

# Turning the Tides on Clinical Laboratory Systems in Africa: It Counts to Count

**SA HIV Clinician Society Conference  
November 25 – 28<sup>th</sup>, 2012**

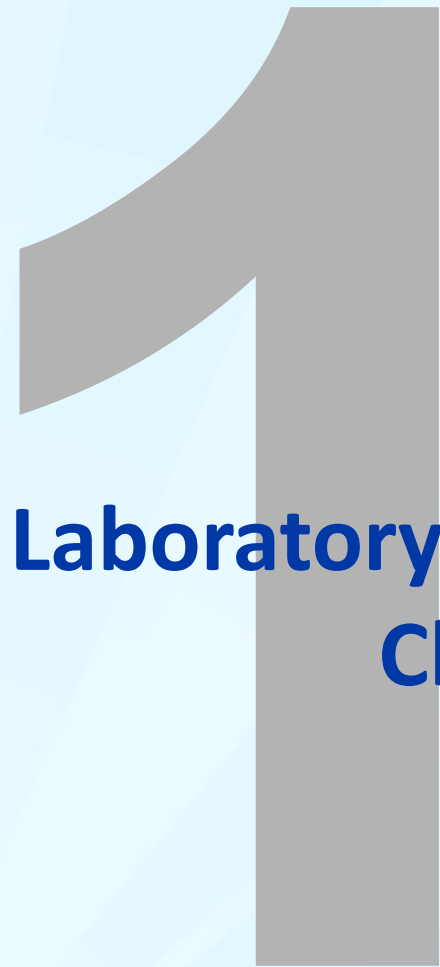
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Associate Director &  
Chief, International Laboratory Branch  
Division of Global HIV/AIDS  
CDC , Atlanta, Georgia**

International Lab Branch



# Outline

- Laboratory Diagnostics for Excellence in Clinical Management
- Quality of Laboratory Testing: It Counts to Count
- Strengthen Systems and Institutions

