



The Health Management Information System is demonstrated to local government officials.

Health Management Information System for Hospitals

Lessons learned from a Tanzanian experience

This brief describes the lessons learned from the IICD supported Tanzania Evangelical Lutheran Church Tanzania (ELCT) Health Management Information System (HMIS) project. It is intended for actors in the health area as well as for institutions implementing a similar project that would like to learn from this experience.

Pauline Kimollo, Miep Lenoir, Mauri Niemi

The brief takes much of its learning from the Monitoring and Evaluation (M&E) activities that have been performed by the project, with help of IICD and the local M&E partner during the project period. The M&E system, which was developed by IICD, consists of quantitative and qualitative assessments. Each year, questionnaires are filled in anonymously by the end users of the project (all users of the project or a representative sample). The answers are then analysed to discover more about end-user profiles, levels of use and satisfaction, and the impact of the project. This process is complemented by periodical Focus Group discussions which are attended by project staff and

end users in order to reflect on the data that has been collected through the questionnaires and discuss successes and challenges relating to the project, and possible solutions.

Context

Since independence in 1964 Tanzania has struggled to improve its health services. During the late 70's the service level in health was relatively high. Economic problems and structural adjustment devastated the health sector, causing falling numbers of health workers, decrease of available materials, and a breakdown of the referral system. Also the rural-urban inequality increased sharply. The implementation of the Sector Wide Approach (SWAp) in 1998 in the health

sector has resulted in greater sector coherence and consistency, supported by the de-centralisation of responsibilities to local government. Efforts have also been made to improve the skills of health staff, which combined with other government measures had a positive effect on the service quality of health care.

Focus of the third national Health Sector Strategic Plan 2009 – 2015 (HSSP III), is on Partnership for delivering the Millennium Development Goals. Over the past ten years Under Five Mortality Rate and Infant Mortality have reduced. However Maternal Mortality and Neonatal Mortality remain persistently high. The health system is gradually expanding, but not enough to cover the unmet needs of the growing population. Information and communication technologies (ICT) to manage health data can play a major role in strengthening the health system.

On the institutional level, health facility management suffers from shortage of staff, high turnover rates and inadequate availability and use of health data. Information from health facilities does not meet the required standards and takes a lot of time from staff to collect. These factors hinder health care facilities in providing quality care, proper financial management, staff retention and providing appropriate input to the national health system. The ICT structure in Tanzania has developed to a level where it is realistic to computerise some of the routine processes in hospitals to support management in dealing with these issues.

The World Health Organization (WHO) argues that investment in health management information systems (HMIS) now could reap multiple benefits, including:

- helping decision makers to detect and control emerging and endemic health problems, monitor progress towards health goals, and promote equity;
- empowering individuals and communities with timely and understandable health-related information, and drive improvements in quality of services;
- strengthening the evidence base for effective health policies, permitting evaluation of scale-up efforts, and enabling innovation through research;
- improving governance, mobilising new resources, and ensuring accountability in the way they are used.

HMIS was one of the themes identified during the ICT Roundtable workshop on ICT for health held in Mwanza in February 2005 and organised by the Ministry of Health and Social Welfare (MOHSW), Christian Social Services Committee (CSSC), Tanzania Commission on Science and Technology (COSTECH) with the support of IICD and Cordaid, a Dutch development organisation. From this Roundtable workshop, two HMIS projects were developed, of which one will be discussed in this brief. Both projects take a bottom-up approach; the information needs at health facility level are taken as entry point. In this sense they differ from classical health management systems that have higher level data collection as primary objective.



Tanzania Profile

Tanzania	
Surface Area (sq. km):	9.473.000 km ²
Population total:	42,5 million
Life expectancy:	56 years
Adult literacy:	72,3 %
School enrolment, primary:	97,8 %
Human development index:	151 (out of 182 countries)
<i>Source: World Development Indicators, 2009</i>	

Access to communication technologies per 1,000 people

Telephone lines:	4
Mobile subscribers:	148
Internet users:	10
Personal computers:	9
<i>Source: United Nations E-Government Survey 2010</i>	

Data on the project

Number of users:	160
Number of beneficiaries:	120,000
Target groups:	Health workers, patients

With the support of IICD and Cordaid, the Evangelical Lutheran Church Tanzania (ELCT) set up the HMIS project 2006 for implementation in its hospitals. By using an HMIS, hospitals can collect, store and analyse data on patient registration and diagnosis, billing, laboratory results, pharmacy inventory, x-ray results and ward management more easily.

