Africa Consortium on Laboratory Systems Strengthening

A Consortium has been formed to strengthen laboratory systems in Africa

Laboratory medicine plays an essential role in the detection, surveillance, control and management of diseases. In low income and middle-income countries, the access to quality assured laboratory diagnosis is a challenge causing delayed or inaccurate diagnosis and ineffective treatment which affects patient safety. Laboratories in low income and middle-income countries have constraints which include absence of essential infrastructure, laboratory supplies, basic equipment, skilled personnel, supply chain management, equipment maintenance, reliance on empirical treatment, inadequate quality management systems and lack of government standards on laboratory testing.[1] In Africa laboratories also faces challenges of power outages and intermittent loss of connectivity which can cause partial disruption of services. However, it is important to note that for the implementation of the Sustainable Development Goals, in particular the universal health coverage, the access to high quality and timely laboratory services is needed to support health care systems which enable the achieving of these goals. Accurate and timely diagnosis underpins more specific treatments as opposed to the empirical treatments, assisting with the stewardship of resources.[2]

In an effort to improve the quality of Laboratory services in Africa there have been several initiatives. One key event was the World Health Organization and United States Centre for Disease Control and Prevention (CDC)) conference of 2008 on Laboratory Quality Systems which recommended considerations of a staged approach towards implementation of a Quality Management System by Laboratories in resource limited settings. This has been followed by several resolutions on laboratory strengthening in the Africa region. In 2009 the World Health Organization Regional Office for Africa (WHO-AFRO), in collaboration with the CDC and other partners, launched the WHO-AFRO laboratory accreditation process and Strengthening Laboratory Management Towards Accreditation (SLMTA) training and mentoring programme which was subsequently renamed Stepwise Laboratory Quality Improvement Process Towards Accreditation (SLIPTA). The African Society for Laboratory Medicine (ASLM) was designated the SLIPTA secretariat by WHO-AFRO in 2012.[3] However, despite these and many efforts in sub-Saharan Africa, the clinical laboratory remains the weak link in the healthcare chain.[4]

In sub-Saharan Africa most clinical laboratories are underequipped, underfunded and remain far from the attainment of international norms and standards. There are not many laboratories accredited to international quality standards and most of the accredited laboratories are in South Africa.[4] Studies have demonstrated that technologies, collectively known as telementoring, are efficient and cost effective tools to provide seasoned or specialized expertise to health professionals in remote or resource-limited medical facilities and have an impact on professional behaviour and knowledge, as well as health outcomes.[5] Furthermore, public and private sectors working in public–private partnerships combining strengths, experiences, methods and resources across sectors have been shown to successfully support laboratory strengthening efforts. A strong workforce is essential in order to achieve a nation's public health goals. However, this is a critical weakness in resource limited settings. In South Africa public–private partnerships solved workforce challenges through innovative training programmes for tuberculosis which was eventually cascaded to other countries. The success of the public–private partnership demonstrates that this model is scalable and expandable to other countries with similar resources for health systems strengthening. Furthermore, effective collaboration is possible and necessary between the public and private sectors in order to solve complex health issues.[6] In Zambia training was demonstrated to build on previous investments to improve laboratory quality systems operability and preparedness.[7]

In view of the need to complement the current efforts and support laboratory professionals, African universities consisting of University of Zimbabwe Department of Laboratory Diagnostic and Investigative Sciences, Cape Peninsula University of Technology Department of Biomedical Sciences, Stellenbosch University Division of Chemical Pathology, University of Pretoria Department of Chemical Pathology and the African Federation of Clinical Chemistry and Laboratory Medicine formed a consortium led by PIM. The consortium has collaborated with the International