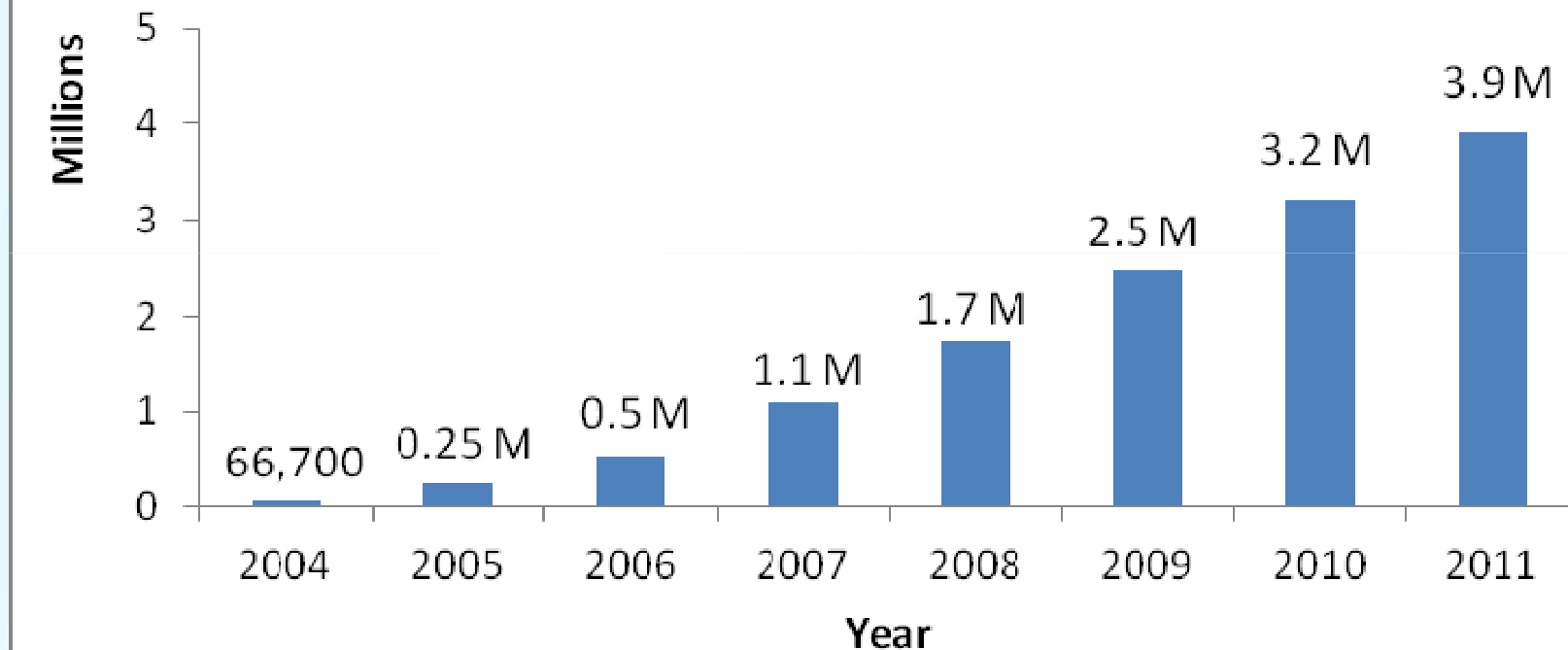


# Laboratory Diagnostics for Excellence in Clinical Management



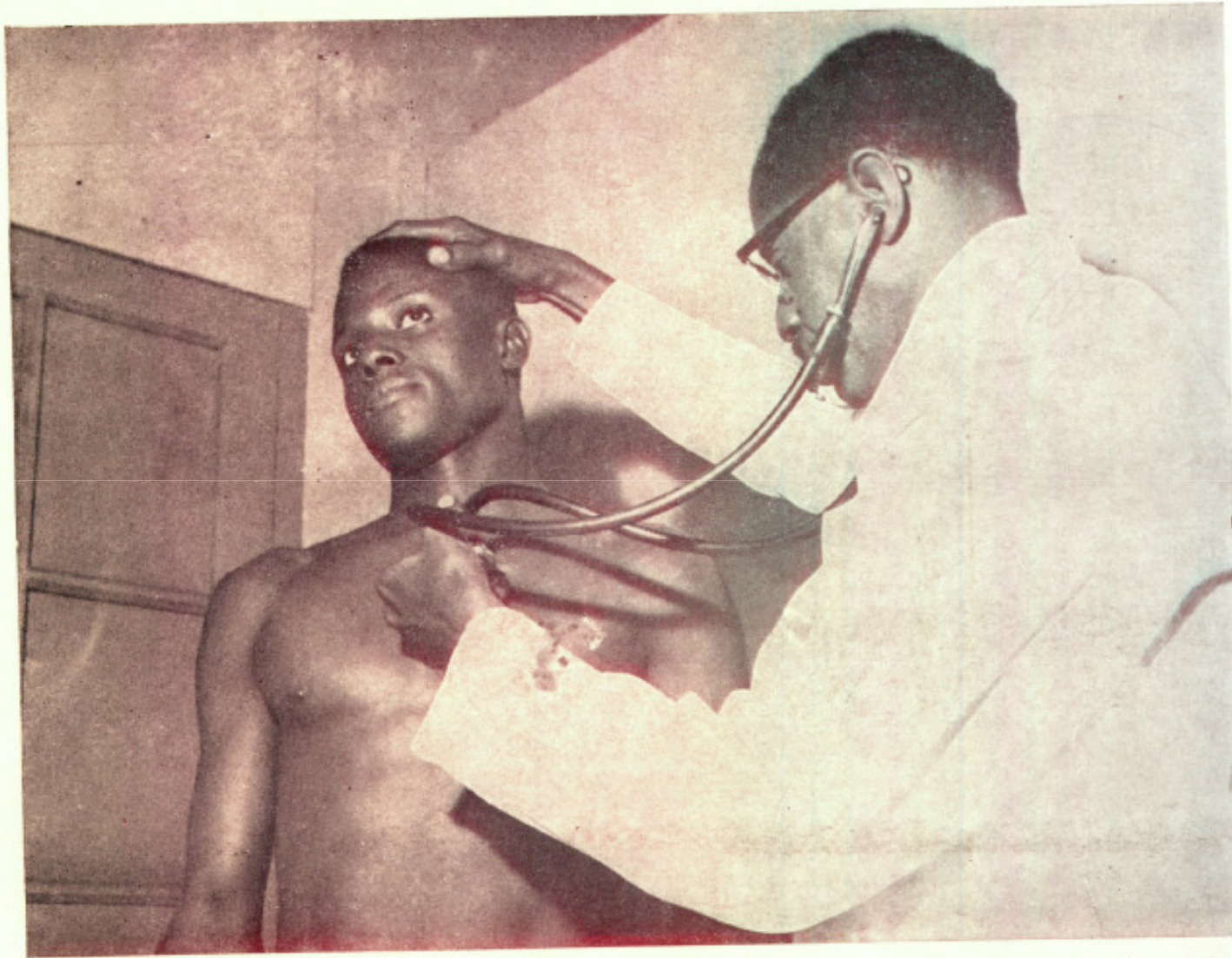
## Program Impact: Saving Lives

### Number of People Directly Supported