Introducing an HMIS brings about far-reaching organisational changes as well as changes in the existing culture. That is why it is very important to get a broad and thorough understanding of the prevailing values, conventions and beliefs within the institution, i.e. insights into the factors that determine people's behaviour in this context. Change management is therefore a key component of the project.

ELCT, the owner of the HMIS project, owns and manages 23 hospitals, 5 paramedical institutions, over 160 dispensaries and health centres and various projects and programmes, which constitutes about 15% of the national health services in Tanzania. The HMIS project is closely linked to another project with ELCT on telemedicine. The IT Unit of ELCT that supports all ICT activities within the organisation, implements the HMIS project. A project manager, an IT technician, and a change manager were recruited. The team is supported and coached by IICD's country programme manager, officer capacity development and officer knowledge sharing.

During the first phase of the project between 2006 and



The Health Management Information System is demonstrated to local government officials.

2009, the IT Unit planned to implement the HMIS system in 26 hospitals. In 2009, the Finnish organisation FELM joined to financially support an extension phase of the project. This phase is ongoing at the moment of writing. The total amount of funds for the first phase, co-financed by IICD and Cordaid, was EURO 101,700.

Project description

The project objective is to improve the management of health facilities and to that end develop a user friendly HMIS to collect reliable information on all activities, and to produce the reports needed by the hospital administration and the Ministry of Health. The HMIS aims to provide timely and accurate information leading to better health care planning, improved diagnosis and increased patient access to health services. Direct users are the health workers, who are expected to:

- get better access to patient information
- be able to spend more time on patients
- be able to spend less time on administration

It is expected that patients will also benefit, as they will:

- spend less time in the hospital
- get possibilities to do appointment scheduling
- get more insight in bills
- get better access to medicines due to better inventory keeping
- get better quality control

The specific objectives of the HMIS project and the means to achieve this are:

- to digitally record all standard transactions in the hospital by means of customised software
- to digitally produce all reports according to the standard specifications, including the government health registration system Mfumo wa Taarifa za Uendeshaji wa Huduma za Afya (or MTUHA, the Swahili name for HMIS), by means of the same software
- to have satisfactory operation of the HMIS within the health facilities by ensuring the required hardware is in place
- to have trained and motivated staff who can use the HMIS system, maintain it and generate reliable outputs
- to have support services in place that can troubleshoot at distance within half a day
- to assure user friendliness and improved work processes by

continuously generating end user and management feedback and integrating these results in the software and ways of operating

- to roll-out the HMIS to 26 health facilities, supported by an introduction package including a guideline manual, assistance in organisational change processes, user training and ICT support and back up services

Software package and modules

The project team could build on earlier experiences, as ELCT had pioneered in Tanzania with the development of a DOS based HMIS system in 1997. It was used in the beginning by six hospitals, but only one continued to use it after a few years. This experience showed that there is interest, because people indicated it helped them in their work and they have since asked for a better version of the system. But it also clearly showed the problems that inhibit the effective use of such a system. Most problems related to:

- the integration of ICT in the workflow, processes and responsibilities
- the robustness, effectiveness and user friendliness of the system
- the computer skills of the hospital staff
- the technical support structure

The project team compared many alternatives which were either too expensive, of poor quality or without affordable long term support. After a careful review of available solutions with a broad collection of stakeholders from amongst others the Ministry of Health and the University of Dar es Salaam Computer Centre (UCC), ELCT decided to develop a generic Tanzanian version of Care2X, an open source HMIS that is used in several countries over the world. ELCT programmers cooperated with UCC, COSTECH and a German software company to adapt the software to the government health registration system MTUHA, and to specific hospital requirements. Drafting of requirements was done with hospital managers. Experiences and lessons learned from the hospitals were continuously translated into requirements for further development of the Care2X software. The process of developing a Tanzanian generic version of Care2X took about two years.

