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**UTILIZING eHEALTH SOLUTIONS TO IMPROVE NATIONAL HEALTH SYSTEMS
IN THE AFRICAN REGION**

CONTENTS

Paragraphs

BACKGROUND

1.   The World Health Organization defines eHealth as the cost-effective and secure use of information and communication technologies (ICTs) for health and health-related purposes.[1] There are seven components of eHealth, namely: leadership and governance; strategy and investment; legislation, policy and compliance; human resources; standards and interoperability; infrastructure; and solutions or applications and services. All of these components were broadly addressed and discussed at the Sixtieth session of the WHO Regional Committee for Africa (Document AFR/RC60/5). The focus of this report is on the last eHealth component: eHealth solutions.

2.   The use of eHealth solutions can contribute to health systems strengthening in several ways by: enhancing health service delivery; developing the health workforce and improving performance by eliminating distance and time barriers through telemedicine and eLearning; improving the availability, quality and use of information and evidence through strengthened health information systems including public health surveillance; improving access to existing global and local health information and knowledge; and fostering positive lifestyle changes to prevent and control common diseases through strengthened public health education and communication.

3.   There are several examples of eHealth solutions that are being used in the African Region including national health observatories (NHOs) as web-based platforms; enterprise resource planning (ERP) for better management; and telemedicine and mobile health (mHealth). Other examples include electronic medical records (EMRs), electronic referrals and prescriptions; and distance learning and electronic resources.[2]

4.   Considering the potential of eHealth, the World Health Assembly called on Member States to improve the use of ICT for health-care delivery (Resolution WHA58.28). The Ouagadougou and Algiers declarations[3] of 2008 also addressed the importance of eHealth in health systems strengthening. Previous Regional Committee resolutions[4] called on Member States to adopt and implement eHealth strategic plans to improve their health systems. The UN Commission on Information and Accountability for Women's and Children's Health that was established in 2010 by the United Nations Secretary-General made ten recommendations. The Commission's third recommendation included the target: "By 2015, all countries would have integrated the use of information and communication technologies in their national health information systems and health infrastructure".[5]

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[1]   Resolution WHA.58.28, eHealth. In: Fifty-eighth World Health Assembly, Geneva, World Health Organization, May 2005.

[2]   WHO/ITU. National eHealth strategy toolkit. Geneva, World Health Organization, International Telecommunication Union, 2012.

[3]   The Ouagadougou Declaration on Primary Health Care and health systems in Africa: achieving better health for Africa in the new millennium; http://www.afro.who.int/declarations/DeclarationOuagadougou-en.pdf. The Algiers Declaration http://www.afro.who.int/declarations/algiers_declaration_en.pdf.

[4]   Resolution AFR/RC56/R8, Knowledge management in the WHO African Region: strategic directions. In: *Fifty-sixth session of the WHO Regional Committee for Africa, Addis Ababa, Ethiopia, 28 August-1 September 2006, Final report,* Brazzaville, World Health Organization, Regional Office for Africa, 2006 (AFR/RC56/24), pp. 22−24. Resolution AFR/RC60/R3, eHealth solutions in the African Region: current context and perspectives. In: *Sixtieth session of the WHO Regional Committee for Africa, Malabo, Equatorial Guinea, 30 August–3 September 2010. Final report,* Brazzaville, World Health Organization, Regional Office for Africa, 2006 (AFR/RC56/21), pp. 12−15.

[5]   CoIA. Keeping promises, measuring results. Geneva, WHO, Commission on Information and Accountability for Women's and Children's Health2011. ISBN 978 92 4 156432 8, http://www.everywomaneverychild.org/images/content/files/accountability_commission/final_report/Final_EN_Web.pdf .

5.   At present, ICTs in Africa include a wide range of technologies and devices (computers, telephones, televisions, media players, etc) that enable services such as mobile telephony, text messaging, teleconferencing, electronic mail and videoconferencing.[6] A number of initiatives have been launched in countries by the public and private sectors to harness the benefits of these devices. Countries have started implementing the above resolutions and commitments with variable success. In 2009, only seven (15%)[7] of the 46 countries in the African Region had developed eHealth national strategies and policies.