on Treatment by PEPFAR



As of March 2012, 4.5 million people were directly supported on treatment by PEPFAR

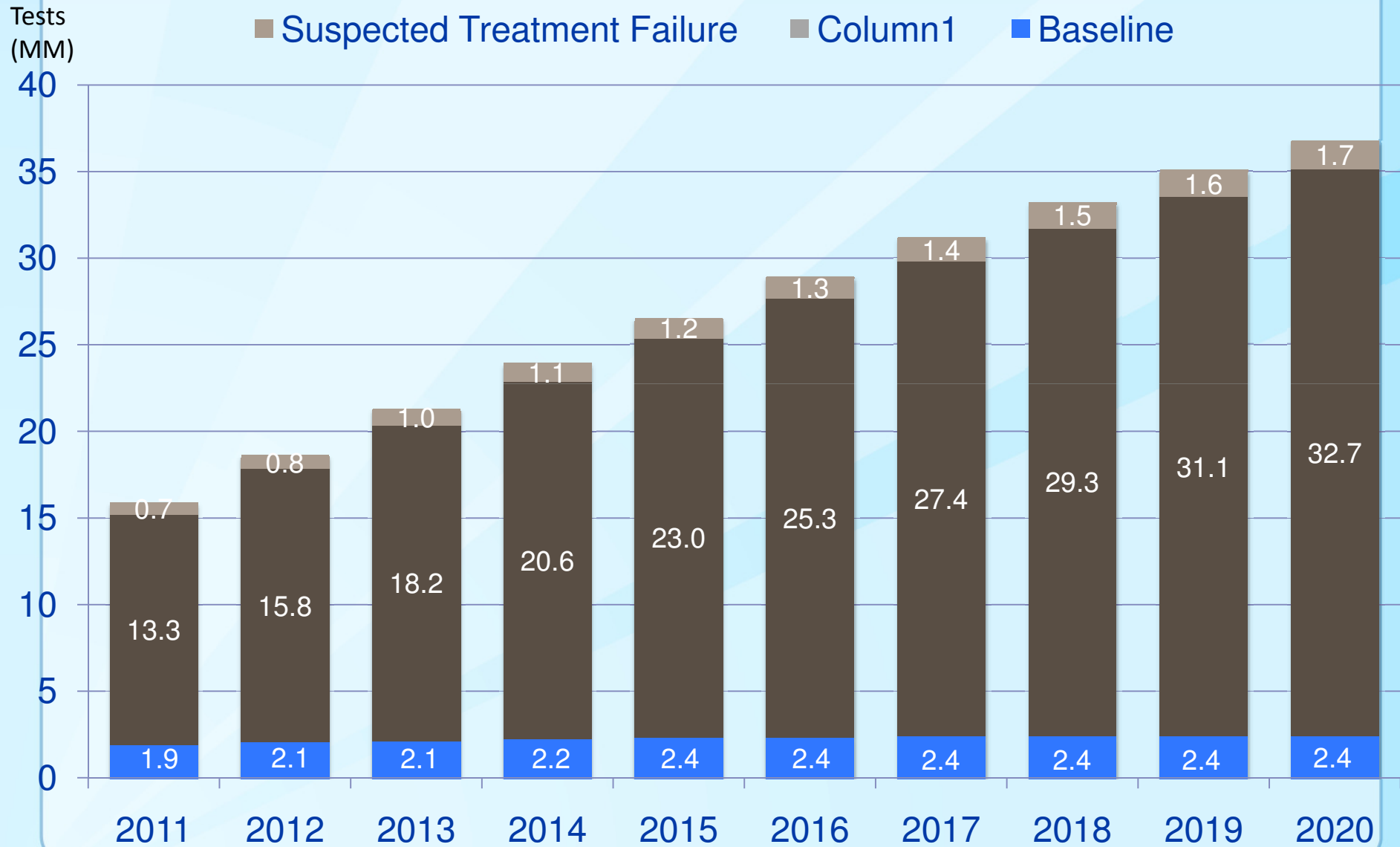
## Striving for Clinical Excellence with Quality Laboratory Testing



