Strengthening Kenya's Health Referral Systems

One of the aims of the United States Agency for International Development (USAID)-funded MEASURE Evaluation PIMA (MEval-PIMA) Intermediary Result 2—improving the availability and use of quality health information at national and subnational levels—was to strengthen the health referral systems in Kenya to ensure continuity and cost-effectiveness of care. MEval-PIMA worked with health sector stakeholders to address gaps in the referral system. Initially, this was a sector-wide approach using the World Health Organization (WHO) health systems building blocks (Figure 1). However, in MEval-PIMA Year 3, PEPFAR narrowed the project's focus to HIV linkages and referrals (Figure 2).

Photo courtesy of Yvonne Otieno, MEASURE Evaluation PIMA

The MEval-PIMA strategy for referral systems strengthening (RSS) encompassed two of the six components of USAID's vision for health systems strengthening: (1) service delivery, and (2) information, as outlined in Table 1. These interventions were based on three main approaches:

1. Building referral system structures at policy and coordination levels

2. Building health workers' capacity to manage and monitor the performance of the referral systems

3. Strengthening structures for monitoring the performance of referral systems and for using referral data for decision making
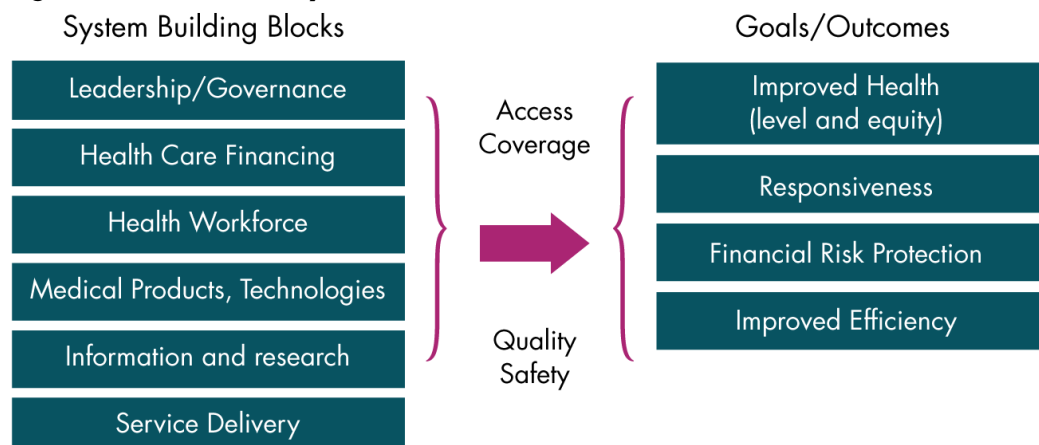
From an initial assessment, MEval-PIMA learned that a health information system needs an established and well-defined system for supporting referrals before work can be done effectively to improve the information system that

monitors it. The project's approach was to address the following gaps:

• Patients bypassing lower-level facilities

• Healthcare providers' lack of accountability for their referral decisions

• Inappropriate referrals

• Overcrowding at higher-level facilities
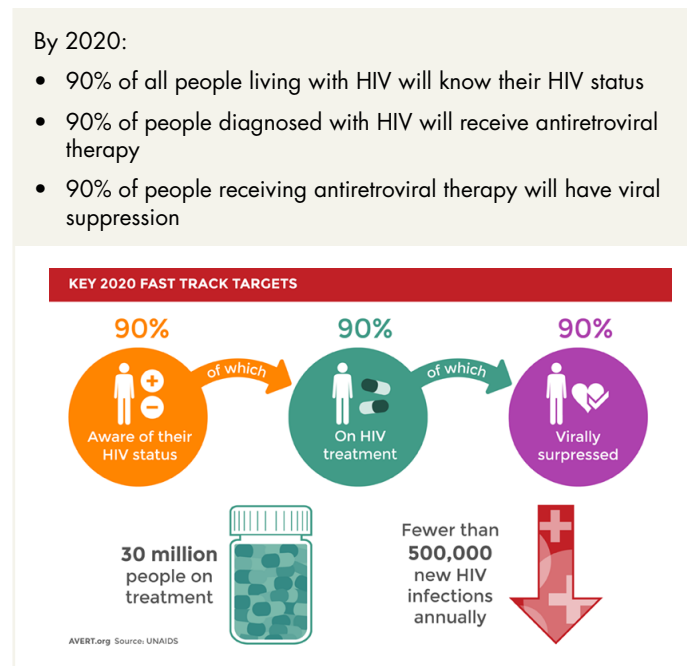
• Lack of coordination in referral processes

Data collected throughout the project's life showed under- and over-estimates of referral completion within facilities, owing to poor systems. Poorly coordinated systems generate poor-quality data and indicate the need for robust systems to accurately capture referral data.

