

A Shifting Paradigm in Strengthening Laboratory Health Systems for Global Health

Acting Now, Acting Collectively, but Acting Differently

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DOI: 10.1309/AJCPY5ASUEJYQ5RK

Improving clinical and public health laboratories should be one of the main goals of strengthening health systems, rather than a desirable afterthought. In this respect, in July 2009, several African countries, donors, the World Health Organization (WHO), and implementing partners met in Kigali, Rwanda, to launch a program for strengthening laboratory management, with the aim to accelerate national laboratory services toward accreditation in the African region. Before the 2009 meeting in Kigali, the need to strengthen laboratory networks, systems, and services in developing countries was highlighted in 2008 by several landmark events, including in January 2008, issuance of the Maputo Declaration for strengthening laboratory health systems; in April 2008, the Lyon statement on the need for developing countries to establish practical quality management systems; and in September 2008, the Yaoundé resolution issued by the WHO Regional Office for Africa (AFRO) that recognized the dilapidated state of the laboratory health systems and the need to strengthen them, as a priority, to fight multiple diseases. The recent focus on strengthening health systems and the emphasis on laboratory systems suggest that the opportunity has presented itself for the international community to act now, act collectively, but act differently to ensure sustainability of global health efforts to enhance laboratory networks and systems.

Acting Now

The 3 pillars for disease prevention, control, and patient management include public health, clinical medicine, and laboratory medicine. However, laboratory medicine is the most neglected pillar in the developing countries, yet is

relied on heavily for clinical decision making and for disease surveillance and control. The recent vast increase in funding for global health development^{1,2} from the US President's Emergency Plan for AIDS Relief, President Obama's Global Health Initiative, the World Bank's laboratory strengthening efforts in East Africa, and other bilateral donors offered a monumental opportunity to act now, act decisively, to end the neglect of laboratory systems and services in global health.

Quality laboratory services and systems constitute the foundation for strengthening health systems, as the primary goal of laboratory medicine is to provide information that is critical to assist medical decision making for the best health care. Few developing countries have established laboratory standards that are affordable and easy to implement and monitor. In this regard, the Kigali meeting, which launched the laboratory management tool called "Strengthening Laboratory Management Toward Accreditation" (SLMTA) and the newly established WHO AFRO accreditation process, is a landmark event that laid a road map for strengthening laboratory systems in Africa leading to accreditation.³ However, to achieve this goal, the international community must act collectively, with strong leadership from the countries, to end the neglect of laboratory systems.⁴

Acting Collectively

With the surge in funding, the ultimate goal should be to work in partnership to support developing countries to strengthen and/or establish sustainable and integrated, functional, tiered laboratory systems and networks that should provide quality services to meet program goals and support

operational research. As discussed in this issue of the *Journal* and in next month's issue, to avoid setting up parallel laboratory systems and networks, the international community must act collectively to address laboratory strengthening in a holistic manner in the context of the countries' national laboratory strategic plans and policies. Olmsted and colleagues,⁵ in this issue of the *Journal*, have shown that laboratory strategic plans, as recommended by the Maputo Declaration, are being developed in several countries⁶; however, implementation will require the collective effort of all donors and implementing partners with country ownership and leadership. Some important questions that need to be urgently addressed include the cost of implementing laboratory plans and policies and return on investment and impact on the overall health systems.

Acting Differently With a Shifted Paradigm

To maximize the surge in funding for global health development and the focus on strengthening health systems, a shift in paradigm must occur. The international community and developing countries must recognize that to sustain laboratory efforts, clear indicators, such as the number of laboratories accredited in the public health sector, and indices must be established to measure our progress for strengthening laboratory systems and networks. Zeh et al,⁷ in this issue of the *Journal*, demonstrate that the accredited laboratory has benefits to patients but also leads to clear financial gains. In addition, different approaches that focus on the "known doing gaps" must be pursued, including the following: (1) bridging the gap between laboratory medicine and clinicians, through continuous medical laboratory education, as Peter et al⁸ will discuss in the October 2010 issue of the *Journal*; (2) strengthening professional bodies such as an African society for laboratory medicine that will advocate for and uphold standards in the field; (3) implementation of competency and task-based management programs, such as the SLMTA⁹; (4) implementation of mentorship programs by embedding experts within countries' laboratory networks for extended periods; and (5) development of local capacity and indigenous partners to ensure sustainability of the laboratory efforts.

In sum, novel approaches and strategies, such as SLMTA and accrediting laboratories using standards that are practical, affordable, and scalable, are required to strengthen integrated laboratory systems that are critical for fighting emerging and reemerging diseases in the 21st century.

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