eLEARNING IN MATERNAL AND CHILD HEALTH: THE EXAMPLE OF IMPACCtt

IMPACCtt is an eLearning tool comprising four courses on the topics of antenatal care, childbirth care, newborn care and postnatal care – for both the mother and the baby. In 2011, the Novartis Foundation for Sustainable Development and the WHO decided to continue their collaboration in order to develop this eLearning tool, which is currently being developed by the Swiss Tropical and Public Health Institute (Swiss TPH).

ACCORDING to the World Health Organization, nearly seven million children die every year before reaching their fifth birthday. A child born in a developing country is ten times more likely to die within the first five years of life than a child born in a developed country. Most common causes are respiratory infections (mostly pneumonia), diarrhea, malaria, measles, and neonatal conditions. More than 60% of all under-five child deaths could be prevented with proven, low-cost preventive care and treatment.

STARTING POINT: ELEARNING IN CHILDHOOD ILLNESS

Integrated Management of Childhood Illness (IMCI), developed by WHO and UNICEF in the 1990s, is one of the cornerstones of the drive to reach Millennium Development Goal 4. IMCI is a relatively easy question-answer approach that facilitates diagnosis and treatment for health workers by focusing on the child as a whole. To date, more than 100 countries have adopted IMCI as a strategy to improve child and infant health. The introduction of IMCI at country level, however, requires a great deal of coordination among existing health programs and services. Main challenges include the adaptation of national IMCI guidelines on a regular basis as well as training and re-training of a sufficient number of staff in IMCI.

In order to tackle these challenges, the Novartis Foundation for Sustainable Development has supported the World Health Organization since 2004 in the development of an eLearning tool called ICATT. ICATT (IMCI Computerized Adaptation and Training Tool) on the one hand facilitates the adaptation of IMCI guidelines to meet country-specific requirements and on the other hand helps scale up IMCI training. The generic ICATT version is a starting point for creating national and local IMCI training courses according to the relevant categories of health staff. The content can be adapted at ministry level through the easy-to-manage ICATT interface and languages, written text and audiovisuals can be changed and additional content integrated. The IMCI chart booklet, which contains the diagnosis and treatment algorithm, can also be adapted through the interface.

Once ICATT is adapted, the software can be “closed” and the training player can be distributed to IMCI training institutions on DVDs or USB sticks. The generic version is available to download from the ICATT training website (see further information). ICATT can be installed on individual computers, on a local school network or web-server. ICATT has been tested in Tanzania, Peru and Indonesia. These pilots have shown that ICATT can facilitate the scaling-up of training in IMCI as it requires less training time, it has also shown to have positive effects on the training outcomes and presents a more cost-effective option compared to traditional IMCI training.

To date, 12 countries have completed IMCI adaptation through ICATT. WHO is further disseminating the software at the global level. The University of Geneva in collaboration with the Novartis Foundation is currently conducting a study in Mali, Burkina Faso and Cameroon, with the aim of generating scientific evidence on the ICATT learning approach. The study compares traditional IMCI courses with ICATT-based distance-learning, looking at the training outcomes, mid-term learning effects as well as cost-effectiveness.

ELEARNING IN MATERNAL AND NEWBORN HEALTH: IMPACCtt

Apart from childhood diseases, one of the biggest challenges today is maternal and newborn mortality. According to WHO, every day approximately 800 women die from preventable causes related to pregnancy and childbirth. 99% of all maternal deaths occur in developing countries. In addition, newborn deaths account for 40% of all deaths among children under five. To tackle these challenges and increase the skilled health workforce, better training in maternal and newborn care is required.
In 2011, the Novartis Foundation for Sustainable Development and the WHO decided to continue their collaboration in order to develop an eLearning tool called IMPACtt, which is currently being developed by the Swiss Tropical and Public Health Institute (Swiss TPH). IMPAC stands for Integrated Management of Pregnancy and Childbirth; while tt stands for training tool. In support of the Safe Motherhood Initiative, the WHO Making Pregnancy Safer Strategy focuses on the health sector’s contribution to reducing maternal and newborn deaths. IMPAC is the technical component of this strategy, which addresses the improvement of skills of health workers, the improvement of the healthcare systems’ response to the needs of pregnant women and their newborns, as well as health education and health promotion activities.

IMPACtt is an eLearning tool comprising four courses on the topics of antenatal care, childbirth care, newborn care and postnatal care – for both the mother and the baby. These courses are all adapted from WHO classroom-based course materials, which are based on the WHO IMPAC package of guidelines and tools. IMPACtt is an ongoing project. To date, one out of four courses – namely the course on Essential Newborn Care – is integrated into the eLearning software. The IMPACtt Essential Newborn Care course (IMPACtt – ENC) contains five modules, subdivided into several sessions. Each session is composed of four different parts: The READ part presents theoretical content (text, graphs, and pictures) whereas the SEE part contains audiovisual material on the respective topic. The SEE part is followed by the PRACTISE part giving instructions for clinical practice to be facilitated in a clinical setting and suggesting a number of exercises to be done on the computer. Finally, each session concludes with a TEST part to assess the acquired knowledge before continuing to the next session.

IMPACtt_ENC was field-tested for the first time in February 2012 at the Tanzanian Training Centre for International Health (TTCIH) in Ifakara, Tanzania, focusing on trainees’ and lecturers’ perspectives about the practicability and usability of the tool, the identification of user difficulties and technical problems of the software.

