



Improving laboratory medicine through leadership, training & partnership

Pathology and laboratory services lie at the heart of the health care services provided to patients and the community. Laboratories are critical for the diagnosis and management of many conditions that are common in sub-Saharan Africa and which are associated with childhood and maternal mortality (e.g. severe anaemia, malaria, TB, HIV/AIDS and neglected tropical diseases). However, chronic neglect (through a lack of investment in human resources and infrastructure; poor quality teaching and a lack of quality assurance systems) has resulted in these diagnostic services becoming the bottleneck in the delivery of high quality healthcare. Evidence shows that significant rates of poor quality testing, diagnosis and slow turnaround times in African laboratories generates misleading clinical information and consequently, delayed or inappropriate treatment.

LabSkills Africa is a two-year collaboration involving 12 partners in the UK and Africa. The programme is funded by a grant from the UK Department for International Development (DFID) and aims to contribute towards the improvement of clinical decision-making and increase patient safety through measures designed to raise the standards and quality of specific laboratory services and tests that support the diagnosis and management of health conditions related to Millennium Development Goals (MDGs) 4¹, 5² and 6³. Lab Skills Africa will also leverage the volunteering efforts and skills of up to 30 UK pathologists and biomedical scientists who will be recruited to work with laboratory technologists, supervisors, managers, pathologists and biomedical scientists in [Kenya](#), [Tanzania](#), [Uganda](#), [Zambia](#) and [Zimbabwe](#).

20 public sector laboratories (4 per country) have been selected to participate in the programme. Training, together with on-going mentoring and support will be delivered to improve the quality of the diagnostic services in these laboratories which serve a combined population of 110 million people and perform more than 1.7 million tests annually.

For this 24 month pilot, LabSkills Africa will focus on improving the following tests:

- Rapid HIV antibody tests;

¹ Reduce child mortality.

² Improve maternal health.

³ Combat HIV/AIDS, Malaria and other diseases.



- Rapid malaria tests;
- Haemoglobin/ haematocrit determination;
- Urine dipstick for sugar and protein;
- Malaria smear testing;
- TB smear microscopy; and
- Peripheral blood film smears.

The program has four key components:

Laboratory Leadership & Quality Management Course

This 'train the trainer' leadership course will provide senior laboratory personnel (pathologists, laboratory managers, chief technologists and biomedical scientists) with the skills to teach, mentor and supervise others to conduct tests to international quality standards. 60 senior laboratory personnel will be trained under this activity.

Laboratory Technical Skills Improvement Course

This course will develop the technical quality, skills and competencies of 2 laboratory technologists in each laboratory. Specialist training will be delivered to improve the quality of common tests and diagnostic procedures, bringing the service up to international standards. 40 laboratory technologists will be assessed and trained under this activity.

Laboratory Improvement Projects

The four laboratories in each country will collaborate as a team to (a) identify an aspect of their service that is critical to maternal and child health (MCH) and which is in need of improvement; (b) develop and implement improvement action plans; and (c) evaluate and report on the impact of the improvement actions. In total, five improvement projects will be developed and implemented (one per country). The laboratories will then share the details of their improvement projects, findings and results with each other with a view to (i) sharing best practice; and (ii) incorporating this shared learning into their own working methods and practices where possible.

Laboratory Improvement Network

The network will be established in order to ensure on-going inter-country and regional training, learning and sharing of best practice between laboratories. The aim is to realise the potential for scaling up and disseminating the project's assessment, improvement, management and leadership training activities through the network.



Successful implementation of LabSkills Africa will see the following improvements:

- Delivery of improved and higher quality front-line services required to meet the MDG health targets in the areas serviced by the 20 laboratories.
- Increased diagnostic accuracy and proficiency, with a corresponding reduction in incidences of misdiagnosis.
- Improved turnaround times in the processing of tests and the communication of the diagnosis to clinicians by at least 20%.
- Overall improvements in the services provided by the laboratories, which will lead to greater confidence amongst clinicians in the results and improved clinical decision-making.
- Strengthening of the professional relationship between laboratory personnel through an increased understanding of their respective roles and contributions in the laboratory testing, diagnostic and operating environment.

Partners

The **Royal College of Pathologists (RCPATH)** is the lead partner for LabSkills Africa and is working in partnership with the **College of Pathologists of East, Central and Southern Africa (COPECSA)**, the **British Division of the International Academy of Pathology (BDIAP)**, the **Aga Khan University Hospital in Nairobi**, the **Lancet Group of Laboratories in East Africa** and the following professional pathology associations/ health institutions in each of the five program countries:

Kenya	<ul style="list-style-type: none"> • Kenyan Association of Clinical Pathologists • Association of Kenya Medical Laboratory Scientific Officers • Kenya Medical Laboratory Technician & Technologists Board
Tanzania	<ul style="list-style-type: none"> • Association of Pathologists of Tanzania • Medical Laboratory Scientific Association of Tanzania
Uganda	<ul style="list-style-type: none"> • Association of Pathologists of Uganda • Uganda Medical Laboratory Technology Association
Zambia	<ul style="list-style-type: none"> • University Teaching Hospital, Lusaka
Zimbabwe	<ul style="list-style-type: none"> • Zimbabwe Association of Pathologists • Zimbabwe National Quality Assurance Programme



The **Liverpool School of Tropical Medicine (LSTM)** will act as evaluators for the program and the **East, Central and Southern African Health Community (ECSA-HC)** will promote and facilitate the sharing of best practice results arising from the program throughout the ECSA region.

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