From the Director

eHealth: Harnessing technology on the road towards universal health coverage

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There are numerous data sources that offer information on the health of a community. Traditional sources, such as hospitals and clinics, provide relatively reliable inputs to existing health-monitoring systems, but often give a delayed or incomplete picture. Additional data sources, such as school and work attendance, veterinary clinics, social media, pharmaceutical sales, and climate-related data do not capture as much information on their own. However, with new technologies, multiple traditional and nontraditional sources can be combined, thus providing a more rapid, reliable, and actionable picture of the community's health than is possible with clinical data alone.

The proliferation of information and communication technologies (ICTs) in our daily lives makes these sources a strategic ally for public health, whether to help solve or prevent health problems, or to improve access to health systems and services. Internet and mobile cell phone usage alone provides an inexhaustible amount of data on an individual's social and health-related behaviors, including Internet search types and keywords, information shared through social media (e.g., statuses and tweets), medicine purchased and location where dispensed, restaurants frequented, and school or work absences due to illness, in addition to many daily activities. If used correctly and ethically, data garnered from new technologies can be used to issue early warnings and health care alerts, enabling the public health sector to, for example, detect outbreaks early and monitor cases more accurately, swiftly identify foodborne illnesses, and facilitate immediate response to emergency and disaster situations by locating affected individuals more quickly than ever before.

The vision of providing universal health coverage in the Region of the Americas means moving towards broader and better health services and ensuring that the entire population has access to affordable services. eHealth—the use of ICT to support health—can play a major role. Wisely used and widely applied, eHealth can be a strategic tool for improving access, expanding coverage, and increasing the financial efficiency of health care systems. ICTs are already revolutionizing access to quality comprehensive care, bridging many difficulties and enabling primary care to resolve more health issues. ICTs link the integrated networks of care, permitting faster, easier referrals to specialists and secondary levels of care. Numerous other uses relate to health information records and systems, training and capacity building for frontline health workers, and even, accountability mechanisms.

In 2011, when the Directing Council of the Pan American Health Organization (PAHO) adopted Resolution CD51.R5 on eHealth (1), it urged the PAHO Secretariat and its Member States to respond to public health challenges in the Region by creating an environment that enables the use of innovative ICT tools and methodologies. Specifically, Resolution CD51.R5 called on Member States to "promote internal dialogue within and coordination between ministries and other public sector institutions and encourage the forging of partnerships between government, the private sector, and civil society as a means of building national consensus and facilitating the sharing of experience on cost-effective models" (1). Additionally, the UN Commision on Information and Accountability for Women's and Children's Health advocates for the integration of ICTs in national health information systems and health infrastructures by 2015 (2).

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In the years since the Resolution was adopted, it has become apparent that one of the main obstacles to implementing eHealth is a lack of professionals with the appropriate skills and experience to develop and execute eHealth projects (3). Another obstacle has been the deficiencies in the technology infrastructure. Furthermore, Member States have pointed out that political commitment, which is difficult to secure, is imperative to mobilizing the legal, financial, human, and infrastructure resources critical for adopting and implementing eHealth services.

PAHO is helping countries of the Region overcome these barriers through its eHealth program, but more action is needed. Standards for quality, safety, interoperability, and ethics also need to be ensured, as the resolution states, while respecting the principles of confidentiality, equity, and equality. Political commitment is pivotal for mobilizing the resources needed to adopt and implement eHealth services. PAHO assists countries in developing eHealth plans and initiatives together with all sectors of government, and in partnership with the private and public sectors. Among the initiatives that PAHO supports are those related to digital literacy and the creation of networks for knowledge exchange and for identifying eHealth experts. An example of such a project, "eHealth Conversations," is formed by a virtual community of 400 people. Another, the initiative "Be He@lthy, Be Mobile," promotes the use of mobile technology, in particular text messaging and Apps, to help PAHO Member States combat the growing burden of noncommunicable diseases (4).

In addition, the Organization is a strategic ally to eHealth networks in the Americas, such as the Red Universitaria de Telemedicina (RUTE) and the Red de Telesalud en las Américas Prof. Marcelo Petrich. PAHO is working with these networks aiming to evaluate their national telehealth programs and to revolutionize public health practice in the Americas through the implementation of web-based tools for community health monitoring. Monitoring at this level enables the automated mining of large quantities of web content (Big Data) generated by social behaviors (data, texts, tweets, posts, audio, video, etc.), both structured and unstructured.

To advance the compatibility of data and interoperability among health systems, PAHO is participating in and promoting the World Health Organization's Forum on eHealth Standardization and Interoperability. The Forum's objective is to facilitate dialogue among health data standards development organizations, standards maintenance organizations, academic institutions, subject matter experts, and Member States in order to develop a policy framework for full implementation of health data standards for interoperability of eHealth systems within and among countries (5).

Undoubtedly, another important initiative is the publication of this special issue of the *Pan American Journal of Public Health*. This special issue on eHealth aims to show the progress that the Region of the Americas has made to date in this area. More broadly, it details how ICT interventions can connect through health data interoperability among different information systems, facilitate access to services, and address diseases, e.g., cancer, obesity, diabetes, depression, and lupus among others, as well as show the important role that governments play in this change process. Some countries, including Bahamas, Chile, Costa Rica, the Dominican Republic, Guatemala, Haiti, and Trinidad and Tobago, are developing national eHealth strategies and projects that harness ICT-based interventions to achieve their country's health objectives in an orderly, effective, and sustainable manner. PAHO has provided technical collaboration to these and other countries, and will continue to promote the use of eHealth as an important tool on the road to universal health coverage. In a context of multi-actor projects, PAHO especially values the interest and support that Health Canada and the Spanish Agency for International Development Cooperation have provided to produce this special issue.

Our aim at PAHO is to ensure that all people have access to the health care they need, when and where they need it; and that people and health workers have access to the right knowledge at the right time in the right format. Our plan, to extend universal health coverage and equitable health services access, will require partnerships that make use of the best ideas, share the most relevant knowledge, and adopt evidence-based and informed eHealth approaches and interventions.

Our hope is that this special issue will represent a momentous step towards both the aim and the plan.

REFERENCES

1. Pan American Health Organization. Strategy and Plan of Action on eHealth, 2012-2017. Proceedings of the 51st Directing Council of PAHO, 63rd Session of the Regional Committee of the WHO for the Americas, 26-30 September 2011. Washington, DC: PAHO; 2011. (Document CD51/13).
2. World Health Organization. Final report of the Commission on Information and Accountability for Women's and Children's Health. Keeping promises, measuring results. Available from: www.everywomaneverychild.org/images/content/files/accountability_commission/final_report/Final_EN_Web.pdf Accessed on 23 July 2014.
3. World Health Organization, International Telecommunication Union. eHealth and innovation in women's and children's health: a baseline review based on the findings of the 2013 survey of CoIA countries by the WHO Global Observatory for eHealth, March 2014. Available from: www.who.int/goe/publications/baseline_fullreport/en/ Accessed on 20 June 2014.
4. International Telecommunication Union/World Health Organization. mHealth for Noncommunicable Diseases (NCDs) Initiative. Available from: www.itu.int/en/ITU-D/ICT-Applications/eHEALTH/Pages/Be Healthy.aspx Accessed on 4 August 2014.
5. World Health Organization. WHO Forum on Health Data Standardization and Interoperability. 3-4 December 2012, Geneva, Switzerland. Available from: www.who.int/entity/ehealth/WHO_Forum_on_HDSI_Report.pdf?ua=1 Accessed on 23 July 2014.