



# Effect of CommCare and Power BI integration to unified data management system in community HIV program for impactful decision making in Ethiopia



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## 1. Background

- Unified Data System (UDS) is an integrated data capturing tool through CommCare using a mobile App for USAID community-based HIV programs. Previous systems didn't allow timely data collection, cleaning, analysis, and data use.
- More than 30 local and international partners were using their own non-digital data collection and reporting systems. Previous systems didn't allow timely data collection, cleaning, analysis, and data use.
- In 2018, Project HOPE started the UDS to ensure real-time data entry, analysis, data visualization on the Power BI dashboard, and timely reporting and decision-making at all levels in the community.
- A retrospective analysis was conducted to summarize the outcome of UDS utilization using the UDS data and Power BI dashboard visuals.

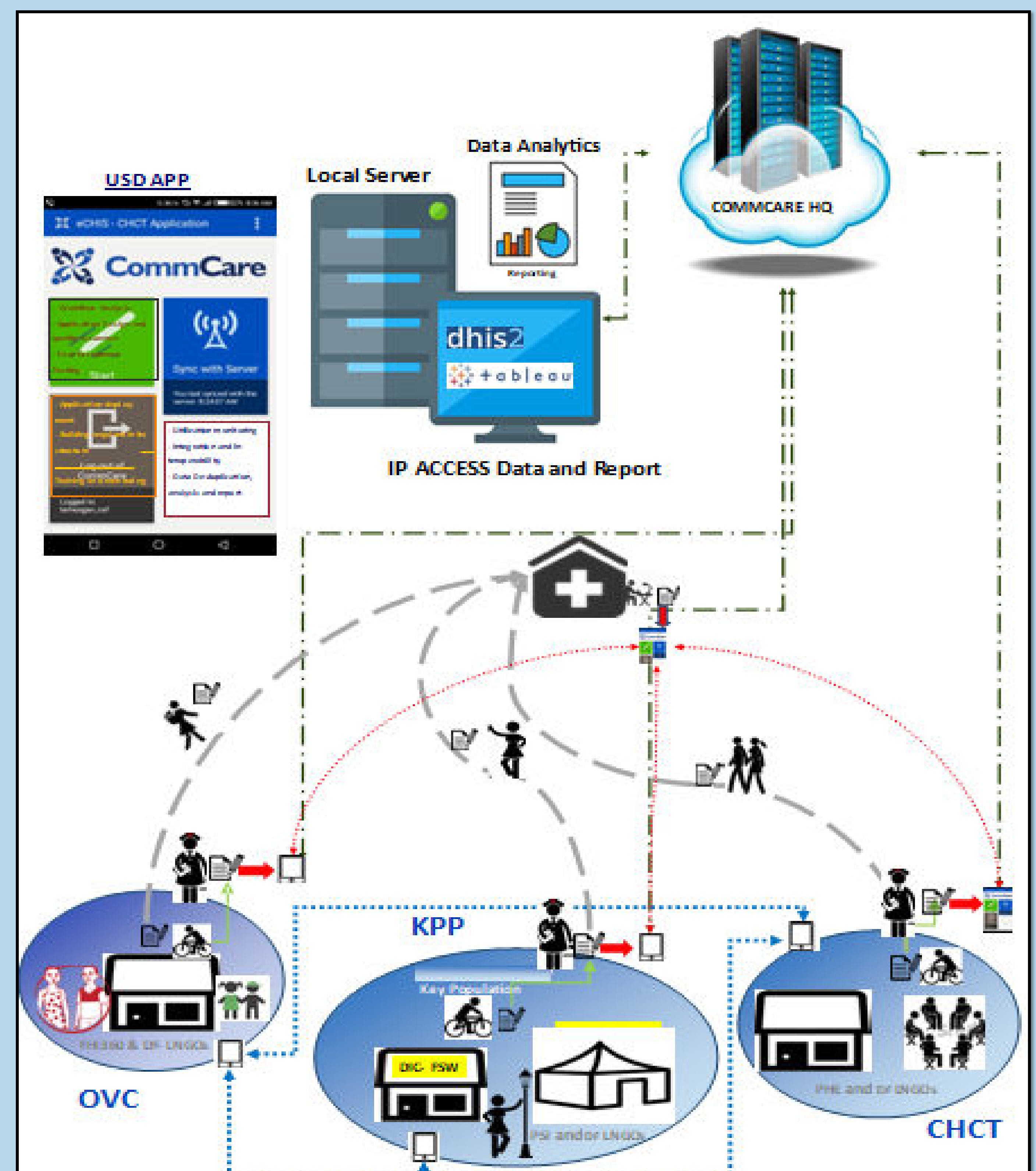
## 2. Program Description

- Project HOPE designed the UDS on an open-source application, CommCare. CommCare allows data collection on a mobile and web application with an offline capacity.
- More than 1000 user accounts were created for community and facility health workers.
- Web access was created for supervisors, coordinators, and managers. Multiple trainings and ongoing technical support were provided to users.
- Community health workers enter data while providing HIV services to their clients and allow two-way referrals among community and facility health workers.
- Multiple interactive visual dashboards were developed on Power BI that simplified performance monitoring and reporting to USAID.