The choice for Care2X was based on the following criteria:

- The software is free
- Local support is available
- Care2X has a proven track record
- It can be adapted to contribute to government (MTUHA) reporting

Care2X is client/server software, which is scalable from a single computer to a big hospital network. It is modular and health facilities can choose which modules they need or are able to use. Modules used in this project are patient registration, billing, laboratory, pharmacy, radiology, diagnosis and treatment, appointments, in-patient, out-patient, eye-clinic and nursing.

Hardware

In all hospitals, satellite internet connectivity was already in place as a result from an earlier project with MEMS (Mission for Essential Medical Supplies & Services). The HMIS project provided servers, printers and power backups. Hospitals themselves were responsible for providing computers, which most of them obtained through a second hand computer project run by ELCT. Each health facility is responsible for the replacement of its hardware.

Results

The implementation of the HMIS system is ongoing. At the moment of writing it is operational in six hospitals and five health centres: St. Elisabeth Hospital, Arusha Lutheran Medical Centre (ALMC), Haydom Lutheran Hospital, Wasso Designated District Hospital, Kilimanjaro Christian Medical Centre (KCMC), Marangu Hospital, Tumaini Health Centre, Kijenge Health Centre, USA Health Centre, Njiro Health Centre, Mtoni Health Centre.

Change management

The project hired a change manager responsible for the organisational change management process. Workshops were organised to prepare staff for the changes ahead and to determine their attitudes towards the changes, at three operating levels:

- ELCT bishops
- Management of the hospitals
- Health staff of the hospitals

Since independence, healthcare in Tanzania has moved from charity, mostly provided by religious entities, to a public service. Government as well as donor organisations stimulate the professionalization of health service provision to ensure this public service can be accessed by all. Hence faith based hospitals increasingly rely on funding from performance based financing schemes and service level agreements with government, which is based on hospital output data.

IICD facilitated change management sessions in which the bishops and the project team mapped the changing context in which hospitals operate, to come to a better understanding of how HMIS can assist hospitals in dealing with these changes. The IT Unit facilitated all the change management workshops in the hospitals.

In the course of the project, IICD and the ELCT IT Unit developed a guide for change management. This guide is based on a proven and successful approach developed by IICD in the setting of district governance. It uses a 14-step approach, starting with the germination of the original idea to set up an HMIS right through to the establishment of a fully operational system.

Steps 1 to 5 are about preparation and training: laying a strong foundation is the first requirement for constructing a sturdy building. Step 6, 7 and 8 are the core of the approach. Together, management and staff decide on how to implement the HMIS. This includes identifying the specific problems of the health facility and then developing a joint vision on where to go. Steps 9 to 14 are all about

troubleshooting, implementing the HMIS, and finally handing over the full-fledged system to a capable workforce that is able to work with it and maintain it.

Training of IT Unit, local software developers and health staff

At the start of the project, a German software company assisted in the programming and testing. The IICD Capacity Development programme supported the IT Unit in training local developers. The University Computer Centre in Dar es Salaam was also working on the generic version of Care2X and IICD facilitated face to face exchanges as well as online sharing of code.

IICD also supported the IT Unit in providing high-quality training programmes for health staff. Members of the IT Unit followed a Training-of-Trainers programme, to sharpen training needs assessment, planning and implementation skills.

The IT Unit organised ICT training at hospital level (on the job training). Most hospital staff members did not have any computer skills and had to start from scratch. In total, about 130 staff members were trained in basic ICT skills and the use of Care2X, usually a mix of nurses, doctors and medical recorders.

From each hospital, one staff member - usually a health worker with special interest in ICT - was selected and trained in basic computer and network maintenance and troubleshooting. Five hospitals recruited their own ICT technician.

Support services

Software problems in the hospitals are tested and fixed remotely from the IT Unit's office in Arusha. Also software updates are installed remotely. At hospital level, technical people are trained to repair server or internet connection breakdowns. In this way the project team has been able to work with the eleven health facilities where Care2X is implemented. On average, the team visits each site once every two months.

Integration with other software

Two hospitals integrated an open source accounting package (WebERP) in the HMIS, allowing the export of aggregated billing information from Care2X to WebERP.

As explained above, the HMIS generates data that improve the management at the level of individual health facilities. An interface has been built between Care2X and the District Health Information System DHIS, which enables aggregation of health facility data at district level and official reporting to the national health authorities. This way aggregated health facility data from a certain district or region can be used to make informed health policy decisions.