6.   WHO established the African Health Observatory in 2010 and supports countries to create NHOs to improve their national health information systems (NHISs). Three countries (Cape Verde, Congo and Sierra Leone) have established their own NHOs and several others are in the process of doing so. A national health observatory is a web-based platform that serves to strengthen the NHIS; the NHO has three core functions: i) storage and sharing of data and statistics for visualization, elaboration, utilization and download if needed; ii) production and sharing of evidence and knowledge through analysis and synthesis of information; and iii) support of networks and communities of practice for better learning and innovation.

7.   This document highlights the issues and challenges related to the utilization of eHealth solutions and proposes actions that could enable countries to use eHealth solutions more effectively and efficiently to improve national health systems.

ISSUES AND CHALLENGES

8.   Several projects and initiatives have started throughout the Region. Numerous examples exist in Algeria, Kenya, Mali, Mozambique, Rwanda, South Africa and Zambia; however, because of inadequate documentation and evaluation, the overall success of these eHealth projects and initiatives is uncertain. One example is: *Reseau en Afrique Francophone pour la Telemedecine* (RAFT) initiated in 2000 as an African French language telemedicine network. It includes 17 Francophone and five Anglophone countries.[8]

9.   The issues related to the utilization of eHealth solutions include inadequate connectivity, availability, accessibility; reluctance to use ICT (more specifically in the health sector); and absence of a conducive policy environment at the national level.

10.   The latest estimate of coverage for Internet use in the African Region is 16 per 100 inhabitants,[9] with lower rates in rural areas as compared to cities. Very few countries have fibre-optic or satellite broadband connections. The quality of connection is not adequate; slow connectivity may actually discourage use and may even be a risk to patient safety (e.g. in telemedicine). Currently, the coverage for mobile phone use is estimated at 63 per 100 inhabitants, again with more limited coverage in rural areas.[10]

11.   Availability of eHealth solutions is still an issue, although there has been marked improvement in the last decade. The use of eHealth solutions is hampered by the inadequate

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[6]   WHO. An assessment of eHealth projects and initiatives in Africa. Brazzaville, Republic of Congo, World Health Organization Regional Office for Africa, 2010.

[7]   Botswana, Ghana, Kenya, Mauritius, Nigeria, Rwanda and South Africa.

[8]   WHO. An assessment of eHealth projects and initiatives in Africa. Brazzaville, Republic of Congo, World Health Organization Regional Office for Africa, 2010.

[9]   ITU. The world in 2013: ICT facts and figures. Geneva, International Telecommunication Union, 2013.

[10] WHO. Atlas of health statistics in the African Region. Brazzaville, Republic of Congo, World Health Organization Regional Office for Africa, 2012.

availability of computers and mobile phones including IT devices capable of using alternative energy sources such as sun and wind.[11]

12.   The high cost of connectivity, equipment and energy, and the proportion of this cost that countries in the Region can subsidize have had an impact on accessibility to eHealth solutions. The ability and willingness of policy-makers and authorities to invest in these services is limited. Awareness and trust, as well as ICT knowledge and skills, limit use of existing eHealth solutions by the population, as would concerns over breach of privacy (e.g. patient records).[12]

13.   Most countries in the Region lack an eHealth national strategy or policy framework that could lead to project harmonization and avoid fragmentation of eHealth solutions. The fragmentation of national and subnational initiatives or efforts and the lack of interoperability between eHealth solutions delay the implementation of eHealth solutions.

14.   The challenges for countries are to strengthen their capacity; improve their ICT infrastructure; and create an enabling environment for the optimal use of eHealth services and applications to strengthen their health systems. More specifically, the challenges are:

    (a) To develop appropriate governance structures and mechanisms to ensure that accountability, transparency and effective leadership are in place.

