



Using ICTs and Mobile Devices to Accelerate Progress for Women's and Children's Health

RATIONALE

6.9 million children under the age of five and nearly 287,000 mothers die every year from preventable causes. While significant efforts have been made to save the life of women and children, further progress is still needed to meet targets under Millennium Development Goals (MDGs) 4 & 5 and the Every Woman Every Child movement. Information and Communication Technologies (ICTs) & mobile devices can be critical enablers as they can facilitate the measurement of performance and progress, improving inclusiveness and transparency, connecting information systems for reporting and research, and the delivery of healthcare and advice even to remote locations.

GLOBAL AND NATIONAL INITIATIVES FOR WOMEN'S AND CHILDREN'S HEALTH EMPHASIZE ICTS & MOBILE DEVICES

UN Commission on Life Saving Commodities for Women and Children ¹	Recommendation 6: build on ICT best practices for making improvements in supply of life-saving commodities.
Commission on Information and Accountability for Women's and Children's Health ²	Recommendation 3: helping countries integrate the use of ICTs in their national health information systems (HIS).
Independent Expert Review Group (iERG) ³	Recommendation 4: accelerate the uptake and evaluation of eHealth and mHealth technologies.
Saving One Million Lives (Nigeria) ⁴	Innovation & technology is a cross cutting theme across the six components of the program.

The rapid uptake and coverage of mobile devices and ICT in low-income countries is an indication of their potential. For example, in developing countries, the number of internet users doubled between 2007 and 2011, and developing countries accounted for more than 80% of the 660 million new mobile-cellular subscriptions in 2011.⁵

GETTING STARTED

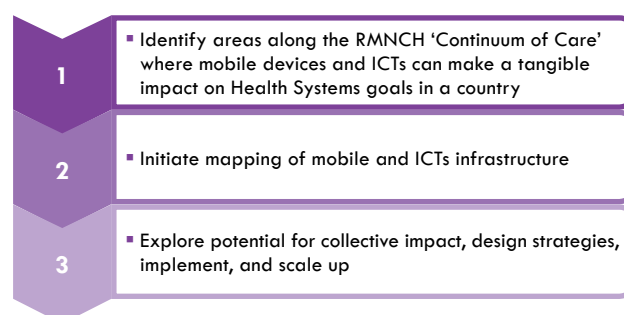
This summary is based on research carried out by several stakeholders in the domain of ICTs and mobile devices. The World Health Organization (WHO), mHealth Alliance, GSMA, and other stakeholders are aligning their work to identify focus areas where ICTs and mobile devices can make an impact.

- The WHO framework combines the concepts of Reproductive, Maternal, Newborn and Child Health (RMNCH) continuum, Health Systems functions, needs and goals, and ICT & mHealth functions and strategies. The Partnership for Maternal, Newborn and Child Health (PMNCH), in particular, strives to bring consensus on a framework for health and ICT.
- The mHealth Alliance strategic framework sets forth the 'Why', 'Where', 'What', 'How' and the 'When' to best use mHealth to improve RMNCH.
- The GSMA framework identifies intervention opportunities

for mobile devices along the service areas of demand generation, registration, health workers, supply chains, and adherence and monitoring.

There is general agreement among different stakeholders that there is value in coming to a consensus on a shared ICT and mHealth framework to help align approaches and support collective action in countries.

Leveraging ICTs and Mobile Devices in RMNCH



The next step is to assess whether the available ICT infrastructure can support technology enabled RMNCH interventions. The International Telecommunications Union (ITU) is a rich source of data on ICT indicators. To inform decision-makers, GSMA is developing national repositories of information on mHealth and eHealth services already launched, evidence available to support these services, and the maturity/readiness of the industry to integrate these services. Finally, stakeholders must coordinate efforts to avoid duplication and fragmentation, and create an ecosystem that encourages scale up from the beginning.⁶

APPROACH

The potential of ICTs and mobile devices is maximized when they are integrated into a larger health program rather than standalone interventions. Viewed from a Health Systems lens, this implies considering aspects of: 1) Service Delivery, 2) Policy and Leadership, 3) ICT ecosystem, 4) Resources, and 5) Delivery Models.

1. SERVICE DELIVERY:

- Individual and communities should have access to high quality, affordable care. They must also be well informed to demand appropriate care.
- ICTs and mobile devices can be effective in improving access and fill information gaps in care seeking. In RMNCH, the quality of patient care and emergency support systems could be significantly improved.

2. POLICY AND LEADERSHIP

- Strong national leadership is required to align policies across sectors that have an impact on use of technology in health – finance, technology, security, etc.

- Global coordination is necessary for cross-country learning and benchmarking of progress.

