ZIDI

Solution design, testing and national scale-up of an enterprise health management system

Gathering reliable, retrievable and timely information on service delivery and other key indicators is an important step in improving health outcomes. Mobile Health Management Information Systems (HMIS) can help with this process. Additionally, the private sector can play a key role in the design, development and testing of such systems, especially when it is not held to the scope and scale-related constraints that come with grant-funded projects.

ZiDi™ is an innovative cloud-based enterprise health management system developed by MicroClinic Technology, Ltd., a Nairobi HMIS company. ZiDi™'s robust, easy-to-use and integrated design has primed it for large scale use in the public and private sectors. To test the system, a pilot of the ZiDi™ was undertaken in Kisumu County in September 2012. The successful 12-month pilot led to ZiDi™'s approval for use in public health facilities by the Government of Kenya.

Implementation date: September 2012

About ZiDi

ZiDi™ is a cloud-based software service that is currently optimized for use in dispensaries, health centers and out-patient departments. It allows health workers to record and access patient data at any time with web-enabled devices, preferably tablets. Regardless of connectivity, a health worker can enter a patient's demographic information, health parameters, symptoms, tests, diagnosis and prescribed drugs when offline. ZiDi™ automatically uploads the data to the cloud once connectivity is reestablished. ZiDi™ also assists health workers to adhere to clinical protocols, tracks procedures and services performed, lab tests ordered and results in a manner that facilitates supportive supervision, monitoring and evaluation of the quality of care offered. Drug inventory and facility revenues and expenses are also tracked. Patients who default on visits can be easily identified and contacted via outbound targeted or generic text messages. Data archived in ZiDi™ can be easily retrieved and exported as an Excel file for offline analytics. Auto-generated service utilization, financial and inventory reports facilitate decision-making by the health workers and district management teams. Through tracking the productivity of health workers, it enables the MOH, in collaboration with the county governments, to correlate resource allocation with productivity in a health facility.

ZiDi™ is also interoperable with multiple existing information systems. Service utilization data are exportable into a District Health Information System (DHIS2). Consumption data on all essential medicines and medical supplies are exportable into the Kenya Medical Supplies Authority's (KEMSA) logistic management information systems. Lastly, data from the master facility list can be uploaded into ZiDi™ to update facility profiles.

Evaluation and Results

ZiDi™ has been successfully piloted in dispensaries and health centers in Kisumu County. Frequent and consistent feedback from health workers and district health management teams has been incorporated into ZiDi™ to improve the system. More than 95% of reports generated in ZiDi™ matched those housed in the facility. Fifteen health workers are currently using ZiDi™ and have fully adopted the system within their practice. Patients also report enhanced service delivery and quality of care at the pilot sites. ZiDi™ has also eliminated the need for health workers in the pilot sites to manually quantify and forecast their 90-day supplies. Instead, this information is readily available from ZiDi™. The system also allows the Kenya Medical Supplies Authority (KEMSA) to monitor consumption, rational use and stock levels in real-time. Benefits such as improved health worker efficiency, enhanced decentralized decision-making, and improved clinical decision-making are invaluable attributes of ZiDi™. It is also easy to adopt and use.

Lessons Learned

- It is important to incorporate end user feedback into the design of mHealth technology.
- Government entities should be active partners throughout the entire development and piloting process.

- Plan ahead for various scenarios to better anticipate adverse situations that may impact scale up of the product and program.
- When thinking about sustainability, keep in mind the role of different stakeholders, including those in headquarters and those in the field.
- While open source systems are often preferred, it is important to note any limitations they may have regarding integrated needs of the health systems.

Conclusion

ZiDi™'s offers an integrated approach to data collection that ensures health workers have constant access to patient data even in remote rural health settings, and provides access to real-time monitoring of disease trends and inventory, thereby, preventing drug stock-outs. Designed to streamline reporting, it accords the MOH and other health officials access to up-to-date, web-based reports in real time, serving as a valuable resource for future decision-making and supportive supervision. By incorporating accountability into rural healthcare, it provides the necessary foundation to improve health outcomes in Kenya.

Geographic Coverage: Kenya

Implementation Partners: Government of Kenya | Kenya Medical Supplies Authority | MicroClinic Technologies | OGRA Foundation | Microsoft 4 Africa | Yahclick – SimbaNet, Kenya | Samsung/Safaricom

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