

Child health: broadband's most important challenge?

It is perhaps the saddest statistic of all: a child born in a developing country is around thirteen times more likely to die before the age of five than one born in an industrialized country. Bringing child mortality down by two-thirds from 1990 to 2015 is the focus of the UN's fourth Millennium Development Goal.

It is a welcome sign that, according to current UN estimates of the MDG-4, some 10,000 fewer children now die each day than in 1990. But, despite improvements, MDG-4 is a goal some now fear may not be met by the deadline if we stick to traditional approaches. One in four children under five in the developing world still suffers from malnutrition, whilst just four diseases account for 43% of all child deaths. Frustratingly, most of the major causes of child mortality – malnutrition, pneumonia, malaria, diarrhea, measles, HIV/AIDS, tetanus – remain treatable, but communities, say researchers, lack both resources and knowledge to treat them. Trained health professionals are in short supply too. The World Health Organization (WHO) estimates a worldwide shortage of almost 4.3 million medical professionals, at its most severe in sub-Saharan Africa.

Healthcare is one area where broadband can really make a difference, according to ITU Secretary-General, Dr. Hamadoun Touré. “We know that we will never have enough health practitioners to access all the people who need it, so having access to technology and e health will enable tremendous opportunities,” he says.

Advances in modern medical technology usually require large amounts of money, but telemedicine can make a huge impact with relatively simple low cost technology. Just one computer, a scanner and a digital camera can transform a hospital, making a real difference where it counts. But to really leverage the true power of telemedicine, Touré says the biggest need is broadband, which would allow doctors to share images and diagnose patients hundreds of miles away using video-conferencing.

Countries in East and Central Africa, such as Kenya and Rwanda, are already beginning to prioritize broadband as a platform for future health service delivery. It is hoped that the nascent

roll-out of broadband in the region will lead to further improvements in patient care, dissolving distances and bringing telemedicine to tens of millions of people.

“This is why broadband has become so important,” says Dr Touré. “We need to ensure that connectivity is giving people the right opportunity to access information, create information, use information and share information to meet the Millennium Development Goals.”

“Telecommunications can play a major role in delivering various healthcare services to people. We see a tremendous number of innovations happening that are making healthcare more affordable and accessible to people,” affirms Kazi Islam, CEO of Grameenphone IT, and a Broadband Commission Focal Point. “Mobile technology can also be used to train intermediary healthcare workers and rural doctors – essential to reduce the strain on the healthcare ecosystem in many developing countries.”

That said, ITU notes that, in many cases, lack of infrastructure remains a key challenge for both m-health and telemedicine solutions. Wireless will clearly be key, since mobile is the sole connectivity platform for 90% or more of the population in many developing countries. Broadband deployments here need to focus on two things: high-speed wireless technologies like 3G, and the deployment of as much fibre as possible to support the vast backhaul capacity that’s needed by telemedicine applications now, and in the future.

Some early ICT-based pilot projects also look encouraging. A joint UN Foundation/Vodafone Foundation report last year discovered, for example, 51 m-health applications in 26 developing countries, many with direct relevance to child health. A wide range of applications were identified including education and awareness, remote data collection, remote monitoring, communication and training for health workers, disease and epidemic outbreak tracking, and diagnostic and treatment support. Moreover, the range of applications showed the possibilities for many different and potentially valuable kinds of intervention in the healthcare value chain.

Collecting data and disease incidence may have a major impact. In Tanzania, for example, the Mashavu project developed by Penn State University used mobile phones to collect data regarding child blood pressure, height, weight and other statistics for aggregation on a website portal that medical practitioners could easily monitor. In India, another mobile project monitored outbreaks of Japanese Encephalitis, a mosquito-borne disease potentially fatal for children. And the Child Count pilot in Kenya involving Columbia University’s Earth Institute, the Millennium

Villages Project, SonyEricsson and Zain, monitored malnutrition in nearly 100,000 children via 25,000 text messages from Community Health Workers.