3. ICT ECOSYSTEM:

- The health information infrastructure includes a number of subsystems, such as electronic patient records, automated alerts, health education modules and mapping.
- These systems must be built on a reliable ICT infrastructure, i.e. electricity, cellular towers, availability of cheap devices, etc.
- Availability of personnel with ICT skills (inside and outside Health sector) is also critical.

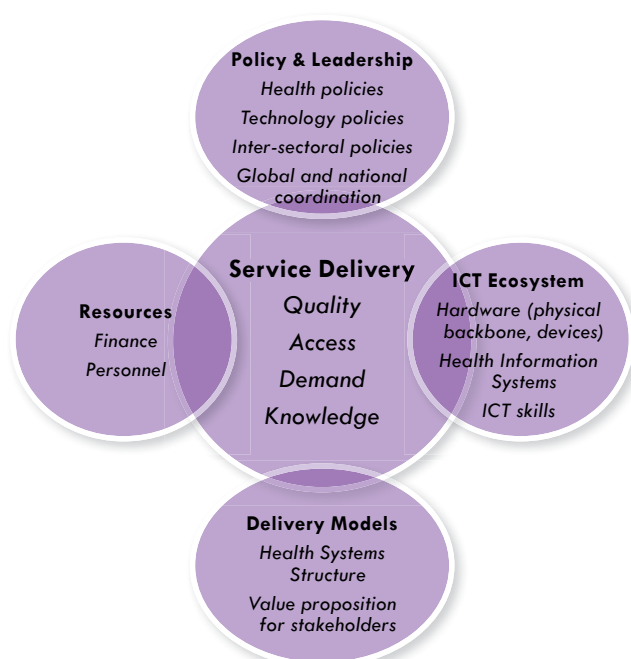
4. RESOURCES:

- ICTs and mobile devices can be used as 'force multipliers' in low resource settings to guide less trained health workers. Examples include phone-based protocols to improve adherence rates. Technology can also be used to enhance effective use of human resources, such as in monitoring and supervision of health personnel.
- HIS can also be leveraged to show the need for more resources (resource tracking) and improve efficiency of existing physical resources (inventory management in facilities, logistics, cold-chain management, etc). Evaluation of programs can also be strengthened.

5. DELIVERY MODELS:

- Clear value propositions need to be established for consumers, health personnel, and suppliers.
- ICTs and mobile devices must empower consumers in seeking better quality care. They must also enhance health personnel's satisfaction (both financial and social), and result in higher returns on investment for suppliers.

ICTs and mobile devices for Health Systems



CASE STUDIES

FOCUS AREA	EXAMPLE
Service Delivery	Interactive Research and Development (IRD), Pakistan's Interactive Alerts application utilizes SMS reminders to patients.
Policy and Leadership	The International Telecommunications Union works closely with regional and international organizations to develop international ICT standards.
ICT Ecosystem	Grameen Mobile Technology for Community Health Worker Initiative (MOTEC), in partnership with the Ghana Health Service, is supporting Community Health Nurses with the aid of electronic records systems to reinforce timely delivery of care.
Resources	Rwanda's Ministry of Health is training community health workers to use mHealth applications to monitor and promote maternal and neonatal health.
Delivery Models	Novartis's SMS for Life initiative tracks stock levels of anti-malarial medicines in remote health facilities in Africa to reduce stock-outs.

Source: United Nations Innovation Working Group.

RESOURCES

- Health Information Systems:** Health Metrics Network. <http://www.who.int/healthmetrics/en/>
- MNCH priorities:** Countdown to 2015. <http://www.countdown2015mnch.org/>
- Standards and Interoperability:** Joint ITU-WHO Workshop on e-Health Standards and Interoperability. <http://www.itu.int/ITU-T/worksem/>
- mHealth Ecosystem:** mHealth Alliance. <http://www.mhealthalliance.org/our-work/hub>
- Innovations in mHealth:**
 - United Nations Innovation Working Group (IWG)'s catalytic grant competition for women's and children's health. <http://www.mhealthalliance.org/our-work/iwg-grantees>
 - Center for Health Market Innovations. <http://healthmarketinnovations.org/>
- National eHealth Strategies:** WHO. <http://www.who.int/ehealth/en/>
- ICTs and Accountability:** United Nations. <http://www.everywomaneverychild.org/resources/accountability-commission/implementing-recommendations>
- ICT Statistics & Research:**
 - ITU. <http://www.itu.int/ITU-D/ict/index.html>
 - World Bank. <http://go.worldbank.org/CAJTL0L1CO>
- The power of Technology for Training:** <http://www.who.int/workforcealliance/media/news/2012/iheedreport2012.pdf>
- Research on mHealth for RMNCH:** WHO RHR mTAG, and HRP Innovations Catalyst. <http://who.int/reproductivehealth/topics/innovations>
- Innovating for Every Woman Every Child, 2011:** http://www.who.int/pmnch/activities/jointactionplan/iwg_brochure_lowres.pdf

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