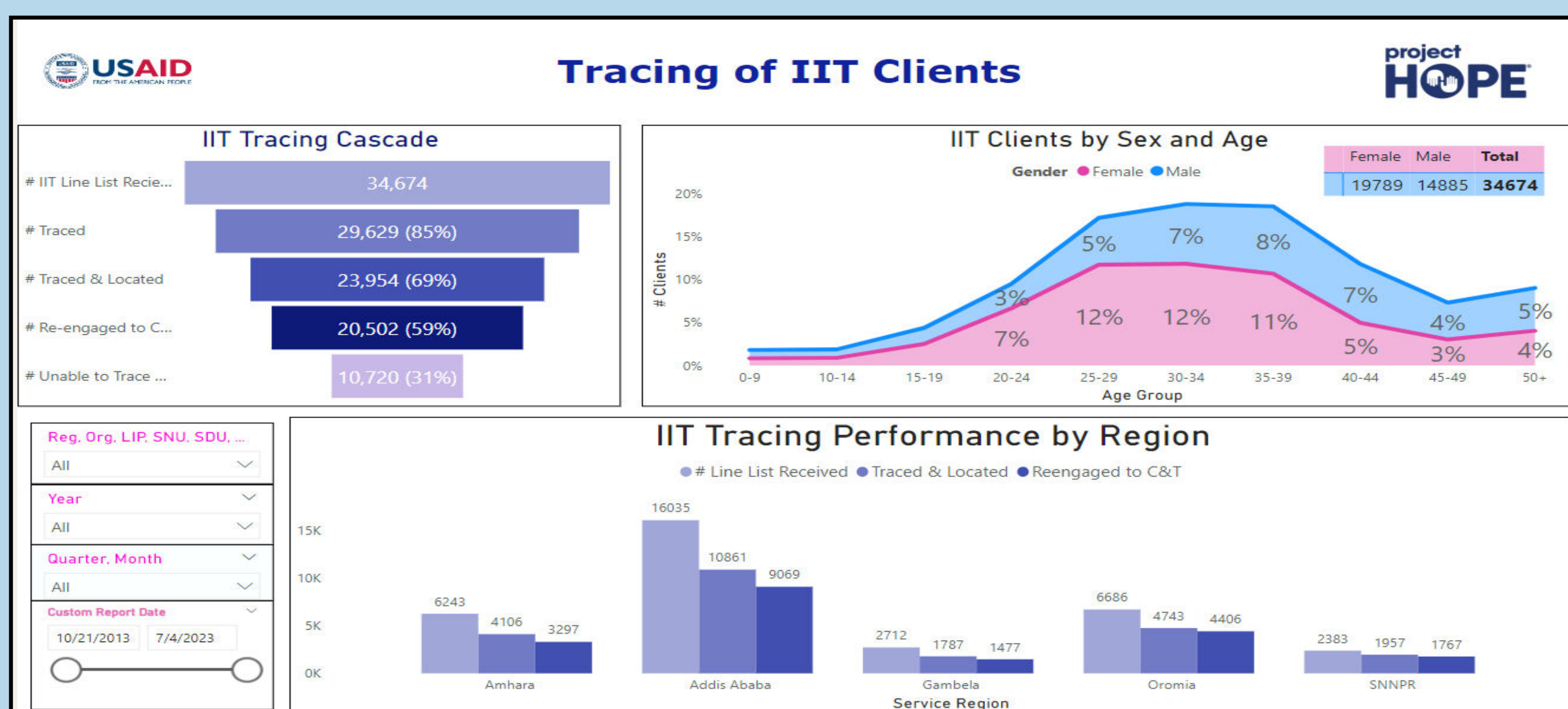
## 3. Results

- From Oct 2020 to Dec 2022, 44 CommCare modules were developed, and 1,015 mobile and 434 web accounts were created.
- Basic and refresher trainings on real-time data entry, cleaning, analysis, and dashboard utilization were provided to over 1,449 users.
- Currently, data for nearly 2 million individual data was entered into UDS App and live data was displayed for 12 major thematic areas with 122 slide displays.
- A dashboard link is shared with 30 implementing partners and users from the donor.
- All implementing partners are regularly using UDS for their performance monitoring, reporting to USAID and PEPFAR's DATIM system, and timely decision-making at all levels.

Picture 1: UDS Architecture



Picture 2: Interruption in Treatment (IIT) Cases Dashboard



## 4. Conclusion

- UDS facilitated the delivery of standardized HIV services, improved program data quality, and promoted data use. Therefore, we recommend the wider application of digital platforms like UDS helps to strengthen and support community-based HIV service delivery in resource-limited settings.

## 5. Acknowledgment

- We would like to thank PEPFAR/USAID Ethiopia for funding and technical guidance, FMOH and RHBs for their unreserved support, and local implementing partners for their commitment to use the UDS as a data collection and case management tool.