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manhiça

New paper-free tools for an integrated demographic, hospital and laboratory based surveillance system in Manhiça, Mozambique

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Introduction

CISM has been collecting demographic, health and laboratory data manually since its opening in 1996.

- The amount of paper forms used is enormous
- The data collection process is time consuming
- There is need to intergrate the data collection systemem
- The ultimate aim is to have a paper free computerized intergated system

Background : Demographic data collection

Manhiça DSS data collection:

- Two rounds per year.
- Households were mapped using GPS.
- Member of household living or with intention to live for more than three months received a unique permanent ID.

Constrains and limitations of this system:

- Use of numerical identifiers
- Errors induced by the respondent, undercounts, misplacements and duplications of individuals or events.
- Migration reconciliation in the field.

30/01/2012

Demographic data collection solution

Mobile biometrics solution for the demographic data collection

- The Mobile Biometrics Solution automates the DSS processes and reduces the proliferation of paper forms.
- Biometric data and demographic information will be collected
- The device is able to capture quality fingerprints, photographs and acquire the GPS coordinates.
- The fingerprint enrolment, identification and verification would be managed by the AFIS database.



Background : Health data collection

- Paper forms of OPD/INPD are completed for patients
- Currently the health centres do not keep records, the OPD form has to be completed each time the patient visits the health centre.
- The clinicians do not have immediate access to the patient's clinical past records

Constrains and limitations:

- Use of numerical identifiers (transcription errors, mix)
- Problems on identification of patient in the health facility identification card (destroyed, lost, missed).
- Duplication of OPDs (in cases of transfers within DSS)
- Lack of immediate access of the last OPD (revisits)

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Healthcare data collection solution

Mobile biometrics solution for health care

- The healthcare application is integrated with the DSS application linking the DSS and the six health centres using biometric data
- The health application is subdivided into the Reception, Laboratory, Consultation for normal clinical visits and clinical trials.
- Data collected includes, study numbers, anthropometric, immunization records, clinical data and outcomes
- Patients enrolled in the DSS would be easily identified and verified using the fingerprint scanners at the health centres.
- For children under the age of 12 years a “buddie” system for biometrics data capture has been implemented

30/01/2012



Healthcare Application



Background : Laboratory data collection

- The lab processes samples for specific studies and some routine hospital samples
- Results need to be provided in reasonable time
- Each sample needed 18 diferente paper form

Constrains and limitations:

- Delay in obtaining lab results;
- Process prone to loss or/mix-up;
- Different ways of reporting;
- Dificulty in obtaining a substitute result.

Laboratory data collection solution

In 2010 CISM decided to implement the SERVOLAB[®]

- Servolab[®] Laboratory InformationSystem is a powerful tool for managing and controlling data processing.
 - Identifies samples through bar codes;

Advantages of servolab[®].

- Each sample → 6 paper forms;
- Eliminates transcriptions;
- Minimizes errors and mix-up of results;
- Quick provision of results;
- Standard results slip
- Confers the possibility of quick previous results;
- Easy data exports for paralell analysis.



CHALLENGES

- GPRS connectivity is a major stumbling block for real time data synchronization
- Staff initial computer skill
- Existing infrastructure in terms of security, electrical power supply and working space
- Long term system maintenance

Way Forward

- Installation of Wi-Fi connectivity at Manhica District Hospital for better data transfer
- Full integration of servolab into the DHSS
- Integration of the digital X-ray films into the health application

Thank you !



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