iicd
People - ICT - Development

ICT Solutions for Strengthening SRHR Programmes

ICT for Sexual Reproduction and Health Rights

Over the last two decades Information and Communication Technology (ICT) has assumed an increasingly important role in development programmes. In the health sector it has proven to be extremely valuable to increase the outreach, accessibility and quality of health services and community health programmes. For Sexual Reproduction and Health Rights (SRHR) programmes, ICTs are cost-effective tools which allow for greater flexibility and adjustment of interventions.

ICTs can effectively increase the reach, uptake and quality of SRHR services through:

- making health information and SRHR services more accessible,
- efficient and targeted sensitisation of specific groups,
- better and easier access to health management information to improve management of healthcare providers,
- creation of feedback mechanisms on policies or SRHR services being provided,
- faster and easier data collection on SRHR interventions or (infectious) diseases for monitoring and surveillance purposes,
- improved knowledge sharing on SRHR among health professionals,
- easier access to learning materials on SRHR topics for continuous professional development.

As an ICT4D expert organisation, IICD has a solid track record in the design, development and sustainable implementation of ICT-based solutions and capacity building programmes for SRHR interventions. The type of ICT tools used and the final outcome always depend on the objectives of the programme, existing infrastructure, local context and the capacities of implementing teams. Many different technologies can be used for SRHR programmes: from mobile phones, online and SMS platforms, to management software, eVouchers and many others.

IICD's unique approach combines technology solutions together with the assessment of needs, design, customisation, roll-out and capacity building for users. This ensures high ICT adoption rates by the owners and users of the solution. Stakeholder engagement, capacity building, change management, technical support, and sustainability plans are all part of our holistic approach to sustain the use and further integration of ICTs after the main implementation work has come to an end.

"All human beings are born free and equal in dignity and rights. Everyone is entitled to all the rights and freedoms set forth in the Universal Declaration of Human Rights, without distinction of any kind, such as race, colour, sex, language, religion, political or other opinion, national or social origin, property, birth or other status. Everyone has the right to life, liberty and security of person."

Universal Declaration of Human Rights

Exemplary solutions include:

CASE: Providing direct access to information about sexuality and sexual health

In Kenya, IICD developed an **ICT platform (online and mobile)** for a SRHR programme aimed at providing youth with direct access to objective information about sexuality and sexual health.

The platform is an **interactive tool**, where youth can anonymously post questions on forums, share stories, find information about youth-friendly clinics and learn about topics relevant for their age (e.g. body changes, sexuality, sexual health and HIV/AIDS) in a friendly and appealing way. SRHR professionals monitor the discussion forums and make sure that the right message gets across. The platform provides free medical referrals to a youth-friendly health clinic in Nairobi. A user can fill out a form on the platform and get free medical care at the health clinic of their choice.

The platform has been designed to attract Kenyan youths between 15-24 years. To reflect behaviour habits of this group the **platform includes a regular website, a mobile version of the website and an offline mobile app (available for download when the user is online so that the user can later on access the information when offline)**. During the design phase, different elements of the platform (layout, style, most needed information, user habits) have been consulted with youth groups from different socio-economic backgrounds. The content on the platform is dynamic and customised for the youth in Kenya. To get the message across, the text is supported by images, infographics, music and videos that tell real stories which resonate with the youth.

Beneficiaries: Kenyan youths between 15-24 years.
Results: The platform has become widely popular among Kenyan youth, reaching **15,000 unique users in less than 3 months** after its launch.

CASE: Educating adolescents on reproductive health and better access to SRHR services

In Northern Ghana, IICD introduced an **SMS platform** as part of a broader programme, which promotes reproductive health among adolescents. The SMS platform supports outreach, frequent supply of reliable information and interaction with peer educators and adolescents.

The messages are customised for different user groups and based on earlier prepared SRHR materials, revised by health specialists and offered in the shape of questions, quizzes, tips, SRHR encyclopedia entries, reminders and key words feedback options. Messages also inform adolescents about available ICT centres with adolescent-friendly corners and educational materials on sexual and reproductive health, and about youth-friendly health facilities for accessing relevant SRHR services.

The mobile phones and the content of the messages are also used during role-playing and discussions held by youth group coordinators.

Beneficiaries: Adolescents living in the Northern region of Ghana.
Results: **5,000 people have subscribed to the SMS-service** and receive weekly messages. These people include adolescents, peer educators and in- and out- of school adolescent groups. Additionally **25 managers, 6 trainers, 51 health staff and 150 peer educators were trained** in content creation and the use of the SMS platform. **347 Traditional Medicine Practitioners (TMPs) were trained** and are now collaborating with 5 facilities. As a result, the communication gap between the clinics and the beneficiary communities, and among the beneficiaries themselves, has reduced. The use of mobile phones has also remarkably **improved the referral from Traditional Birth Attendants (TBAs) and TMPs to the clinics**.

