IICD in the Health sector

Health Management Information System | Tanzania

IICD in the Health sector

IICD supports healthcare improvement in developing countries by using ICT (information and communication technology) to increase access to better-quality medical treatment and vital health information. We help healthcare workers deliver effective, safe and quality services to those who need it, when they need it. We also help local organisations spread general health information to a wider public using multimedia and mobile phones.

Working in seven countries, IICD has made a real difference in the lives of thousands of healthcare workers and more than half a million patients and vulnerable populations in rural and semi-urban areas.

Challenges to health

Poor health and poverty go hand in hand. Poverty breeds ill health, which in turn renders people unable to fully take part in economic activity. In developing countries, access to the quality healthcare that could help break this vicious circle is limited.

A number of factors lead to poor quality healthcare, including inadequate medical training and a shortage of health professionals. Poor data management of both patient records and new medical knowledge further undermine the quality of care. In remote areas, there are few trained professionals, and information on disease prevention and proper sanitation techniques is scarce. Medical expertise is often out of reach, as most specialists are concentrated in the larger cities.

About IICD

IICD is a non-profit foundation specialising in ICT as a tool for development. IICD is active in economic development, education and health with a focus on innovation and gender.

'When lab results were recorded on paper, information was often missing from patient files. Now, because the data is put straight into the computers at the lab, we know their test results and which drugs they've taken.'

Leodegarda Mtui, *Nurse, Bukumbi Hospital, Tanzania*

Sanitation and hygiene education | Burkina Faso

Community child health information | Uganda

The role of ICT

ICT helps fundamentally change the way healthcare services are managed and delivered. For example, the internet helps bring specialist diagnosis to rural areas through telemedicine. In Burkina Faso, local health workers use multimedia to educate rural communities on sanitation and hygiene. In Uganda, mobile text messaging is used to spread information on infant and maternal health. This is just one example of the potential of m-health: using mobile devices to support health services.

ICT can also improve the efficiency and effectiveness of medical facilities. Reliable systems for collecting, storing and analysing health data help improve diagnosis and treatment. Better operational systems (for billing, purchasing and payroll) lead to better healthcare management. They also establish greater financial transparency in healthcare delivery.
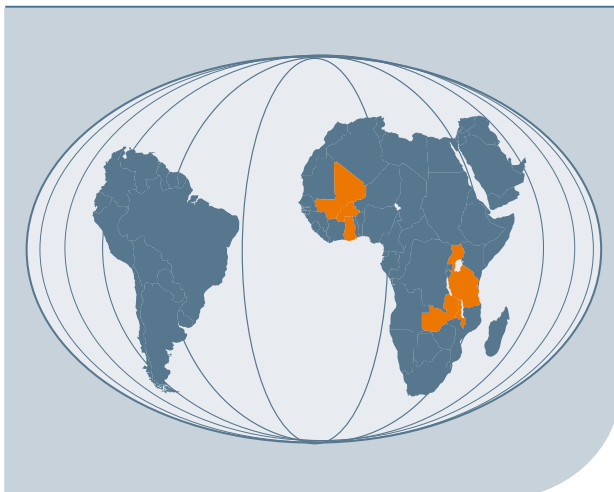
Core aims in Health

• **Developing health professional capabilities:** improving medical training and access to up-to-date medical information.
• **Improving healthcare delivery:** increasing access to specialist diagnosis, and improving the storage and use of patient data.
• **Increasing administrative efficiency:** storing medical, pharmaceutical and financial information to improve data management.
• **Raising public awareness:** increasing the effectiveness of public health campaigns through modern communication technologies.
• **Supporting policy makers:** creating an environment conducive to ICT policy development.

What is ICT in Health?