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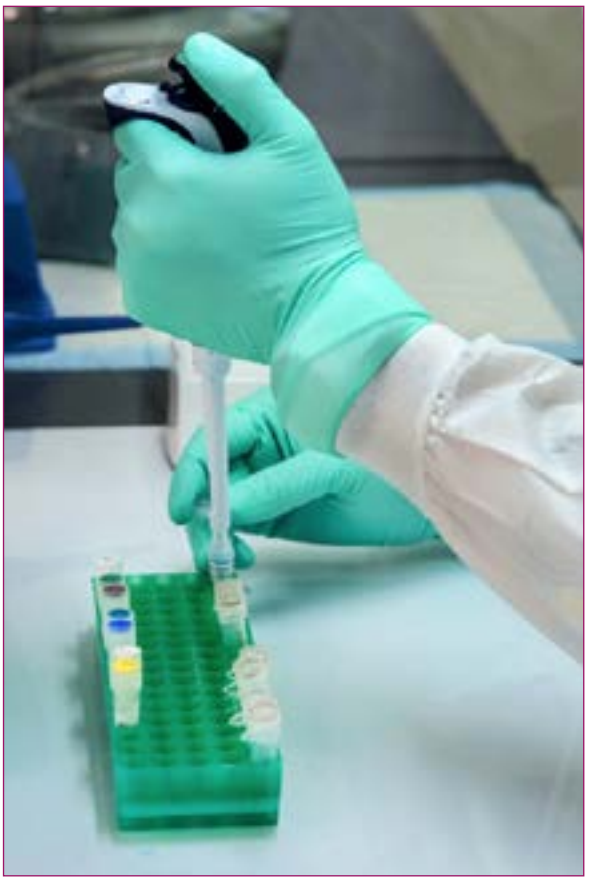

Federation of Clinical Chemistry and Laboratory Medicine and Empower School of Health, Geneva.

Progress so far

The consortium, having identified areas in need of support, has so far conducted three webinars, namely, Ethical Laboratory Practice on 26 March 2021, (to celebrate the International Laboratory Professionals week 18 – 24 April 2021); The Medical Laboratory Career opportunities on 20 April 2021 and Quality Issues in the Medical Laboratory: The Elephant in the room on 29 April 2021. The webinars were held with Empower School of Health providing support in preparation of advocacy, demand generation, the digital platform for registration of participants and Zoom account to host the webinar. All the universities involved advertised the webinars to their staff; students used links with professional bodies and laboratories to disseminate the information on the webinars. The International Federation of Clinical Chemistry and Laboratory Medicine also advertised the webinars. The presenters were drawn mainly from universities in Africa and some international experts were also invited to present on areas of expertise. During the webinars the presenters were given a twenty minute slot to present on a topic and at the end of all presentations a round table forum was held on questions raised on the presentations with all the speakers contributing. The first webinar of Ethical Laboratory practice had 473 registrants of which 183 attended. The Medical Laboratory Career opportunities had 45 attendees and Quality Issues in the Medical Laboratory: The Elephant in the room had 150 registrants and 54 attendees.

The webinars were held successfully and the numbers of attendees from different African countries demonstrated that the concept can be successfully implemented with African experts and with support from international experts to address areas of need on a virtual platform without the need for movement of the personnel and presenters. Empower School of Health also placed the recording on their Facebook site for later access enabling the recording to be a good contextual reference for laboratory professionals and teaching purposes.

The future

The consortium will hold more webinars on priority areas identified and seek to apply for a grant to fund the setting up of a centre of excellence at the University of Zimbabwe Department of Laboratory Diagnostic and Investigative Sciences that will enable the consortium to offer hands on training for areas of need and face-to-face training where needed. Short courses planned include laboratory accreditation, supply chain management, good clinical laboratory practice, quality management systems and laboratory management, which will all be aimed to improve the knowledge base of the participants leading to improvement in quality of test results.

Through the publication of the manuscript, we hope to identify collaborators who may be interested in supporting the initiative from our pilot concept to full implementation by the consortium. We welcome all comments and suggestions for improvement.

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Links to the webinar recordings:
https://fb.watch/61qPay9bEq/
https://www.facebook.com/eshllp/videos/370047924463198
https://www.facebook.com/eshllp/videos/349771943422390