Impact

The number of questionnaires collected over the years is too low to measure impact as perceived by users. The open answers in the 29 questionnaires do give an impression of how health staff is using the HMIS. When asked what actions they undertook as a result of this project in order

to improve their work, users provided answers like: “I managed to register all patients’ diagnoses and prescriptions electronically and to produce all the reports electronically.” Another user replied: “Keeping records of patients on the computer. Get reports of the hospital easily.”

When asked why they have achieved their goals, a user answered: “I can register and enrol a patient without delay.” Another user replied that “the patient flow can easily be monitored.”

When asked why they have not achieved their goals, users provided answers like: “Lack of computers”, “Lack of full management support to the project”, and “Need for more training.”

Economic impact: increase in revenues

In an economic impact study carried out by an independent consultant at the end of 2009, it was found that health facilities using HMIS had recorded an increase of income collected from different collecting sites in the hospitals. This was evidenced through interviews and focus group discussions with management and staff members from billing stations, pharmacies and laboratories in six health facilities. The responses also indicate an improvement in logistics and drugs management. The respondents said this is seen as the result of a good and effective HMIS. Unfortunately, only one health facility could provide data on revenue collection before (2006) and after HMIS implementation (2007 and 2008). Revenues increased 33% between 2006 and 2007 and 34% between 2007 and 2008. These are indicators that the HMIS contributed to an increase in revenues, although there are no data on patient numbers and other causes cannot be excluded. The respondents noted that the increase in income collected from health facilities could be related to:

- Control of fraud points: all patients attended are recorded in the system. Hence money collected is always equal to the number of patients attended at the health facility.
- Reduction of so-called ‘corridor clinics’, which implies the treatment of unrecorded patients by health providers without recording the patients and their payments.
- Better logistics and drugs management, through use of an effective HMIS to minimise wastage.

Impact on health care: time saving

In the impact study, health workers pointed out that they were able to retrieve patient files in the HMIS much faster than in the manual system, increasing efficiency by saving both patient and staff time, so patients can be attended faster.

Anecdotal evidence from interviews with 30 patients states that the HMIS urged doctors to do ward rounds daily to update their HMIS records, hence providing health care at the right time and reducing bed occupancy time. Also, estimates of reduced patient waiting time from 24 hours to 30 minutes are mentioned, as well as reduced loss of patient files from 30% to 1%.

On the other hand, health workers noted that in case of

power cuts or system failure, they cannot access patients’ records, causing delays and inconveniences. They are forced to go back to the manual system. After the power comes back, manually collected data are not always entered into the system.

Improved data security

The IT Unit ensures that all the records stored by the system are encrypted and saved with one local backup and a remote backup for each hospital. In the impact study, respondents from administration and management observed that data are nowadays safe from damage, corruption, or modifications by unauthorised individuals. Improved data safety was for all respondents a major benefit from the project.

Side effects

The project has been found to be beneficial to the users and health providers who are now computer literates, increasing their professional status and career opportunities. In the M&E questionnaire a user comments: “I use the computer with more confidence, I work more with modern technology, and I can explore other technology.”

Lessons learned

In theory, all aspects have been thought of; the change management guide with the 14 step approach that was developed during the project roll out prescribes a thorough preparation in terms of awareness raising and training among management and staff to enable them to take ownership and decide on the HMIS implementation. In practice, it still turned out to be extremely complex for hospitals to take full ownership and implement an HMIS. What can be learned from the differences between expectations and results so far?

Manage expectations

When looking back, expectations set at the start of the project were too high. Project developers expected that the software could be developed and customized in one year; it took two years. It was expected that every two months a hospital would start implementing the HMIS. Within four years, six hospitals and five smaller health units have started to use the HMIS, with varying intensity. The most successful hospital is implementing ten modules of the HMIS. The least successful hospitals are only (partly) using the patient registration module, which means there is still a risk of turning back to manual. Organisational change needs a lot of time and patience. This is also reflected in the M&E questionnaire, where a user comments on the HMIS: “People should get more time to understand its importance.”

Identify key agents of change at several levels

Change agents need to be identified at the levels of government, hospital management, hospital departments,

and health workers. Since the dioceses of the Lutheran Church are the owners of the hospitals, also church leaders need to be involved.