Courtesy, Ghana Information Services, Accra.

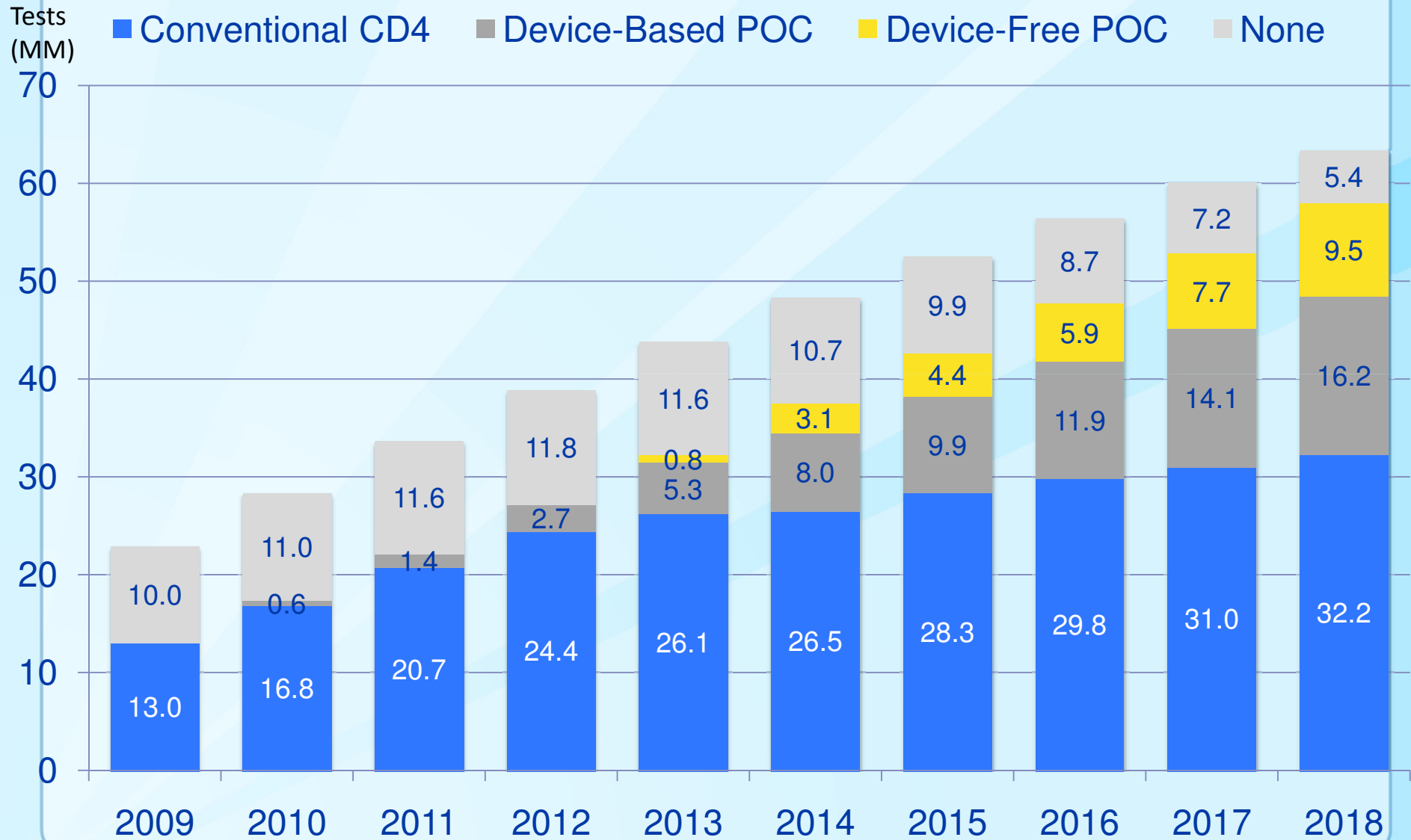
*A Doctor taking close examination of a patient; no drumming, no invocation, no mystery, as in the case of the traditional healer.*