Aim	Deliverables
Developing health professional capabilities	• Distance and e-learning through the internet, audio-conferencing, CD-ROM, PDA • Better access to current medical information • ICT skills training • Integration of ICT in teacher training • Improved study materials • Networks for peer-to-peer exchange
Improving healthcare delivery	• More accurate patient records • Access to specialist diagnosis through telemedicine and remote support • Shorter patient waiting times through increased efficiency • Better preventative medicine • Disease surveillance and epidemiology • Quality assurance systems
Increasing administrative efficiency	• Improved management of financial, administrative and pharmaceutical information • Increased transparency • Better financial management • Efficient procurement of medicines
Raising public awareness	• Spread of information via internet, mobile text messaging, radio, TV • Use of digital photography, video and multimedia
Supporting policy makers	• Consultation on ICT programme formulation and implementation frameworks • Assistance with capacity development • Monitoring and evaluation

Facts & Figures

Countries:	Burkina Faso, Ghana, Malawi, Mali, Tanzania, Uganda and Zambia
Number of programmes:	24
Direct users:	5,000
Secondary beneficiaries:	623,000
Local partnerships:	Government agencies and ministries, hospitals and other health facilities, civic organisations and private companies
Scope:	Healthcare workers, hospital management and administrators, medical professionals, health education and training institutions, patients under medical care, communities in semi-urban centres and remote rural areas.

Success stories

Recent IICD activity in the Health sector includes programmes developed and implemented with partners in Mali and Tanzania. It has also been active in health in Burkina Faso, Uganda and Zambia. Based on its deep experience, IICD is developing health programmes in Ghana and Malawi.

District Health Management Information System | Tanzania (left + middle)   Teleradiology | Mali

Mali

There are only 13 radiologists in Mali to provide care for a population spread across a country twice the size of France. What's more, all of them are located in Bamako, Mali's capital. This means rural patients must rely on general practitioners to diagnose their x-rays. Statistics show that general practitioners misdiagnose x-rays 50% of the time. To bring specialist knowledge to rural areas, IICD helped create a teleradiology system connecting seven regional hospitals across the country via the internet to radiologists in the capital. Through the system, specialists can consult on cases hundreds of kilometres away. In the same way, radiology workshops and seminars have been instituted to provide distance training and skill updates to local staff.

This programme, one of the first of its kind in Africa, has been a remarkable success: within a year, the participating hospitals were submitting an average of 60-70 x-rays per month for expert diagnosis. A local gold mining company also signed a contract with the project team, and submitted over 700 cases in 2009. In the same year, the European Space Agency helped IICD pilot the use of satellites to improve internet connections for the most remote hospitals.

IICD and its Malian partners also apply their experience to policy development. Recently they helped the Malian Ministry of Communication & ICT develop an e-health policy, which resulted in the creation of an agency within the Ministry of Health to coordinate and implement e-health initiatives.

Tanzania

One of the greatest challenges facing the Health sector in Tanzania is the lack of reliable health data, particularly patient records. To rectify this, IICD and its partners have set up customised Health Management Information Systems (HMIS) in 40 healthcare facilities, including hospitals and clinics. These systems collect, store and analyse health data, increasing not only the effectiveness of medical treatment but also the ability of government to track health trends at district level.

Since the introduction of the HMIS, patient records, including registration, diagnosis, lab tests, pharmacy and billing, are now routinely digitised. For the patient, the improvement in data management means better treatment: it leads to more accurate diagnoses and better follow-up. For the healthcare facility, the new system means better planning with regard to patient flow and resource allocation, clearer accountability and an increase in the efficiency of revenue collection. In nearly each facility where an HMIS was implemented, revenues from billing and in-house pharmacies have risen.

Better data management also helps provide the timely and accurate health information that policy makers need to make well-informed decisions on disease prevention, for example.

Recently, the Tanzanian government formed a steering committee to develop an e-health policy, led by the Ministry of Health. IICD is providing this committee with advice on strategy and implementation, capacity development and awareness-raising regarding ICT in health.

Improving access to healthcare through ICT

Teleradiology | Mali

Health Management Information System | Tanzania

With the right ICT programmes and policies, developing countries can make their healthcare systems more effective and efficient, and get the most out of the resources they have. Initiatives such as telemedicine and digitised record-keeping directly benefit patients by raising the quality of health services and improving the way health workers deliver them.

To find out more about what we do and how you might be able to help us, please contact us.

iicd
People · ICT · Development