From the most advanced hospitals the IT Unit learned that the attitude of the hospital management towards the HMIS is essential. If management prioritises and pushes for HMIS, everything is possible: staff resistance can be overcome, electricity problems are dealt with. It just takes time.

The IT Unit learned that some hospitals are more motivated to use HMIS than others. Therefore, priority in rolling out the project is on those hospitals that are most motivated and ready for HMIS implementation. Creating champions in this way will inspire the more reluctant hospitals.

Apart from hospital management, also church leaders like bishops and administrators need to be actively involved and understand the importance of the HMIS, since they influence decisions on how the hospitals are run. What is said or recommended by church leaders often has implications for service delivery. Recently the IT Unit also started to involve government officials to enhance public private partnerships and get government support for the system.

Similarly, departments as well as individuals can be agents of change. In general, junior staff members take up ICT more easily than older staff and can thus set the example. Some departments pick up the HMIS faster than others. A certain department was very reluctant in participating. When its staff members saw the others going ahead, they felt ashamed, joined and made up quickly for the delays.

Make benefits to management explicit from the start

Benefits like reduced time spent in hospital, reduced loss of medicine and increased financial revenues are – or should be - strong incentives for management to incorporate the HMIS in the work flow. The project team noted that some hospital managers are more receptive to these benefits than others. Whether it is used as a carrot or a stick, the project team needs to be able to provide hard proof of these benefits by monitoring indicators from the start. In the current project, no baseline measurement was done and no indicators for management benefits were set. This lesson was picked up in a similar, more recent project supported by IICD in Malawi, where indicators like financial revenues and patient's length of stay have been included in the project design from the start.

Provide coaching on information-based management

In the project design it was assumed that increased access to health data would automatically result in better managerial planning and decision making; no guidance for management was offered. During the roll out of the project it turned out that support in the use of (HMIS) data for management and planning was needed. This was translated in additional training in financial management and special

staff was recruited for that purpose. IICD applied this lesson in a related HMIS project in Mwanza region, where the project extension now includes peer learning sessions for hospital managers, to exchange on the use of data to improve planning and decision making.

At facility level, there is a need for more guidance on data entrance and for feedback on how the data are used. The IT Unit noted that data entered in the national MTUHA system are often estimates or 'cooked' data. If health workers get feedback on the collected data, especially their own outputs, they will be aware of the importance of data and have an interest to collect them.

