# Mobile Health Services in Africa: A New Cooperation Opportunity for Korea

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Rwanda, the landlocked country in East Africa well-known for its tragic history, is now being mentioned as a huge success example of basic-level mobile health services for pregnant women and their children, called RapidSMS, introduced by UNICEF to the Ministry of Health of Rwanda in 2009. The service enables community healthcare workers who support maternity health in local areas throughout Rwanda to use a simple SMS (short message service) to collect pregnant women's medical records for all healthcare workers to share, and to receive reminders for when expectant women are due for check-ups. The very simple m-health (mobile health) project tracks changes during the 1,000 days from a child's conception and up to two years of age, the most critical time for maternal and child health. It has contributed to the reduction of maternal mortality from 750 per 100,000 live births in 2005 by one third of this in 2014-2015, according to the Rwanda Demographic and Health Survey. This is just one case how mobile technology is changing the healthcare environment in Africa.

When it comes to m-health or e-health in the most developed countries, one may think of telemedicine or smart watch applications used for health

and fitness. The concept, however, is one much broader that covers any use of information and communication technology (ICT) for health, defined by WHO. Mobile health applications include client education and behavior change communication (BCC), sensors and point-of care diagnostics, registries/vital events tracking, data collection and reporting, electronic health records, electronic decision support, provider-to-provider communication, provider work planning and scheduling, provider training and education, human resource management, supply chain management, and financial transactions and incentives (the 12 common m-health and ICT applications reported in Labrique et al. 2013).

The rapid growth of mobile access in Africa has enabled the application of technical convergence between IT and BT in Africa. m-health has the potential to improve healthcare in Africa to overcome limited physical, human, and financial resources for health services and access barriers to health services. Various technologies from very simple SMS to state-of-the-art lab-on-a-chip (LOC) diagnostics are widely adapted in the different levels of healthcare points across Africa. One of the most promising points of m-health for developing countries is not just that m-health technology provides better services for patients and health professionals in remote locations, but the technology of recording, storing, and analyzing real-time data makes up-to-date information available not only for healthcare providers but also for health policy makers and researchers. It allows policy makers to decide on policies based on evidence and to redistribute limited healthcare resources to the right place at the right time, so people faced with barriers to access healthcare delivery due to physical, social, cultural, and financial obstacles can reach the services.

Many African countries are actively incorporating m-health applications in their healthcare strategies and policies. Kenya, which already drew up a national e-health strategy in 2011 and is implementing this strategy in its health policies, is not the only country in Africa to harness the technology in a national development plan following WHO's e-health guidelines and strategies for public health. Some governments are even considering m-health as a stepping stone for economic development through ICT. Several incubators for m-health startups and government-led m-health platforms have been launched through cooperation between recipient governments, industries, universities, and development donors. Local players can participate in supply-chains so that m-health projects will be sustainable and proliferative even after development cooperation support ends.

These m-health initiatives in Africa are also a great opportunity for Korea. Although it will be some time before an m-health "market" is established in Africa, ODA (official development

assistance) for m-health projects in Africa will be mutually beneficial to African partner countries as well as Korea as a donor. First, Korea can assist partner countries to improve their healthcare infrastructure and environment with its excellent level of knowledge and technology. Korea was a recipient of international assistance for 45 years after its independence before eventually transforming into a major international donor, but still its ODA scope and budget are limited compared to the aid programs of other major international donors. As it will be necessary to focus on priority countries and areas when considering Korea's limited ODA resources, m-health cooperation is the best area for Korea, where Korea can do better than other donors to cooperate with partners that need technology, experience, and plans for development.

In addition, m-health cooperation projects will foster Korea's m-health technology ecosystem. Korea possesses world-class ICT products and has developed outstanding m-health technology, such as hospital information systems, electronic medical record management platforms, smart quarantine systems, and mobile-based diagnostic devices. On the other hand, domestic m-health related markets are still premature because insufficient social acceptance of the technology has hindered the establishment of related laws and institutions in Korea. It is very hard to create markets in the m-health industry because most companies in the industry are small- to medium-sized start-ups. International cooperation projects in the m-health sector will provide chances for these start-ups to upgrade their technology and products, and serve as future references for them during government procurement processes. Korea's m-health ODA cooperation with African countries will also provide Korea with strategic cooperation opportunities with partner countries that place their economic development priority on the ICT industry. For Korea, it will be worthwhile to pay close attention to the multiplicative potentials forming in the m-health sector for Africa. **KIEP**