CASE: Creation of feedback mechanisms on maternal health rights and services for the purpose of lobbying and advocacy

In Uganda, IICD assisted a local health rights NGO to use ICT for sensitisation and the creation of feedback mechanisms to improve awareness and lobbying and advocacy on maternal health rights. An **SMS campaign was designed to inform community members on available health services and their rights to receive good quality healthcare**. Registered community members could also use this SMS to provide feedback on services they received. For those who were illiterate **voice messaging** was utilised. The same text messaging platform was also used to assess client satisfaction. Furthermore, the local health rights NGO received **training in the use of digital tools to produce and disseminate user-friendly information and communication materials** to show at health facilities.

Beneficiaries: People, particularly women, living in the areas of Lyantonde, Luweero and Kamuli.
Results: 3,170 people including 800 pregnant women receive text and voice messages twice a month. 192 of these people have also participated in patient satisfaction surveys. Men and women were equally eager to send questions for feedback. The SMS platform has **reduced delays in collection and analysis of feedback data from 3 days to just-in-time**, allowing the local NGO to respond more quickly to issues affecting healthcare delivery. Mobilisation of communities for a common cause has become much easier. Sensitisation campaigns are also easier to design and more attractive thanks to the use of multimedia. Better data and easier reporting also greatly strengthened lobby and advocacy; the local health rights NGO has been invited to provide technical support in developing an automated balanced scorecard to monitor the Ministry of Health's maternal health plan.

CASE: Better home-based care services in remote areas and timely referral to health facilities

In Malawi, in the catchment areas of Chikwawa, Blantyre and Mangochi, IICD integrated different **mobile applications** (*CommCare* and a locally developed solution based on Frontline SMS) and a **Health Management Information System** as part of a maternal and child health programme. The aim is to support Community Health Workers (CHWs) to deliver home-based care to the most isolated mothers. The CHW uses the mobile application to register pregnant women, follow up on their antenatal care visits, register newborns and follow up their vaccinations in the first two years. A special feature allows them to register and manage complicated cases, if necessary receiving consultation from a professional health worker in a nearby health facility. **The mobile application is also used for referral of patients to health facilities** and reporting to the facilities' HMIS, reducing delays and increasing reliability about available care, patient data and medical records. At health facility level, the application allows decision-makers to make better high-level decisions by improving the availability of real time information logistics on health cases from remote areas.

The application also allows health facilities to send **targeted messages to improve the knowledge of CHWs**. CHWs can send messages to community members to remind about vaccinations, upcoming deliveries or antenatal visits.

Beneficiaries: Families, particularly women and infants, living in the catchment areas of the Dioceses Mangochi, Chikwawa and Blantyre.
Results: Over 100 CHWs have been trained in the use of a mobile phone and the pre-installed application. As a result, **3,400 pregnant women and infants have been registered** in the HMIS and have been provided with accurate health information by a CHW. **CHWs provide better health services monitored by health facilities and more women deliver their children in health facilities**.

Our solutions for SRHR programmes

Our experience in integrating ICTs in the health sector has proven that the following solutions can strengthen and enhance SRHR programmes:

Peer consultation platforms, clinical decision-making tools and dashboards to improve healthcare delivery

Communication possibilities are extremely important to support health workers and improve healthcare delivery in rural areas. ICT tools can help overcome challenges in the communication and alignment among health workers or between health facilities and health workers in the field.

To make health specialist expertise more readily available and accessible in remote areas, **peer consultations platforms** can be introduced for the secure exchange of images and patient information, as well as consultation on ultrasounds between health workers in rural facilities and health specialists in university hospitals. This helps to set the right diagnosis and treatment.

IICD has experience with designing and implementing solutions from scratch, customising standard solutions such as iPath, and developing service organisations and business models to financially sustain the service.

To support health workers at community level, a variety of mobile applications and SMS-based solutions are available for simple registration of patients, making decisions regarding referrals and treatments, engage with community members on health issues by showing images or videos, and sending reminders for check-ups. IICD has experience with customisation and training in *CommCare* and has developed various **FrontlineSMS-based solutions** together with local partners.

Data that is already being collected can also be used to analyse outputs of specific health workers or to investigate how work processes can be improved. For this purpose, IICD is currently developing a **dashboard** for analysis and visualisation of collected data and benchmarking. The dashboard will be of particular use in combination with mobile data collection tools to review both collected data, the performance of mobile application users as well as the workflow.