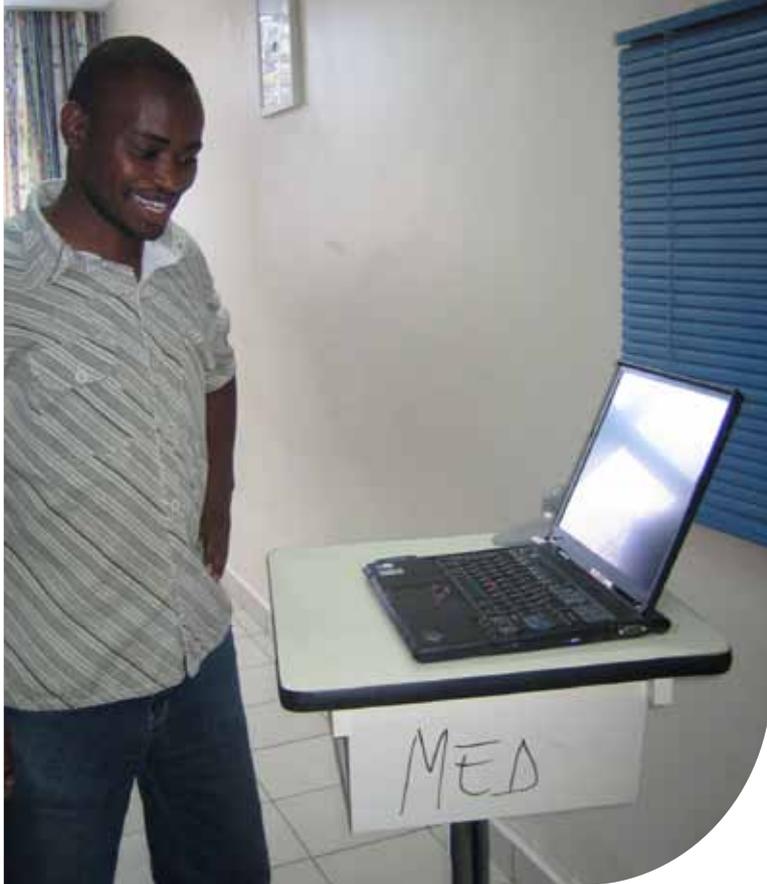
Involve everyone in the change process

When implementing an HMIS, more effort is needed in change management and working on people's attitude than in the technical part. Management and healthcare staff have to first get familiar with ICT. It is very important that everyone involved in the health facility can speak out about the problems they encounter, as well as suggest possible solutions, and that they can contribute to how to implement an HMIS. By involving everyone in the design and implementation of the HMIS, all can contribute and each individual can adapt to the changes this inevitably brings. Change management workshops were organised separately for bishops, hospital managers and health workers, as the project team noticed that health staff was reluctant to speak out in presence of senior management. Typical concerns expressed by health personnel were their fear to lose their jobs if computer use would result in staff cuts, and the fear to get more work due to both manual and digital recording. As the IT Unit became aware of these fears, they were able to address them and hence reduce the resistance to the system. However, not everyone participated in the workshops and resistance could not be taken away entirely.

Also it was noted that in some units only the people directly working with the HMIS were aware of the benefits of the system. This limited the support of the project by the entire staff. Involving the entire staff would also create more ownership and broaden the interest of all staff to be computer literate.

Strengthen IT support at hospital level

At the start of the project, the IT Unit reckoned that the ICT support at hospital level could be created by training a health worker from the hospital with special interest in ICT. Yet the IT Unit had to visit the hospitals constantly for troubleshooting and hardware problems. Hence it decided to review its strategy, by advising hospitals to employ an IT technician before Care2x is implemented, to have ownership from the start. The IT Unit now requires this from hospitals. As it is difficult to find ICT technicians in remote areas, the IT Unit trained two interns to become ICT technicians and transferred them to different hospitals. The successful implementation of Care2X in Arusha Lutheran Medical Centre, one of the first hospitals to be



An IT technician shows the laptop used by doctors visiting patient at their beds.

introduced to the use of HMIS, can be attributed to the full time young ICT university graduate that the hospital employed and who took responsibility for all ICT matters. In total, five hospitals recruited their own ICT technician.

Provide tailor made ICT training for hospital staff

It was difficult to determine what motivates health workers to learn to use a computer. Many of them are overworked and underpaid, which makes them reluctant to participate unless they have a direct interest. Some hospitals started to include basic computer knowledge as a requirement when recruiting new medical staff. Several lessons were learned about ICT training for hospital staff:

- Management support is key and needs to be developed: management has to allow trainings to take place during working hours. As soon as these kinds of events are organised outside official working hours, people will not attend unless financially compensated.
- A training room on site increases the ability and willingness of staff to attend training and is cheaper than sending staff to a training centre off site. However, it is more difficult to control attendances.
- Due to the general high staff turnover in hospitals, ICT training needs to be provided continuously.
- An onsite training room enables staff to continuously and independently upgrade their skills by using the training room in their free time whenever it is convenient for them.
- Independent and peer to peer training is to be preferred over classical training conducted by a paid trainer. While there can be reluctance from experienced staff, the young newly recruited staffs swallow it easily and can teach others.
- Preferably trainings are conducted in shifts according to the different working schedules, type of health worker and skills as determined through a skills and needs assessment

- Certificates and refreshments can be incentives to come to the training.
- The increase of their 'market value' when being ICT literate can be an incentive for health workers to use their spare hours to practice.
- Training material should be in Kiswahili, job related and tailor made according to the specific computer tasks of each type of health worker, with exercises for each module to enlarge efficiency.

Challenges

Tacit resistance to change

Although the IT Unit tried to guide the hospitals through all the steps of the change management guide, hospitals did not always follow them. The project team stumbled upon tacit resistance: in general, hospital managers express their commitment to the process, in practice there is a lack of collaboration. Pauline Kimollo, project manager, explains how such resistance is manifest expressed: "The facility is giving a lot of excuses when you plan a certain activity. Or when you visit the facility for an agreed activity, no one is bothering your presence and nothing is organised for the activity." In several cases, the IT Unit decided to stop working with unwilling hospitals and continued in facilities showing genuine commitment.