# Viral load test and forecast to 2020



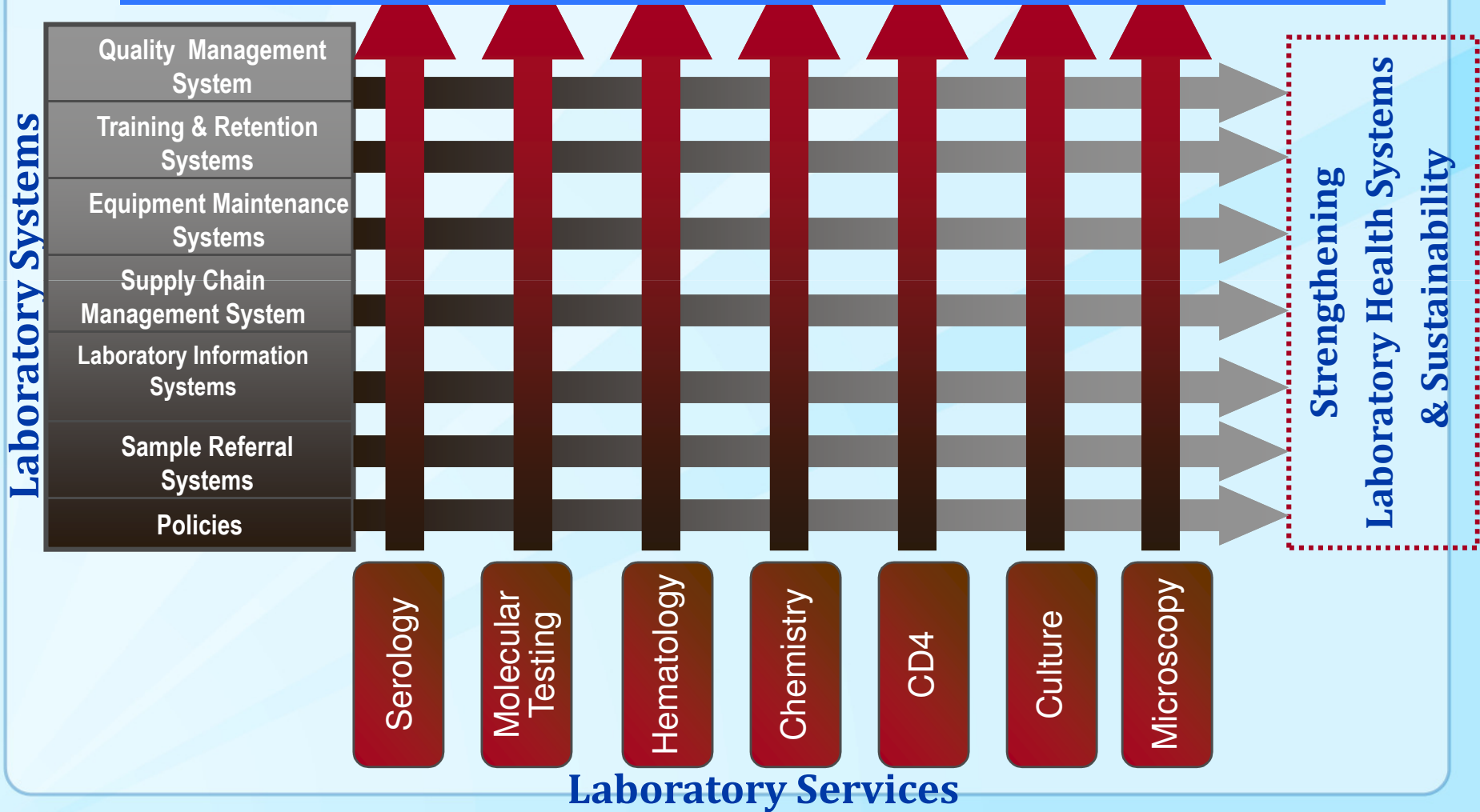
Source: Trevor Peter, 2012

# POC CD4 and Forecast to 2020 by device type



Source: Trevor Peter, 2012

# Framework for PEPFAR Laboratory Strengthening: Integrated Approach for Multiple Diseases







**Institutions**

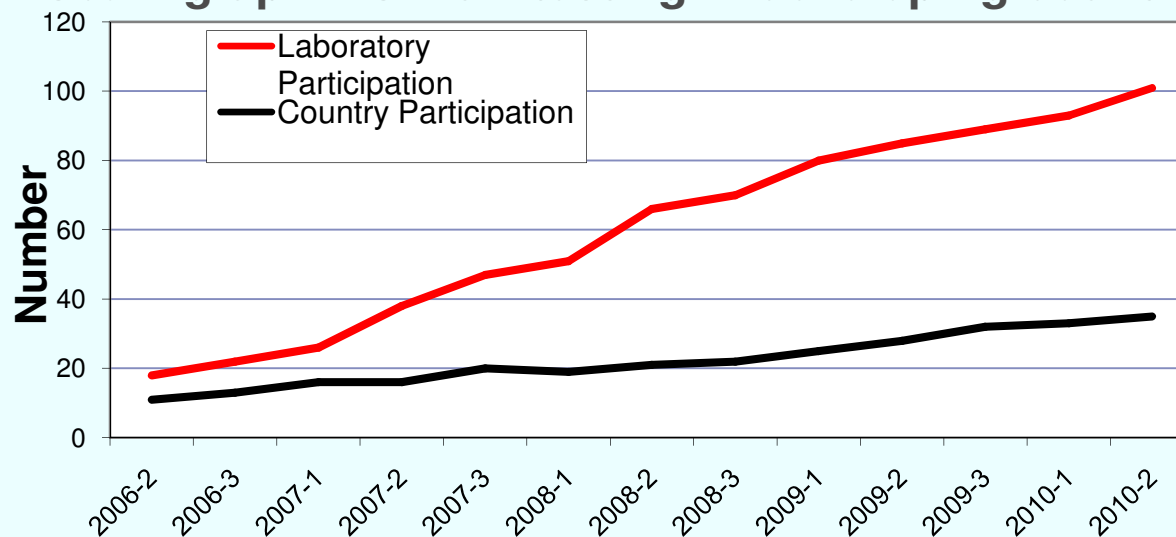
**Systems**

**Services**

# Dried Blood Spot-Based PCR Testing has Helped Scale-Up Early Infant Diagnosis (EID)



Scaling up DBS-PCR testing in developing countries





Systems

Services

# The Case for Strengthening Laboratory Systems

Kigali Conference / LABORATORY SYSTEMS AND SERVICES IN GLOBAL HEALTH

## Laboratory Systems and Services Are Critical in Global Health

Time to End the Neglect?