Figure 1. WHO Health Systems Framework

System Building Blocks

Goals/Outcomes

System Building Blocks		Goals/Outcomes
Leadership/Governance		Improved Health (level and equity)
Health Care Financing	Access Coverage	Responsiveness
Health Workforce		Financial Risk Protection
Medical Products, Technologies		Improved Efficiency
Information and research	Quality Safety	
Service Delivery		

Source: https://www.who.int/healthinfo/systems/WHO_MBHSS_2010_full_web.pdf

Figure 2. UNAIDS 90-90-90

By 2020:

- 90% of all people living with HIV will know their HIV status
- 90% of people diagnosed with HIV will receive antiretroviral therapy
- 90% of people receiving antiretroviral therapy will have viral suppression

Source: https://www.avert.org/infographics/key-2020-fast-track-targets

Table 1. Timeline of service delivery and information interventions during the MEval-PIMA project

PIMA Program Year	Service Delivery Interventions	Information Interventions
Year 1	• Created national technical working groups for referrals strengthening	• Performed baseline assessment on the health referrals system in eight counties • Established RSS database
Year 2	• Finalized National Health Sector Referral Strategy • Established referral coordination mechanisms at national and county levels • Developed county-level action plans	• Developed training curriculum on referral systems; 60 trainers and 1,996 health workers trained on management and performance monitoring of referral systems
Year 3	• Mentored health workers on HIV referral processes and developed HIV referral system strengthening action plans	• Included mentorship for performance monitoring of referral system and discussions of facility-level HIV referral data
Year 4	• Focused scope of RSS to HIV • Developed an abridged curriculum to train health workers in counties not previously trained; 40 people trained as county resource persons in HIV service delivery at the national level; 30 health workers in Kisumu and 18 in Nairobi were trained at the county level • Facilitated continuing medical education in three counties, focusing on referrals • Developed referral directories for facilities for HIV services	• Conducted a performance assessment of HIV referrals in 10 counties • Collected HIV referral data at the facility level • Facilitated facility-level data use forums and action planning
Year 5	• Published *Linking HIV Testing and Counselling in Kenya: Standard Operating Procedures*, to inform referral coordination, documentation, and data collection at the facility level	

Lessons Learned

Training improved health workers' knowledge.

- Opportunities to improve the training approach came from participant feedback, such as the need for the workshop to be extended to two days, to provide more time for participants to share their experience with HIV testing and counseling and linkage performance monitoring, present clear objectives and instructions for each activity, and provide materials in an organized and easy-to-use format.

- Pretest and posttest data for the trainings held in Kisumu and Nairobi Counties showed an overall improvement in knowledge about referrals. Paired sample t-tests were done to analyze pretest and posttest score differences. There was a statistically significant difference in the mean for correct responses between the pretest and posttest scores among the participants, indicating the training content significantly increased participants' knowledge.[1]

Standard operating procedures came to be viewed as foundational for institutionalizing a consistent approach to referring and linking patients to care.

- In MEval-PIMA Year 5, *Linking HIV Testing and Counselling in Kenya: Standard Operating Procedures*[2] was published and disseminated in the end-of-project package for MEval-PIMA. This opens up the opportunity for subsequent assessments to appraise the usefulness of this resource, along with changes in health worker skills and behaviors in referring patients. *Findings from the Performance of HIV Referrals and Linkage into Care in 10 RSS Target Counties*[3] assessment performed in Year 4 of MEval-PIMA identified that differences in referral and linkages processes between facilities could be the source of poor or erratic referral completion rates. For instance, in Siaya County, two clients were recorded as referred from prevention of mother-to-child transmission (PMTCT) to a comprehensive care center (CCC) in January; however, data show that the CCC received 32 clients in the same month. Standard processes, along with improved performance monitoring of linkages to care, could help improve these rates and care for HIV-positive clients.

- Opportunities to improve reporting from additional service units continues, specifically for transferring PMTCT clients from postnatal care (PNC) centers to CCCs and transferring HIV-positive clients from provider-initiated HIV testing and counselling (PITC) to CCCs. Patients often fall through a gap in these services and are lost to follow-up at this point in care. It is important to have a smooth transfer of services, to keep the client engaged in care. Standard documentation of referral initiation and completion is necessary, to make sure clients access the care they need and to calculate indicators that monitor this.

Standard referral indicators increased the availability of data.

- Following interventions, more data on referrals were available from more service units. Following training, referral indicator reporting increased in PMTCT units in all 10 counties and for PITC in 6 counties. While some counties reported steep increases in referral data reporting, others showed decreases in referral completion rates. Data from these indicators are also questionable, because many of the counties report an intrafacility referral completion rate of more than 100 percent.

