

Concept Note
Virtual workshop on
Workshop on Data Revolution, Health Status Transformation and the Role of Artificial Intelligence for health and pandemic preparedness in the African Context

Vision: A healthy population with low mortality and morbidity meeting the international standards of health care and economic growth is embedded in sustainable development goals by 2030. Attaining these goals is realistically possible. Africa is poised to become a major player in the global economy in this century. Almost all the additional global labor force in later decades would come from Africa. A healthy population with high productivity will be essential for Africa to be competitive in the global economy.

Sub-Saharan African governments are currently spending about \$48B a year on health expenses, with an expected rise to \$75B by 2030 and \$135B in 2040 (in constant 2011 dollars).¹ The increases will be driven by a growing population, but also by the transition from communicable to (more expensive) non-communicable disease burden. As healthcare becomes increasingly technology-enabled, strengthening local digital health ecosystems and leveraging technology can help improve outcomes, limit cost increases and ensure that Africa gains a share of the growing global health market. Global spending on health is expected to increase from US\$7.83 trillion in 2013 to \$18-trillion in 2040 (in 2010 purchasing power parity-adjusted dollars)²³. Potentially Africa will have a comparative man power advantage to meet the demand of the global market and increase the value of its trade.

Background: Evidence-based decision making, monitoring of health status, tracking of expenditures and outputs for improving efficiency of investments are hallmarks of successful health programs. In recent times, public health intelligence platforms, such as the WHO's Epidemic Intelligence from open sources (EIOS), utilize strong data systems as a key component for health emergency preparedness. Within the development partner community, prominent examples include PEPFAR and GAVI. Yet, Africa faces numerous challenges in the availability, analyses and use of data to inform health decision-making. Enormous amounts of health data are now available, though countries utilize only a small portion of these data for program improvements. For instance, demographic and health survey data could be better and fully utilized by decision makers at all levels. Health information systems are making large amounts of data available in several countries but only a small portion of the data is being used to improve programs. Data on cost and expenditures are not available to make decisions or enforce accountability.

At the same time, the developed world is beginning to benefit from more advanced analysis and use of data. Technologies like Artificial Intelligence (AI) have potential to offer new insights and tools to improve clinical decision making, predictive analytics for health emergency preparedness, mitigate workforce shortages, tailor program targeting to areas of greatest need, improve forecasting of disease outbreaks and bring efficiencies to health service delivery. Realizing the potential of digital health and AI to achieve development goals will require collaboratively addressing multiple challenges, including strengthening underlying digital infrastructure and digital health systems, working to improve data quality, responsible management and sharing of available data, and eventually trust and utilization of data to inform strategic planning

Africa is in some ways poised to make use of these technologies through the rapid growth of mobile phone ownership and use. However, there remains significant gaps in the digital health ecosystems that will shape its utilization. Realizing the full potential of digital technology including AI requires attention to policy and the regulatory environment, system infrastructure,

¹ Estimate [from International Futures](#) modeling tool, University of Denver.

² Lancet 2016; 387: 2521–35

sustainable financing, technical safeguards and workforce capacity, and diversity of the stakeholders involved in digital health and technology innovation. While it is critical that Africa is not left out of new advances, it is equally important to approach new innovations thoughtfully.

Globally, the COVID-19 pandemic has triggered an unprecedented demand for digital technology solutions in screening populations, tracking infections and minimizing direct human contact. The use of different technologies at every step has brought efficiencies in tracking and tracing contacts, testing and in case management. Most importantly, technology has played and continues to play a vital role in protecting medical personnel by limiting direct contact with patients, disinfecting controlled environments and disseminating of public health and emergency messages. By leveraging the use of digital technology in Africa in the health sector, different health crises can be managed better and health care systems strengthened through effective and more efficient digital mechanisms.

