Establishing the Africa Centres for Disease Control and Prevention: responding to Africa's health threats

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On Jan 31, 2017, heads of states and governments of the African Union and the leadership of the African Union Commission will officially launch the Africa Centres for Disease Control and Prevention (Africa CDC) in Addis Ababa, Ethiopia. As detailed in the African Union's Africa Agenda 2063[1]—a roadmap for the development of the continent—some of the concerns that justified the establishment and initiation of an Africa-wide public health agency include rapid population growth; increasing and intensive population movement across Africa, with increased potential for new or re-emerging pathogens to turn into pandemics; existing endemic and emerging infectious diseases, including Ebola;[2] antimicrobial resistance;[3] increasing incidence of non-communicable diseases and injuries;[4] high maternal mortality rates; and threats posed by environmental toxins. In addition to these concerns, African countries are burdened with insufficient public health assets including surveillance, laboratory networks, competent workforce, and research expertise that hinder evidence-based decision-making.

Public health institutes are a science-based source of guidance for public health policy formulation and implementation for decision-makers. Accordingly, the guiding values of the Africa CDC include leadership, credibility, ownership, transparency, and accountability. The institution will provide strategic direction and promote public health practice within member states through capacity building, minimisation of health inequalities, and promotion of continuous quality improvement in the delivery of public health services. It will also guide in the prevention of public health emergencies and threats through partnerships, science, policy, and data-driven interventions and programmes in line with international standards and WHO recommendations.

In the next 5 years, the Africa CDC will work with member states, WHO, and partners to strengthen their capacity in four strategic priority areas: (1) health-related surveillance and innovative information systems, with a focus on improved capacity for event-based surveillance, disease prediction, and improved public health decision making and action; (2) functional and linked clinical and public health laboratory networks in the five geographic subregions of Africa; (3) support for member states' public health emergency preparedness and response plans; and (4) strengthened public health science for improved decision making and practice. To ensure capacity to implement the strategic priority areas, the Africa CDC will develop innovative programmes in the areas of competency-based workforce development, partnerships, financing of public health activities, and communication among member states. This approach will support African countries to achieve existing international health targets, including the Sustainable Development Goals, the International Health Regulations (IHR), and universal health coverage.

The Africa CDC will operate on a decentralised model driven by implementation of operational approaches that enables member states to own and facilitate an increase in the proximity of their response capabilities. Thus, Africa CDC will operate as a network, with a headquarters in Addis Ababa and close linkage with five Regional Collaborating Centres in Egypt, Nigeria, Gabon, Zambia, and Kenya. Each collaborating centre will be equipped with laboratory and advanced diagnostic capacity to rapidly detect known and unknown pathogens. In addition, the Africa CDC will advocate and promote the establishment or strengthening of National Public Health Institutes (NPHIs) in each member state, resulting in an African Public Health Network. NPHIs provide a legal mandate for public health and can enhance public health research. Moreover, functional NPHIs provide a unique opportunity to create effective responses, improve efficiencies and hence reduce cost, and improve IHR core capacities by integrating disease surveillance and laboratory networks into robust and well-coordinated national disease intelligence hubs.[5] The Africa CDC is expected to work with member states and WHO's Regional Offices in Africa to develop a framework for establishing and operating NPHIs, based on a stepwise approach aimed at improving capacities for disease surveillance at country level, laboratory networks, emergency operation centres, information systems, and pandemic preparedness and response plans with a surge capability to mobilise the workforce in times of need. NPHIs will be certified biannually

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through a thorough, quantitative, and transparent process, against clearly defined benchmarks agreed on in the framework. A similar stepwise improvement approach for capacity development has been used very effectively by the WHO Regional Office for Africa and the African Society for Laboratory Medicine in advancing laboratory networks in Africa and moving them towards accreditation: over 1100 facilities are now enrolled in the process. The Africa CDC will also assist member states to strengthen their core NPHI capacity through the development and implementation of competency-based tiered public health workforce programmes with an enabling environment for appropriate career paths in field epidemiology, laboratory management and leadership, and public health informatics. These programmes will be designed to suit needs at different levels of the health systems pyramid, including primary health care and community programmes at the base of the pyramid. NPHIs will also serve as coordinators of the one-health approach to disease control and prevention including coordinating engagements with ministries of agriculture, health, communications, defence, wildlife, and communication.

The statute of the Africa CDC clearly requires close collaboration with WHO and other UN health agencies to coordinate and create synergies to better respond to disease threats in Africa. Accordingly, in August, 2016, WHO and the African Union Commission signed a framework for collaboration that will guide both institutions to leverage each other's strengths to improve disease management in Africa. The framework outlines key areas for coordination: enhanced capacity for IHR; improved surveillance (event-based and integrated disease surveillance); development and dissemination of information products for decision making, including health situation and risk analysis; investigation and emergency response, including surge capacity and stockpiles; and management of public health events. In addition, the Africa CDC will seek to strengthen close partnerships with non-governmental organisations including the African Field Epidemiology Network and the African Society for Laboratory Medicine.

In summary, the recent Ebola virus disease pandemic clearly calls for greater investment in strengthening national responses.[6,7] How successful the Africa CDC becomes in its mission will be determined by its capacity to develop the right partnerships, including with the private sector to invest in public health as a public good, adopting innovative approaches, and mobilising adequate resources. Through this inclusive approach, the Africa CDC is expected to fill a niche that enables rapid acquisition of critical public health surveillance data linked to joint response capabilities, which would mitigate the gap in response that has characterised public health events of significance in the past. It is now clear that disease outbreaks in Africa constitute national, economic, and health security threats that can quickly evolve into global health crises. We call for a strong commitment at the G20 summit in July, 2017, to championing the Africa CDC's strategic approach and its capacity to strengthen or establish NPHIs—a critical step in enabling countries to identify threats early and respond effectively.

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