Information management systems and mobile data collection tools for strengthening health systems

The access and availability of good quality data is key to provide health services. To improve general service delivery of health service providers one can opt for introducing an electronic Hospital Management Information System (eHMIS). An eHMIS allows facilities to better manage and plan health services and lessen the administrative workload of the already scarce health staff. An eHMIS can be used for patient registration, record keeping of patient information, accounting, HR management, asset management, stock management and knowledge management. This also enhances reporting as data is collected and analysed more easily and faster. IICD has worked with different locally developed solutions, as well as with standardised solutions such as **DHIS2, Care2X and AfyaPro**. Recently IICD also developed a **mobile plug-in** for **AfyaPro** which also allows health workers visiting patients in remote areas to register, manage patient data and receive lab results of patients.

Additionally, for health surveillance purposes, mobile data collection tools available for feature phones, smartphones and tablets, allow to collect data using a simple questionnaire on specific health indicators. Many applications also work offline thus making it possible to collect data in areas where there is no connectivity. This is done by transferring such data to the central database once connectivity is available again. Some of these tools are specifically designed for collecting patient feedback on the provided health services. Applications such as **Flow** allow creating surveys and helping field workers to collect and enter data while doing the interviews. Other options are the use of SMS-based questionnaires on simple feature phones, a solution which is especially relevant in locations without good or stable Internet coverage. Data collection thus becomes simpler and less time-consuming.
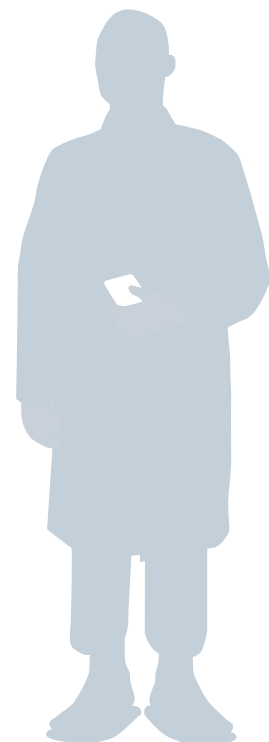
SMS-platforms, multimedia and helplines to improve community health awareness

Training in using the **Internet, multimedia and content creation** can greatly enhance the sensitisation activities of front-line health workers. This enables them to look for information to meet the needs of the community and allows them to present this information in an attractive way, using for instance audio-visual content. Through **SMS-based platforms** health providers can create their own SMS campaigns targeting and interacting with specific groups of people on topics such as HIV/AIDS. **Helplines** are also useful to make health information more accessible (and anonymously if needed), and allow health consumers to interact directly with experts about questions or concerns they may have. In places where sexual education remains a taboo, interactive platforms can provide direct and anonymous access to information about sexual health through content that resonate with the youth.

eVouchers to increase access to health services

To stimulate the demand for SRHR services, family planning for instance, vouchers can be disseminated allowing targeted people to make use of these services without costs. The process of verifying who is eligible for this service and whether the voucher that is presented was not used before is labor-intensive and costly in terms of time. An **electronic beneficiary voucher (*eVoucher*) system** with a mobile or HMIS plug-in enables health facilities and mobile health teams to quickly verify who is eligible for a specific service or not, regardless where the person demanding the service lives. This makes verification reliable, easier, faster and transparent.

Strengthening professional skills through e- and mLearning tools

ICTs can add value to enhancing skills and knowledge of both professionals and volunteers providing SRHR services by offering courses and study materials online. **E- and mLearning platforms** are particularly useful for health workers in remote areas who have to travel to follow training and take exams. Various solutions are possible: from a basic platform offering easy access to learning materials and lectures online, to environments whereby students can assess their skills, access study materials, interact with a tutor and take tests and exams to get the required certificate or license. E- and mLearning platforms are often beneficial for both students and training institutes as they save considerable time and costs compared to regular education. To further encourage professional learning, IICD also developed the **Device Leasing Initiative (DeLI)**, a revolving fund to enable device leasing which allows health workers who have limited access to a computer to purchase a tablet at an affordable cost.

About IICD

IICD is an expert foundation, with nearly 20 years of experience in using **Information and Communication Technology (ICT)** as a tool for development in health, education, agriculture and economic development.

In the health sector, IICD's primary goal is to expand the effectiveness, efficiency and equity of healthcare systems, with a special focus on women and girls, by building individual, organisational and institutional capacities to use ICTs.

In our portfolio[1] at least 65% of our programmes have managed to reach financial sustainability, meaning that the project partner has been able to sustain the ICT solution without financial support from IICD.

IICD in the health sector   ✕

9 countries
In 2014, we supported **24** ICT-based programmes and projects in the health sector.

+7.8 million
people benefitted from IICD-supported projects and programmes in the health sector, including:

+1.4 million
people received health information by text messaging, radio or TV.

+7,600
healthcare workers reached by ICT.

Mali
Senegal
Ghana
Uganda
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Zambia
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Zimbabwe

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