The 'project syndrome'

Among the project developers there was a general belief that hospitals were ready to accept the HMIS and would make a deliberate move to own and support the system. However, HMIS uptake, especially the financial integration of the system, took longer than expected and in most hospitals it is still not fully integrated.

When health facilities started to use the HMIS, the IT Unit managed to make agreements with them to share the accommodation and transport costs for technical support visits. Health facilities partially pay the costs of ICT equipment and sometimes the salary of an IT technician. Yet the majority is not ready or able to incur all the costs of an HMIS; the switch from external project financing to internal budgeting seems to be difficult. The hospitals still depend heavily on external funding. In the impact study it was stated that 'most health facilities consider the HMIS as an external project of IICD and the IT Unit. This makes them passive in investing in the HMIS project.'

Partial use of the HMIS

The least successful hospitals are only (partly) using the patient registration module. In the M&E questionnaire, a user states: "we are finding some of the data are not filled so we are ending up with missing information." As long as the HMIS is not sufficiently integrated in the workflow, there is still a risk of turning back to manual.

Power and connectivity cuts

The system is mimicking the manual system so that when power goes off or the server is down, the old manual

system can be used. However, power cuts are so frequent that they endanger the proper use of the system. Power back up systems like standby generators are expensive to run. Some hospitals are not even connected to the national grid and have to get electricity through expensive alternative power solutions. Hospitals are increasingly using low power solutions like Inveneo desktops.

Lack of software developers

The Care2X software developers that were trained with support of IICD all went for other opportunities and are not working for the project anymore. The IT Unit is still looking for a way to attract a pool of strong developers. Israel Pascal, system administrator: "We consider selecting students from colleges in Arusha by giving them a specific task; the best performers will be offered a job."

Staff turnover

There is a tremendous movement of health staff from one facility to another which affects the performance and progress of the HMIS. It is difficult to maintain the system when there is a serious staff turnover. For example, at one facility implementing the HMIS, five nurses, one medical recorder and two doctors left their job and moved to a government health facility. The project team needs to have a sustainable training strategy to deal with this kind of challenge. It plans to train three to five staff members in each facility to be ICT trainers, who can schedule training whenever needed. On the longer term, basic computer skills and e-health applications need to be integrated in the curricula of the national health education system.

Next steps and future plans

At the moment of writing, the Ministry of Health and Social Welfare of Tanzania is developing a national eHealth strategy. It is a multi-stakeholder process and supported by IICD. The eHealth strategy defines how ICT can reinforce the implementation of the Health Sector Strategic Plan 2009 – 2015, and aims to leverage existing initiatives, among which the HMIS project of ELCT. The endorsement of the eHealth strategy will therefore facilitate the roll-out of the HMIS project.

In the extension phase of the project, a financial plan for the HMIS will be made with each hospital before implementation, to ensure ownership from the start. IICD, Cordaid and FELM intend to support the expansion of the project.

Contact information

ELCT IT Unit

www.health.elct.or.tz

Mrs. Pauline Kimollo

Mlay Project Manager

pauline@elct.or.tz

IICD

www.iicd.org

Mr. Nic Moens

Country Manager Tanzania

nmoens@iicd.org

Links

Video about the project:

<http://www.iicd.org/articles/tanzanian-partner-makes-video-in-swahili-about-digital-health-system>

Project documentation:

<http://www.iicd.org/projects/tanzania-health-management-system/>

With the right tools, people in developing countries can considerably improve their livelihoods and quality of life. Better access to information and communication technology (ICT) is particularly vital in enabling them to achieve their goals. This is why the International Institute for Communication and Development (IICD) creates practical and sustainable solutions that connect people and enable them to benefit from ICT. As an independent not-for-profit foundation, we put knowledge, innovation and finance to work with partners from the public, private and not-for profit sectors. Together, we can make a world of difference.

International Institute for Communication and Development

Visitor's address: Raamweg 5 | 2596 HL The Hague | The Netherlands

P.O. Box 11586 | 2502 AN The Hague | The Netherlands

Phone: +31 (0)70 311 7311 | Fax: +31 (0)70 311 7322 | E-mail: information@iicd.org | www.iicd.org

Design: Frissewind visuele_communicatie (BNO) Amsterdam | Copyright © IICD September 2010