This workshop will bring together high level policy makers, technical experts, as well as public and private sector innovators to discuss critical policy dimensions of strengthening digital health ecosystems and lay the foundation for responsibly developing and adopting new innovations like AI in African health systems.

Objective: To bring together Ministries of Finance, Health and Information Communication Technology, academic sector, private companies and donors to:

- a. Discuss the latest advances in digital technology including AI tools and techniques, telemedicine, key considerations for their development and use in the African context during times of health emergencies, as underscored by COVID-19 and beyond, and policy decisions that will facilitate responsible use now and in the future.
- b. Identify concrete actions for shaping policy and enabling environments to foster digital technologies for accelerated improvement in health and related development programs.
- c. Showcase AI driven innovative solutions for health developed by innovators on the continent and share best practices from countries, including possibilities for customization.
- d. Discuss methods to address issues of equity and finance to support digital transformation, strengthen economies for sustainability especially following the impact of COVID-19.

Outcome: The outcomes of the meeting will include:

- a. Deeper interest and understanding by participants in digital health and innovation systems and the use of, especially, AI for health, recognizing both potential contribution to accelerating the pace of economic growth and attaining self-reliance and its limitations.
- b. Development of business models for private sector engagement and investments in digital technology.
- c. Decisions on improving policies, ecosystems and the regulatory environment for private sector investments in digital health.
- d. Decisions to further strengthen the collection of quality data, promote data protection rights, data ethics, security and privacy.
- e. Resolutions on digital health for further considerations and decision at the African Union, WHO/RC summits and World Health Assembly.
- f. Proceedings and Policy Position Paper on digital technology in health with close follow-up on key actions to be undertaken in pilot countries.
- g. Draft declaration on AI for health in the African region.

Approach: As digital technologies such as AI have become more relevant and essential in the health sector and beyond, this workshop will be a joint engagement and learning by all stakeholders. The policymakers will identify their areas of interest,

the technical experts will demonstrate the relevant tools and techniques and the private sector and donors will identify critical challenges and discuss options to address them for mutual benefit. This discourse will provide a basis for outlining the future path for digital technology and AI digital health interventions, including investment opportunities in each participating country. Consequently, this technical workshop will be preceded by the second part of this meeting – The Ministerial meeting which will be held in September, 2021, and will focus on validating the actions from the technical workshop.

Organization of the workshop:

The workshop will be jointly organized by WHO, USAID and ITU with participation/contribution from various organizations that include but not limited to AfDB, UNICEF, UNESCO, UNECA, JICA and AUC among others.

Participants: The workshop will be held virtually allowing participants from various countries to join with representatives from ministries of Health, Finance, Information and Technology and Universities. The Private sector that includes private companies; local entrepreneurs and experts will also be invited.

Experts dealing with AI and Institutions dealing with digital technology such as EAC/EAHRC and a couple of implementing partners such as Digital Square and DIAL will be invited to provide key experiential insights in AI. The workshop will also aim to draw expertise from the ITU-T AI for Health Focus Group and from the Broadband Commission Working Group on Epidemic Management.

Duration of the meeting: The meeting will take place over four days. The first day will highlight existing AI –based applications with an in-depth showcase of the process of their development. This will allow innovators to identify system-level bottlenecks and opportunities to strengthen digital health systems in ways that facilitate future AI development and use. The second day will be identification of policy issues defying solutions by the ministries and possibility of applying tools and techniques demonstrated on the first day. Also, the gaps in the current tools and areas requiring innovation will also be discussed. The third day will be devoted for the discussion on actions needed at the country level and possible interest of private sector and donors. The last day will deal with identification of next steps by each stakeholder to begin addressing issues identified.

Timing: June 21 – 24, 2021.

Location and Venue:

The workshop will be organized as a virtual event.

Evaluation of workshop impact: At the close of the workshop the success will be determined by the number of additional programs/issues identified for application of AI and additional investment possibilities by the private sector and donors. Another evaluation will be conducted after three months to assess actions undertaken and investments made.