- Referral system monitoring indicators are challenging to interpret. Multiple factors complicate these data, including poor data quality in the summary registers because of inaccuracies; reporting total number of clients referred instead of tracking individual client referrals, causing referral completion rates of more than 100 percent; and an inability to track individual clients throughout care. This supports the need for standard indicators with clearly defined data sources, to accurately monitor referral data.

Continued training and supportive supervision will ensure the sustainability of referral systems strengthening.
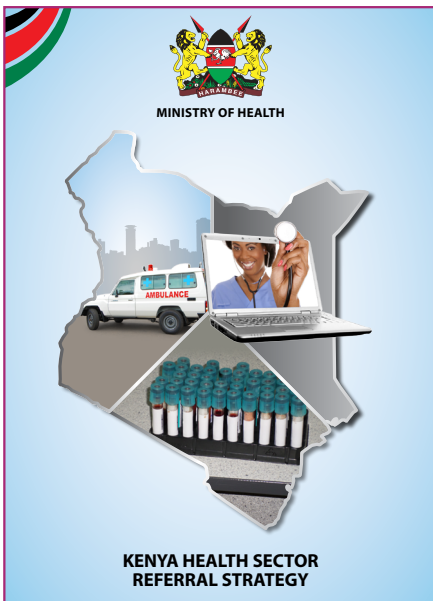
- Going forward, health workers' capacity for monitoring referrals should be considered, to reinforce the skills acquired during training. MEval-PIMA provided training to approximately 2,140 health workers to help bolster their systems. However, more training specific to monitoring referral systems may be needed to sustain improvements.

- Supportive supervision should focus on referrals, to help health workers troubleshoot problems in real time at their health facilities. During supportive supervision, a data quality check can be conducted, to make sure that correct data are used to correctly construct, calculate, and track referral indicators.

[1] MEASURE Evaluation PIMA. (2017). Performance of HIV Referrals and Linkage into Care in 10 RSS Target Counties. Chapel Hill, NC, USA: MEASURE Evaluation.
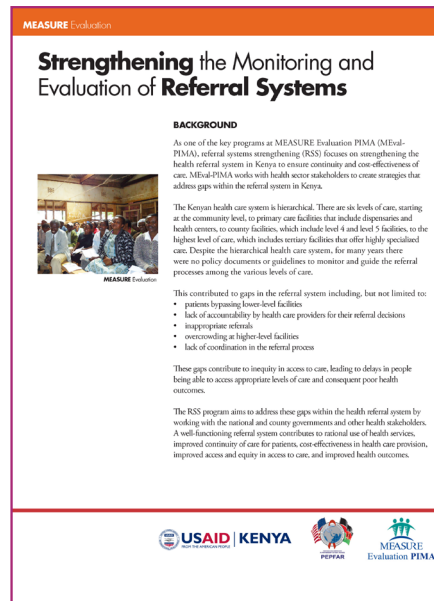[2] MEASURE Evaluation PIMA. (2017). Linking HIV Testing and Counselling in Kenya: Standard Operating Procedures. Chapel Hill, NC, USA: MEASURE Evaluation. https://www.measureevaluation.org/resources/publications/tr-17-190?searchterm=linking+hiv+testing+and+
[3] MEASURE Evaluation PIMA. (2017). Performance of HIV Referrals and Linkage into Care in 10 RSS Target Counties. Chapel Hill, NC, USA: MEASURE Evaluation.
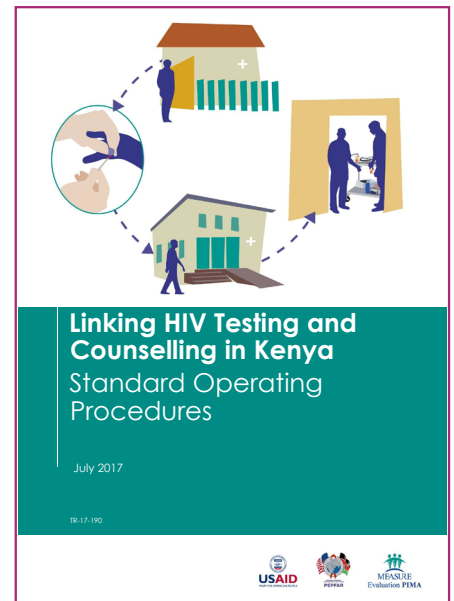
MEval–PIMA Publications on Strengthening Kenya's Referral Systems

https://www.measureevaluation.org/pima/referral-systems/referral-strategy

https://www.measureevaluation.org/resources/publications/fs-14-117

https://www.measureevaluation.org/resources/publications/tr-17-190?searchterm=linking+hiv+testing+and+