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**Key Words:** National laboratory systems; Laboratory strengthening; Global health; Public health; Infectious diseases

DOI: 10.1309/AJCPMPSINQ9BRMU6

AJCP / EDITORIAL

## A Shifting Paradigm in Strengthening Laboratory Health Systems for Global Health

Acting Now, Acting Collectively, but Acting Differently

*John N. Nkengasong, PhD*

DOI: 10.1309/AJCPMPSINQ9BRMU6



**Neglected Lab Infrastructure**

# Staining Area

Before



After



# Biosafety Cabinet Work Area:

**Before**



**After**



# Integrated Laboratory Networks are beginning to be a reality: Ethiopia

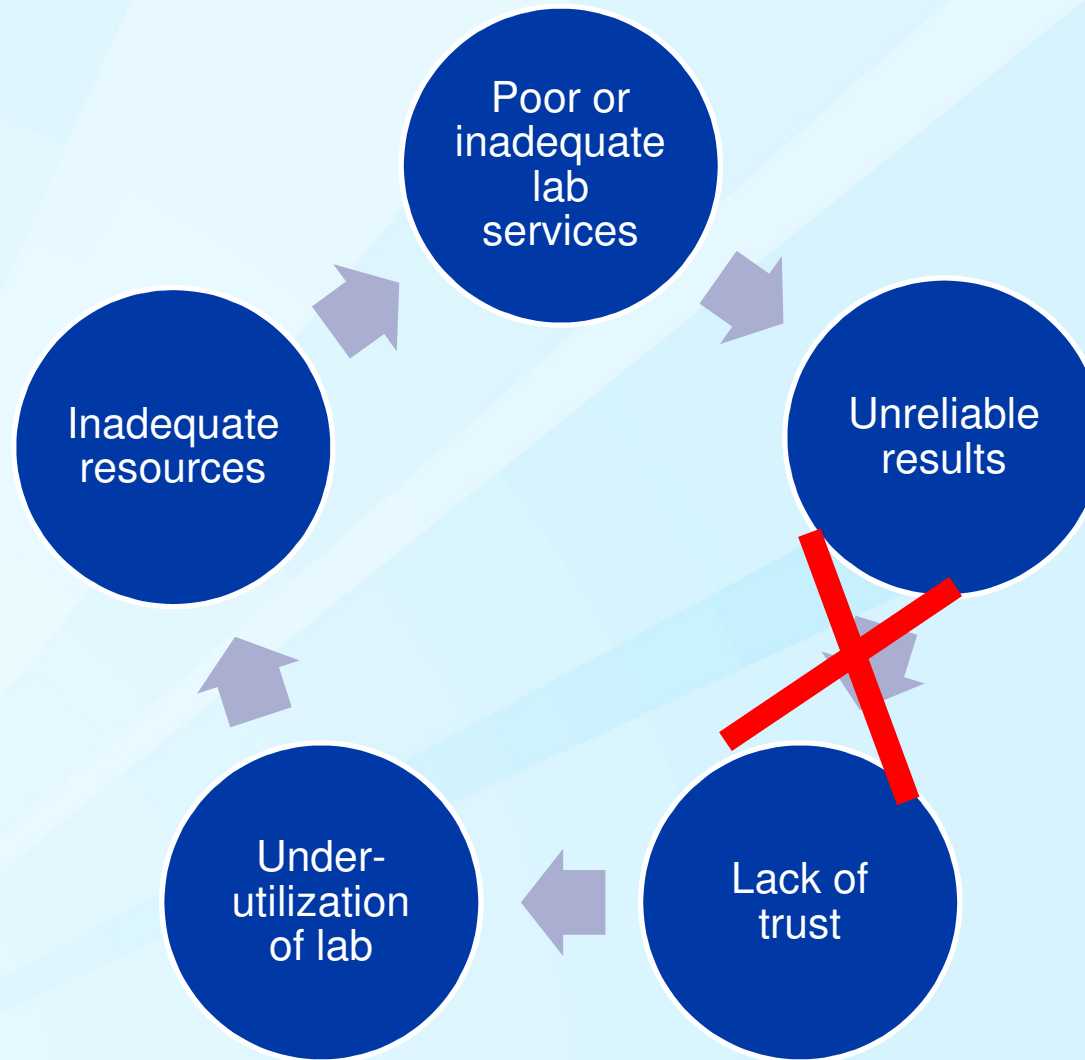
Reference Laboratories



Regional Laboratories



# Breaking the Cycle of Lab System Neglect?





# The Case for Lab Accreditation

Kigali Conference / WHO-AFRO LABORATORY ACCREDITATION PROCESS

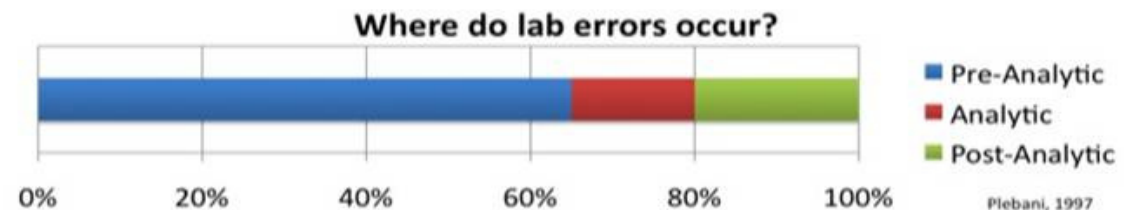
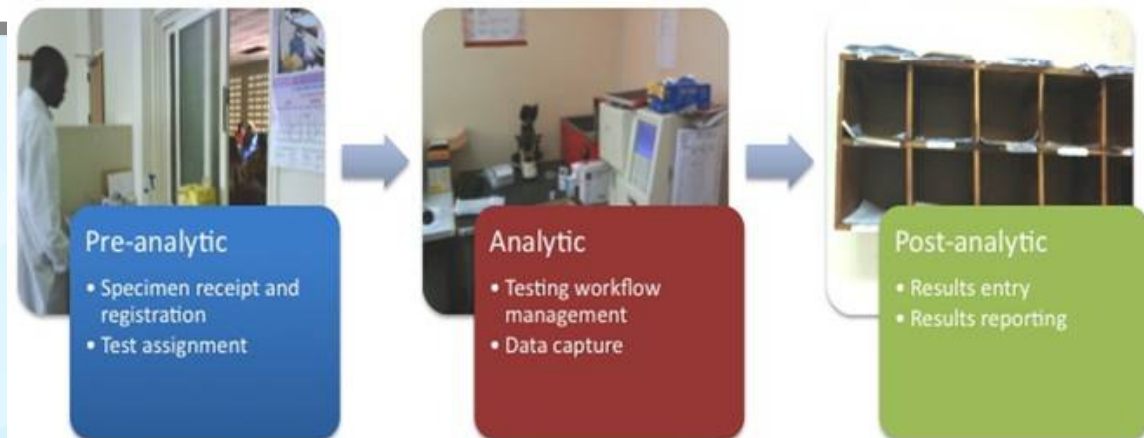
## The World Health Organization African Region Laboratory Accreditation Process

Improving the Quality of Laboratory Systems in the African Region

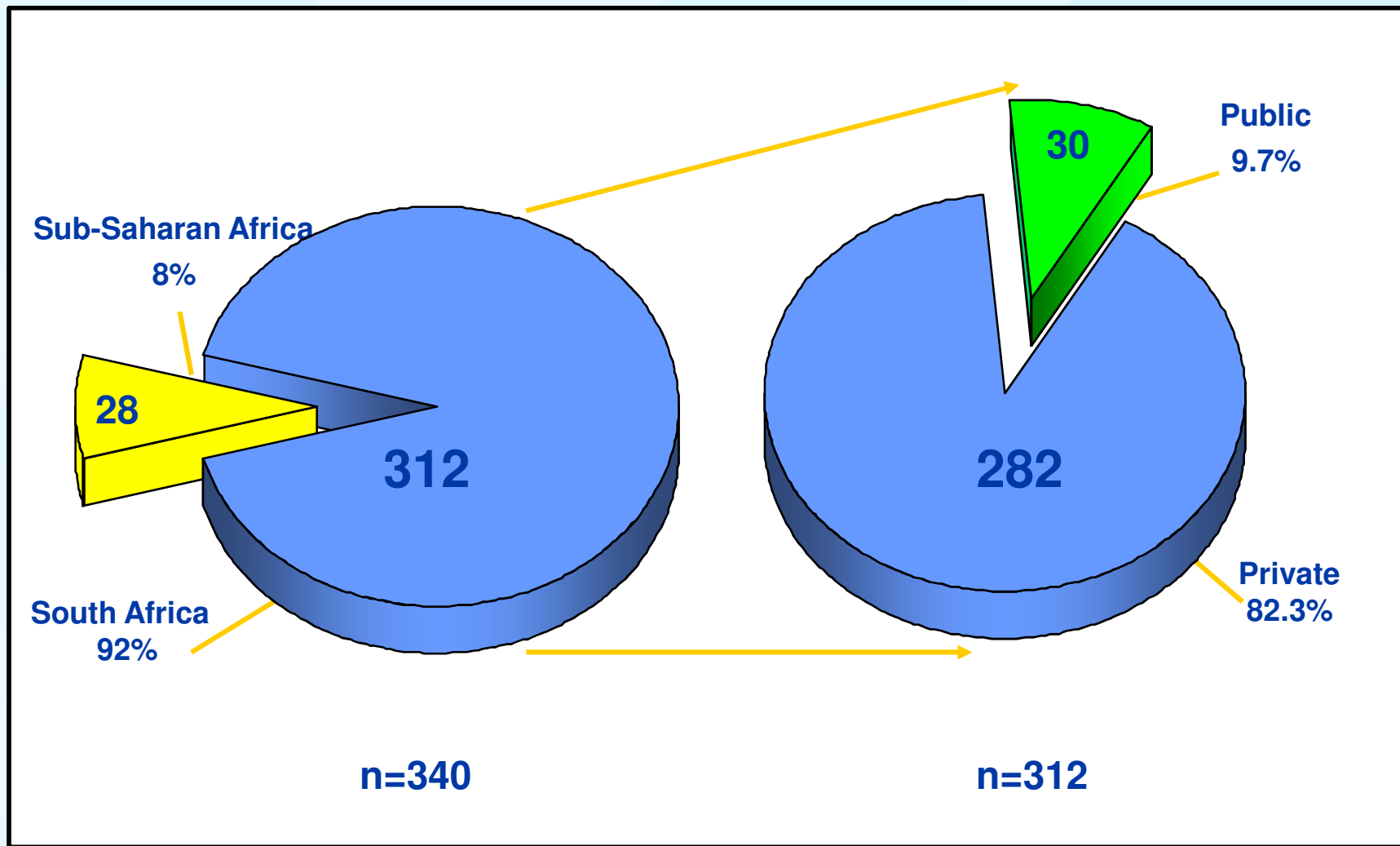
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**Key Words:** Laboratory medicine; Standards; Accreditation; Africa