    (b) To encourage the development and use of high-priority eHealth solutions.

    (c) To develop the requisite human resources.

    (d) To establish incentives to attract private sector investment.

    (e) To support secure electronic information exchange across national geographic and health-sector boundaries.

ACTIONS PROPOSED

15.   To strengthen their health systems, countries should strive to improve their ICT infrastructure and create an enabling environment for the optimal use of eHealth solutions. More specifically, they should:

    (a) Establish a national eHealth governing board or council responsible for setting overall national eHealth directions and priorities, reviewing and approving national eHealth strategy and funding decisions, and monitoring and evaluating eHealth strategy progress and outcomes; countries should also develop regulatory functions geared towards implementing and enforcing a national eHealth regulatory framework.

    (b) Establish targeted stakeholder reference and working groups that will be engaged and involved throughout the development of the eHealth strategy and plan; countries should also identify cross-sectoral representatives to participate in targeted stakeholder engagement forums that ensure broad and appropriate representation from health-care providers, professionals, governments, vendors, industry, consumers as well as community and other relevant stakeholder groups.

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[11]   WHO/ITU. National eHealth strategy toolkit. Geneva, World Health Organization, International Telecommunication Union, 2012.
[12]   WHO/ITU. National eHealth strategy toolkit. Geneva, World Health Organization, International Telecommunication Union, 2012.

(c) Establish a national compliance authority responsible for testing eHealth solutions and certifying their compliance with national standards; the authority must have sufficient power, funds, infrastructure and resources to conduct effective testing, validation and certification.

(d) Identify a number of priority eHealth solutions that should be developed and deployed on a national scale, and develop high-level design and requirements for them; examples of such solutions may include national electronic health record systems and national prescription services.

(e) Identify, evaluate and select partners capable of undertaking the detailed design and implementation of eHealth solutions that adhere to high-level requirements and design; eHealth solutions should be deployed and operated reliably so that they can be accessed and used by the intended users (e.g. individuals as well as health-care organizations, providers, managers and administrators).

(f) Identify the priority consumers, care providers and health-care managers to be targeted and assess their readiness to adopt specific eHealth solutions; countries should develop and roll out awareness campaigns for these high-priority targets and, in time, extend the campaigns to a broader stakeholder group.

(g) Guide the development of a competency framework and code of professional practice for health-care providers that would define their expectations and obligations to collect, store and share high-quality electronic health-care information in a timely, appropriate and secure manner.

(h) Identify changes required in existing education and training courses to ensure the development of eHealth workforce capabilities; countries should also work with educational institutions to include eHealth in their curricula, identify and establish specialized eHealth courses and qualifications, and implement formal training programmes.

(i) Engage with the health ICT industry and the broader health sector to increase available investment funds and encourage the development of high-priority eHealth solutions; countries should also establish an investment funding programme and define its governance rules, processes, control mechanisms and functions.

(j) Adopt secure communication standards to ensure that information exchanged through a national eHealth environment remains private and confidential, can be authenticated and is only delivered to intended recipients; countries should adopt high-priority standards for health information flows that have been identified for delivery such as care event summaries, telehealth, electronic health records and diagnostic test results.

(k) Define clear criteria and targets for the improvement of eHealth solutions, and regularly monitor and assess progress on these targets to measure eHealth adoption among consumers, care providers and health-care managers and administrators; countries should establish national, internet-based information repositories (that could be part of a national health observatory) to record project achievements and enable knowledge sharing within the health sector.

16. WHO and other partners should continue to support countries to develop or revitalize their national eHealth strategies and the deployment of mobile health, telehealth and telemedicine services. They should also continue supporting countries to implement and develop their NHOs including the evaluation of such strategies, systems and services.

17.	Country implementation of the proposed actions to make better use of eHealth solutions will strengthen national health systems and contribute to improving the health of populations.

18.	The Regional Committee is invited to examine this document and endorse the actions proposed.