steps

Conclusions:

- The high coverage of PLHIV in EMRs provides rich data for informing CBS sentinel events-anchored PHR in Kenya.
- The PHR reports have revolutionized the utility of CBS and accelerated its buy-in in Kenya.
- To the best of our knowledge, Kenya is the first sub-Saharan African country to implement the complete cycle of CBS, including PHR as a feedback loop to the facilities and improving services to PLHIV.

Next steps:

- To strengthen the CBS system, an evaluation is currently underway.
- Attaining 100% national coverage and roll-out of the national unique persons' identifier.

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DISCLAIMER
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