DIGITAL COMMUNICATION AND MHEALTH IN DEVELOPING NATIONS

Patient empowerment and education is a key benefit of digital communication technology. This was the main message of a speech I recently delivered at the United Nations 58th Commission on the Status of Women Symposium. The session was sponsored by the Global Alliance for Women's Health and entitled: "How Digital Communication Impacts Health Care in Developing Nations."

The [Global Alliance for Women's Health](#) is an organization formed in 1994 to advance women's health in all stages of life and at all policy levels, through advocacy, education and program implementation. They engage in collaborations with government and non-government agencies (NGOs), the private sector, academics and individual citizens, all of whom were represented at this session.

With approximately 98 % of the world's population now in possession of cellphones, an m-Health (mobile health) infrastructure is in place that can provide access to healthcare and health-related information, particularly for hard-to-reach populations where solar powered charging stations enable the cellphones, tablet computers and PDAs to work.

Among the benefits from this network of mobile health devices are: improved ability to diagnose and track diseases; timelier, more actionable public health information; and expanded access to ongoing medical education and training for health workers.

These m-Health applications include collecting community and clinical health data by local health workers, and delivery of that data to practitioners, researchers, and patients in real-time; monitoring of patients' vital signs; and educating patients in basic health practices. SMS or Short Message Service campaigns translated into multiple languages and dialects, send reminders to patients via text messages to urge them to get a check-up or to pay attention to nutrition guidelines. Communication and connections happen irrespective of time and place, and information is available to health workers at the point of care and for continuity of care.

Although not a panacea, the technology helps address some of the overwhelming medical issues prevalent throughout the developing world, including: malaria, diabetes, maternal mortality, HIV, Typhoid fever, Hepatitis, food, water and airborne bacterial and viral infections, and severe malnutrition and anemia which become an underlying cause of many of these illnesses, and result in infant, child and maternal mortality.

There are many new technologies and apps that are on smartphones, tablets and other wireless technologies that do not require electrical power and will have widespread benefit in developing nations, including:

- Wearable Devices that have built-in sensors to monitor heart rate, pulse, blood pressure and blood sugar, weight; wireless
- Robots that are used for diagnostic purposes as well as remote assistance with complicated surgery;
- Telemedicine that connects local health workers with trauma centers throughout the world;
- Personalized medicine and as yet undiscovered devices and applications can bring about amazing results.

To succeed, however, there must be a strong commitment from the national ministries of health, and collaborations with sponsors and private foundations who must continue to build and expand the mHealth infrastructure and telemedicine networks that have the potential to change the world.

[UN presentation.4](#) *How Digital Communication Improves Health Outcomes in Developing Nations*