In summary the following key points resulted from the field-testing:

- The field-testing has shown that IMPACtt – ENC is appreciated by lecturers and learners, and seen to be a very suitable tool to disseminate learning content.
- Difficulties in using the tool occurred where computer skills were lacking or very limited and/or where the English – the language in which the tool is set up – was a challenge. To overcome language barriers the tool eventually needs to be translated into other languages, as done for example in ICATT, to improve access and use. More experienced computer users had no problems in operating and navigating through the tool.
- The software, except from some minor problems related to the computer configurations, runs reliably and is stable.
Participants and facilitators equally stressed the value of audiovisual material in the tool and expressed a wish to have more such material available, particularly for three out of 14 sessions. There was also a clear wish for more exercises to be included in the practice part of eight out of 14 sessions.

The field-testing clearly showed a need to define the prerequisites and conditions required to successfully implement and apply the tool in a teaching and training environment. The result of the field-testing related to the content and functionalities of the IMPACtt – ENC are currently being changed, improved and implemented into the IMPACtt software. The need resulting from the field-testing to provide guidance on possible approaches to apply IMPACtt – ENC in a learning environment will be the purpose of a second field-testing of IMPACtt – ENC planned early 2013 in the Philippines. The focus will be on testing the applicability and experiences with implementing IMPACtt – ENC as a largely self-directed and ideally distance-learning approach.

Parallel to the conceptualization and preparation of the second field-testing, a first draft session of IMPACtt – ANC (Antenatal Care) has been developed. The material for the two remaining courses on Childbirth Care and Postnatal Care are currently being drafted by WHO and will be translated into IMPACtt once approved and available. Once IMPACtt is completed it will be made available for free by WHO.

A knowledgeable and skilled health workforce is critical for reaching universal health coverage, strengthening health systems and ultimately improving maternal and child health. In the education and training of health workers, eLearning plays an increasingly important role and tools such as ICATT – and in future also IMPACtt – can be applied to improve the quality of education and training, to increase accessiblity and to make new and innovative forms of learning available to health workers worldwide.

The UNAIDS 2012 Annual Report tells us that over the past decade (2001-2011) the annual rate of new infections has been cut by more than 50 percent in 25 low- and middle-income countries and by as much as 70 percent in some African countries. These improvements are partly the result of a ten-fold increase resources invested in ARVs, mother-child transmission, testing, male circumcision, education and condoms initiatives. In the wake of this report, Hilary Clinton, the American Secretary of State has put on the table a blueprint for “an AIDS-free Generation”. The sense of optimism is in sharp contrast to the way I recall events of the previous decade, writes CHRIS SIMMS*.

*CHRISTINA BIAGGI and MARC BLUNIER, Swiss Tropical and Public Health Institute (Swiss TPH). SABINA MATTER, Novartis Foundation for Sustainable Development. Contact: Marc Blunier (marc.blunier@unibas.ch) / Sabina Matter (sabina.matter@novartis.com).

Further Information
ICATT Training: www.icatt-training.org
Novartis Foundation for Sustainable Development: www.novartisfoundation.org
Swiss Tropical and Public Health Institute: www.swisstph.ch
WHO Department of Maternal, Newborn, Child and Adolescent Health: www.who.int/maternal_child_adolescent/en

THE CONSTANT GARDENER

The UNAIDS 2012 Annual Report tells us that over the past decade (2001-2011) the annual rate of new infections has been cut by more than 50 percent in 25 low- and middle-income countries and by as much as 70 percent in some African countries. These improvements are partly the result of a ten-fold increase resources invested in ARVs, mother-child transmission, testing, male circumcision, education and condoms initiatives. In the wake of this report, Hilary Clinton, the American Secretary of State has put on the table a blueprint for “an AIDS-free Generation”. The sense of optimism is in sharp contrast to the way I recall events of the previous decade, writes CHRIS SIMMS*.

Its December 1999, Dar es Salaam, Tanzania, days to the Millennium and this Head of Aid, whom I have known both here and Zambia is the quintessential ‘constant gardener’, diligent, self-effacing, modest – is overwhelmed. The source of his distress, like many in Africa’s health sector, is the growing realization that, as millions of Africans are dead or dying from AIDS, few serious efforts have been made to tackle the crisis; instead, most were preoccupied with the health reform agenda.

AN EPIDEMIC WITH ITS OWN MEMORY

He says, “We saw this early and then ignored it. We gave it free reign for at least 10 years and in the end, it dehumanized us”. He looks at me. “It insinuated itself in me, in you, into the donor community then swallowed us whole. We’re in it and it’s in us.”

In his bewilderment he’s taken to attaching inappropriate attributes to the epidemic; he describes it as self-directed, with a life of its own, taking orders from itself, with its own structure and function, anatomy and physiology, its own memory, a capacity for self-replication and for self-anneling and a collective ‘intelligence’ of sorts that helps guide it to where it would thrive and avoid where it would not. (Christakis/Fowler 2009) He imagines it meandering from Equatorial West Africa eastwards along the Trans-African Highway, along water and trade routes through Congo and Rwanda until reaching the Great Lakes region during the Idi Amin’s war; here it erupts, spreading swiftly into East Africa as if it found its true home – Uganda, Kenya, Tanzania and then Zambia and southwards as a scent epidemics became ‘concentrated’ and then ‘generalized’ and countries tumbled like dominos.

And he imagines the epidemic mimicking the very virus that flows inside, that is, its ability to invade and destroy the systems that are meant to protect. He imagines its tentacles reaching into communities, moving undetected past pub-