DOI: 10.1186/14752875110014



# Internationally Accredited Laboratories In Africa as of 2008



# WHO-AFRO Kigali Launch

## July 27-29, 2010



120+ experts and policy makers from 12 African countries

### Meeting Goals:

- Launch WHO Stepwise Accreditation process
- Launch Strengthening Laboratory Management Toward Accreditation (SLMTA)



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#### PRESS RELEASE

#### KIGALI HOST THE LAUNCH OF A PROGRAM TO ACCELERATE NATIONAL LABORATORY SERVICE CAPACITY BUILDING TOWARDS ACCREDITATION IN THE AFRICAN REGION

**Kigali, July 27, 2009** - A total of 120 experts and policy makers from 12 countries, including representatives from Botswana, Cameroon, Cote d'Ivoire, Rwanda, Ethiopia, Kenya, Malawi, Nigeria, Senegal, Tanzania, Uganda, and Zambia convened in Kigali, Rwanda, from 27 to 29 July to gear up toward laboratory capacity building to achieve accreditation. This is a follow-up to the September 2008 Dakar meeting where WHO-AFRO announced the Laboratory Accreditation Scheme to strengthen the tiered laboratory systems of its Member States in a stepwise fashion.

Under the theme "Strengthening Laboratory Management, achieving immediate laboratory improvement, accelerating the process toward accreditation by WHO-AFRO," the Kigali meeting has three goals: 1) to show a blueprint of the path toward accreditation; 2) to obtain key stakeholders' support for accreditation; 3) to showcase a task-based training program in support of laboratory improvement required for accreditation.

The meeting is organized by WHO Regional Office for Africa (WHO-AFRO) and the US President Emergency Plan for AIDS Relief (PEPFAR), in partnership with American Society for Clinical Pathology (ASCP) and Clinton Foundation.

The three-day meeting was opened by the Ministry of Health of Rwanda; the US Ambassador; the WHO Representative for Rwanda; the Director of Global AIDS Program, Centers for Disease Control and Prevention. Former US President Bill Clinton also address the audience via a taped speech. The World Health Organization (WHO) Representative for Rwanda welcomed the participants and emphasized that the theme of the meeting is in line with the Resolution AFR/RC58/R2 on Public Health Laboratory Strengthening adopted by Member States during the 58<sup>th</sup> session of the Regional Committee in September in Yaoundé, Cameroon. Because there is global consensus that laboratory services are vital to achieve universal access to care and treatment and meet the millennium development goals for health, WHO AFRO, in close collaboration with its partners, is putting a lot of efforts in laboratory capacity building to combat HIV, TB, Malaria, Flu and other emerging and re-emerging diseases such as multi-and- extensive resistance TB.

The number of laboratories accredited is a key indicator to measure progress made in strengthening laboratory systems in developing countries. Participants acknowledged that although accreditation may require a lot of commitment and resources, the benefits are measurable, not only to laboratories, but to the entire health system of a country. Accreditation serves to focus the health system on the expressed needs of the customer/patient. As processes are redesigned to deliver the value desired by the customer/patient, there is an opportunity to cut waste and delete non-value-added steps, thereby allowing for reduced costs. Workforce retention is boosted by the sense of professional pride in working in an accredited laboratory. The external evaluation that is the hallmark of accreditation assures the customers that service meets acceptable quality and safety standards. Through continuous improvement of laboratory service quality, the accreditation process can enhance the quality of patient care.

In this meeting, experts will review the roadmap to accreditation, shared success stories and potential roadblocks, discussed critical success factors, and showcased the training tools that will help countries jump start their effort. Accreditation is not an end point, but rather a series of markers along the road to quality laboratory services – services which support the care and treatment of patients.

At the end of the meeting, participants will agree on the leadership and commitment necessary for the transformative accreditation process with strategic plans, policies, actionable operational plans, personnel placement and development, training, financial resources, and persistent accountable support.





**It Counts to Count**

# Strengthening Laboratory Management Towards Accreditation - SLMTA

## What is SLMTA?

An innovative structured task-based training and mentoring program developed to effect immediate, measurable improvement in laboratories using their existing resources



