



## QUALCOMM® WIRELESS REACH™ HEALTH CARE IN AFRICA

Qualcomm believes access to advanced wireless technologies can improve people's lives. Wireless Reach is a strategic initiative that brings wireless technology to underserved communities globally. Wireless Reach invests in projects that foster entrepreneurship, aid in public safety, enhance the delivery of health care, enrich teaching and learning and improve environmental sustainability.

Formalized in 2006, Wireless Reach has grown to include over 100 projects in 40 countries. Wireless Reach collaborates with non-governmental organizations, universities, government institutions, nonprofits, development agencies and other private sector companies to develop projects which demonstrate innovative uses of Qualcomm technology for social and economic development.



## WIRELESS REACH HEALTH CARE PROJECTS IN AFRICA

### **STRENGTHENING THE ARV PHARMACEUTICAL MANAGEMENT SYSTEMS (KENYA)**

HIV/AIDS is a major concern of Kenya's Ministry of Health; offering Antiretroviral Treatment (ART) is a key component of the government's strategy in reducing HIV/AIDS-related morbidity and mortality. Historically, ineffective pharmaceutical and patient records management compromised the delivery of ART for HIV/AIDS patients. Wireless Reach, RTI International, and the Nairobi Provincial Medical Office, part of the Ministry of Medical Services, along with other stakeholders, implemented a program aimed at reducing the administrative burden on health care workers and improving patient care by strengthening pharmaceutical management systems using advanced wireless technology.

### **MOBILE ULTRASOUND PATROL: EARLY DETECTION OF AT-RISK PREGNANCIES THROUGH THE USE OF 3G TECHNOLOGY (MOROCCO)**

Every day, around the world, approximately 800 women die from preventable causes related to pregnancy and childbirth.<sup>1</sup> Of those deaths, 40 percent are due to injuries or conditions related to placenta complications. The only way of detecting abnormal placenta challenges is through an ultrasound. The Mobile Ultrasound Patrol is a program that seeks to improve care for women in developing countries through early detection and treatment of major causes of maternal mortality. The medical examinations took place in three villages in Morocco

— Oulmes, Boulemane and Ribat el Kheir — with reading physicians providing diagnoses in city centers in Morocco and France. Throughout the program, a total of 575 exams including 3,108 images were wirelessly transmitted through 3G technology, with clinicians giving the ultrasounds a 98 percent perfect clarity rating. The use of advanced wireless technology led to: shortened diagnostic review or second opinion time from two weeks to fewer than 24 hours; reduced cost of a medical diagnosis from \$80 to \$2 per patient; shortened transportation time of the medical data for review from four days to two seconds; and increased medical practitioners' (midwives, nurses and general practitioners) skills to deliver ultrasounds from 20 percent sufficient for diagnostic purposes to 92 percent sufficient for diagnostic purposes. Due to the success of the pilot, the regional health ministry in the first region of Souss Massa Drâa, Morocco has committed to installing devices and this program in an additional 10 health houses.

### **CLINIPAK360 MOBILE HEALTH APPLICATION (NIGERIA)**

Nigeria suffers extremely high maternal mortality rates at approximately 630 maternal deaths per 100,000 live births; in some Midwife Service Centers the number may be even higher at 1,000 deaths for every 100,000 live births. CliniPAK360, a collaboration between Wireless Reach, Etisalat Nigeria, InStrat Global Health Solutions, the Nigerian National Primary Health Care Development Agency, and Vecna Cares Charitable Trust provides midwives and frontline health care providers with 3G-enabled mobile devices to capture, analyze, and diagnose clinical conditions that lead to maternal and/or infant mortality, and continues to aim to dramatically decrease the number of deaths in these groups.

### **MOBILE HEALTH INFORMATION SYSTEM (SOUTH AFRICA)**

Access to relevant health literature at the point of care can be a challenge, particularly in rural and remote health facilities. Suitably designed systems and mobile broadband technologies can help address this access-to-information challenge effectively. Wireless Reach teamed up with South Africa's Eastern Cape Department of Health, FHI 360, MTN South Africa, Nelson Mandela Metropolitan University, and South African Partners to provide nurses, doctors, and nursing students in several health facilities in the Eastern Cape Province with 3G wireless technology to access information on a Mobile Health Information System, thereby providing better care to their patients. With the help of the Mobile Health Information System — Internet-capable, commercially available smartphones and tablets pre-loaded with a locally relevant, reliable clinical library — nurses and doctors in rural communities are now able to access much needed information at the point of care.

<sup>1</sup>World Health Organization, CIA World Factbook 2013 and ITU report 2011 Facts and Figures, <http://www.who.int/mediacentre/factsheets/fs348/en/>