Strengthening health information systems to address the HIV / AIDS epidemic: A public-private NGO model in Mozambique

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Background

Mozambique has insufficient health informatics infrastructure, a dearth of trained health information technology (IT) personnel, and inadequate management of health information systems (HIS), which limit national capacity for monitoring and evaluation (M&E) of the HIV/AIDS epidemic. Strengthening health systems, including HIS, is a priority for the Mozambican Ministry of Health (MISAU) and for the U.S. President's Emergency Plan for AIDS Relief (PEPFAR).

Methods

- MOASIS (Mozambican Open Architectures, Standards, and Information Systems) is a south-south public-private partnership between the Universidade Eduardo Mondlane (UEM) and Jembi, a health informatics NGO in South Africa.

- MOASIS utilizes several models to build capacity, including collaboration with implementing partners, twinning with programmers from other OASIS nodes, and contract management of commercial vendors.

- MOASIS plays a unique role through its MOU with the Government of Mozambique to assist with implementing the Strategic Plan for the Department of Information Systems.

- With financial support from PEPFAR and other international funders, MOASIS provides a more stable external environment for health informatics projects to move forward.
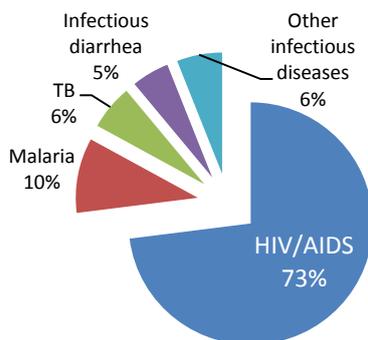
Results

CURRENT PROJECTS INCLUDE:

- A health information system for mortality **(SIS-ROH)** adopts WHO-FIC standards for mortality and morbidity systems coding with the development of a simple tool and electronic system to collect information on mortality and cause of death from deaths recorded in health facilities, based on an updated death certificate and adapted ICD-10 standards for mortality.

- A health information system for monitoring and evaluation **(SIS-MA)** will be based on the open source DHIS2 software.

- Development of standards for systems with patient-level data **(SIS-BI)** represents the development of the first ever national standards for public health information systems in Mozambique, aiming to standardize health information systems to support HIV care and treatment.

In 2012, MOASIS successfully analyzed data from SIS-ROH, which covers 36 health sites and registers death events inside and outside of the Health System. This data estimated causes of death based upon a 10 hospital sample for 2009-2011.

Mortality by infectious diseases, 10 hospital sample, Mozambique 2009-2011

- Infectious diarrhea 5%
- TB 6%
- Malaria 10%
- HIV/AIDS 73%
- Other infectious diseases 6%

HIV/AIDS accounted for **28%** of all registered causes of death.

MOASIS staff has conducted trainings with provincial MISAU technicians on the use and maintenance of HIS and the provision of general IT support.

Conclusions

M-OASIS demonstrates how a public-private NGO can act as an honest broker with the Ministry of Health to guide decision-making, develop systems, and manage projects as well as enhance local capacity and assist the government in developing and implementing public health information systems.

The M-OASIS model may help other national health systems address the challenge of strengthening HIS as a key step towards achieving an AIDS-free generation.

jembi health systems   MOASIS   University of California San Francisco AIDS Research Institute Center for AIDS Prevention Studies