



## E-health to improve quality of healthcare

The Novartis Foundation for Sustainable Development (NFSD) aims at contributing to the achievement of the health-related Millennium Development Goals (MDGs). To strengthen human resources in healthcare and improve access to healthcare for patients in remote areas, the Novartis Foundation applies innovative e-health and m-health in several of its projects.

### E-learning in maternal and child health

Every year, 6.9 million children worldwide die before reaching their fifth birthday. The majority of these deaths could be prevented through a relatively small number of simple, low-cost interventions such as pre-, ante- and postnatal care, vaccinations and antibiotics. The crucial factor is the development of skilled human resources for health. To strengthen the skills of healthcare personnel working with sick children, the Novartis Foundation supported the World Health Organization (WHO) to develop an e-learning tool for the Integrated Management of Childhood Illness (IMCI).

Called ICATT (IMCI Computerized Adaptation and Training Tool), the program facilitates the management, with minimal personnel intervention, of the most common pediatric diseases such as pneumonia, diarrhea, malaria, measles and malnutrition. ICATT can be easily adapted to country-specific features such as treatment guidelines and rolled out for the training of healthcare personnel in IMCI. The tool facilitates faster and more flexible scale up of IMCI training. Training time and costs are reduced and consequently more people can be trained in the management of childhood illnesses. ICATT is currently being rolled out globally by WHO.

Apart from childhood diseases, maternal and newborn health is one of today's biggest challenges. In 2011, the Novartis Foundation and WHO decided to continue their collaboration and work with the Swiss Tropical and Public Health Institute (Swiss TPH) to develop an e-learning tool called IMPACTt (Integrated Management of Pregnancy and Childbirth training tool). The first module of IMPACTt on Essential Newborn Care has been developed and was tested in Tanzania and the Philippines. Other modules on antenatal, childbirth and postnatal care are under development.

The Novartis Foundation is also working with the Tanzanian Training Centre for International Health (TTCIH) in Ifakara, Tanzania, and the Swiss TPH to build an e-learning center of excellence at TTCIH. eLearning@ttcih aims at implementing existing tools such as ICATT and IMPACTt into the training curricula of health workers and to build capacity at the TTCIH so that the center can develop its own tailored e-learning courses in the area of maternal and child health.

### Telemedicine in Ghana

To strengthen human resources in rural areas, the Novartis Foundation, in cooperation with the Millennium Villages Project (MVP), the Ministries of Health and Communications and the District Hospital, started a telemedicine project in the Bonsaaso cluster in Ghana. The goal is to provide quality primary healthcare services that are affordable, sustainable and meet the needs of patients, specifically by overcoming geographical barriers through Information and Communication Technologies.

The project will build upon current health sector initiatives in Bonsaaso and adapt to existing mobile health platforms such as ChildCount+, a system that uses text messages to deliver vital health information of patients

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from a mobile phone to a database. As part of this process, a teleconsultation center has been established to provide structured decision-making support to health workers in clinics in rural areas. The teleconsultation center helps build the capacity of the field health staff, both in immediate procedures and in the long term. Best practices will inform the development of the project and demonstrate results to the Ministry of Health in Ghana as it looks to scale up telemedicine services across the country.

## Assessing the quality of healthcare services

By intervening on both the supply (healthcare provider) and demand side (patients), access to quality healthcare can be comprehensively improved. To improve access to quality healthcare services, the Novartis Foundation, Swiss TPH and Ifakara Health Institute are collaborating on the Initiative to Strengthen Affordability and Quality of Healthcare (ISAQH). One of the project's components looking at the quality of provider services resulted in the development of a questionnaire-based assessment tool.

E-TIQH (electronic Tool to Improve Quality of Healthcare) examines and assesses infrastructure and equipment, job expectations, motivation and clinical skills of healthcare staff, facility management and patient satisfaction. Improvements in quality of services are rewarded through a performance-based incentive system. Compared to the previous paper-based version, e-TIQH makes the quality assessment approach more manageable and efficient in terms of time, financial and human resources and eventually also scalable to the rest of the country.

## SMS technology to reduce stock-outs

Since 2000, Novartis donates multidrug therapy (MDT) to all leprosy patients worldwide through WHO. Nevertheless, access to the drug is not guaranteed and health facilities often face stock-outs due to supply chain challenges. To identify and reduce stock outs of leprosy and tuberculosis (TB) drugs at health facilities in Tanzania, the Novartis Foundation is piloting an m-health initiative based on the Novartis-led SMS for Life technology. The project uses a combination of mobile phones, SMS messages and electronic mapping technology to track stock levels of drugs in health facilities.

SMS for Life Tuberculosis and Leprosy (TL) aims at establishing solid reporting on both available and required drugs for the treatment of TB and leprosy cases. In collaboration with the Tanzanian Ministry of Health and Social Welfare, the Novartis Foundation tested an initial version of SMS for Life TL in five districts, before a more advanced version was piloted in all districts across the Mwanza region.

## For more information please visit:

[www.novartisfoundation.org/projects](http://www.novartisfoundation.org/projects)

[www.youtube.com/novartisfoundation](http://www.youtube.com/novartisfoundation)