**AJCP**

*American  
Journal of  
Clinical  
Pathology*

September 2010

 American Society for  
Clinical Pathology



Volume 134  
Number 3  
Pages 353-520

**Kigali Conference** / IMPROVING QUALITY MANAGEMENT SYSTEMS

## **Improving Quality Management Systems of Laboratories in Developing Countries**

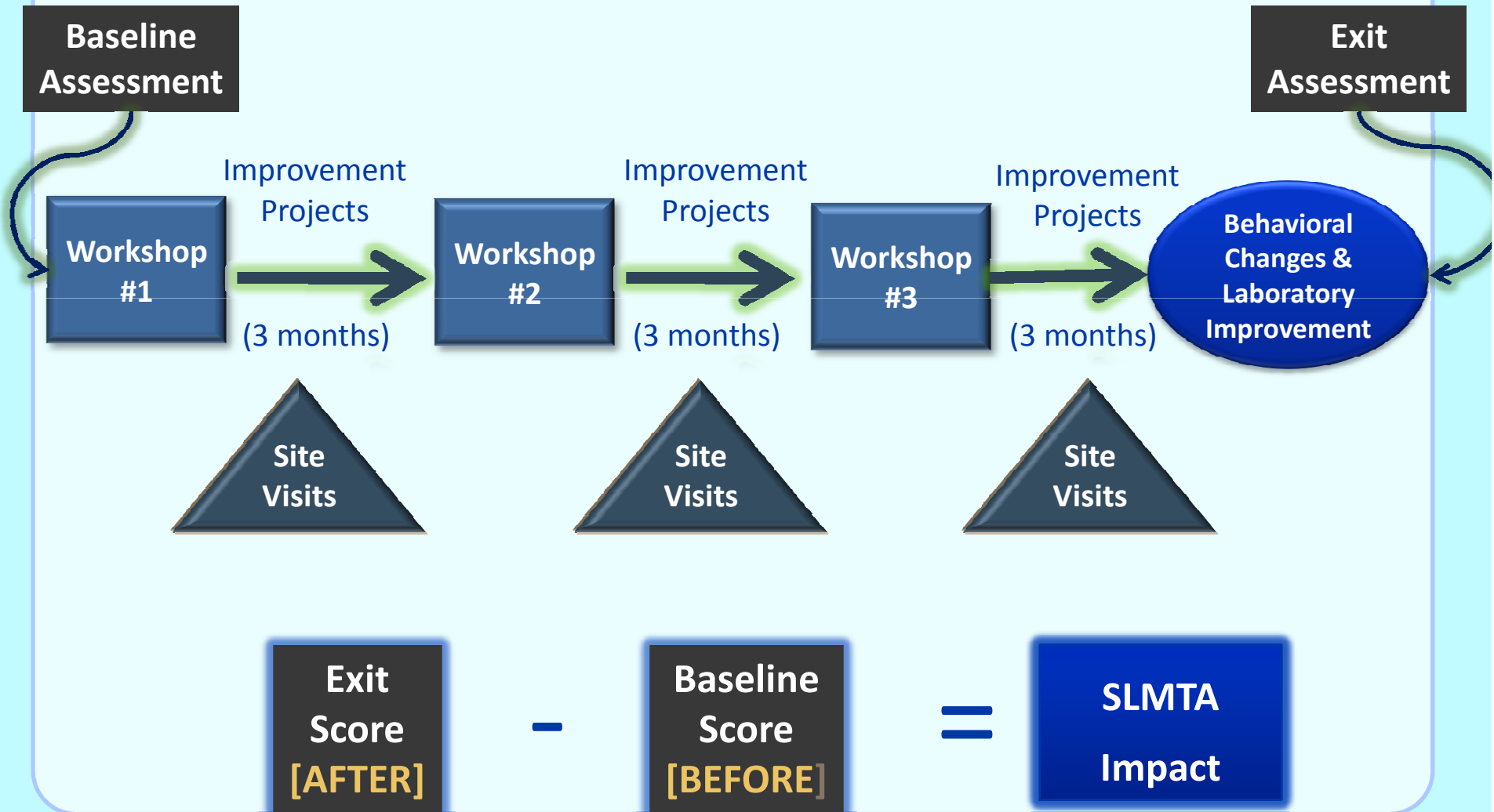
### An Innovative Training Approach to Accelerate Laboratory Accreditation

*Katy Yao, PhD,<sup>1</sup> Barbara McKinney, MD, MPH,<sup>2</sup> Anna Murphy, MT(ASCP),<sup>2</sup>  
Phil Rotz,<sup>3</sup> Winnie Wafula, MD, MSc,<sup>4</sup> Hakim Sendagire, PhD,<sup>5</sup> Scolastica Okui, MPH,<sup>5</sup>  
and John N. Nkengasong, PhD<sup>1</sup>*

**Key Words:** Accreditation; Management; Laboratory quality management system; Laboratory management;  
Task-based training

DOI: 10.1309/AJCPNBBL53FWUIQJ

# Basic SLMTA Facts – Implementation





# SLMTA – The Lesotho Experience

PUBLISHED BY AOSIS OPENJOURNALS



## AJLM

African Journal of Laboratory Medicine

### Strengthening Laboratory Management Towards Accreditation: The Lesotho experience



FIGURE 5: Average performance of all laboratories across the 12 sections, as measured by the World Health Organization Regional Headquarters for Africa Stepwise Laboratory Quality Improvement Toward Accreditation (WHO–AFRO–SLIPTA) checklist.

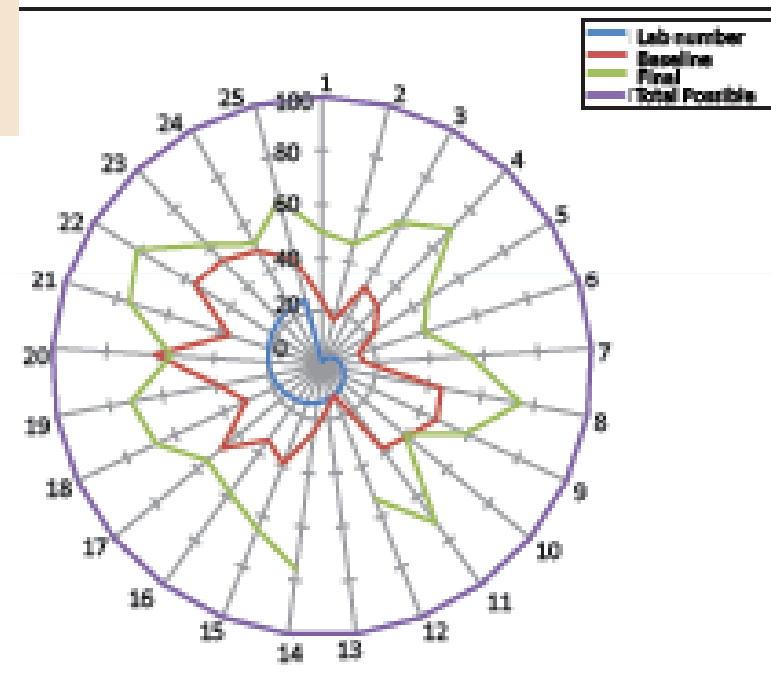
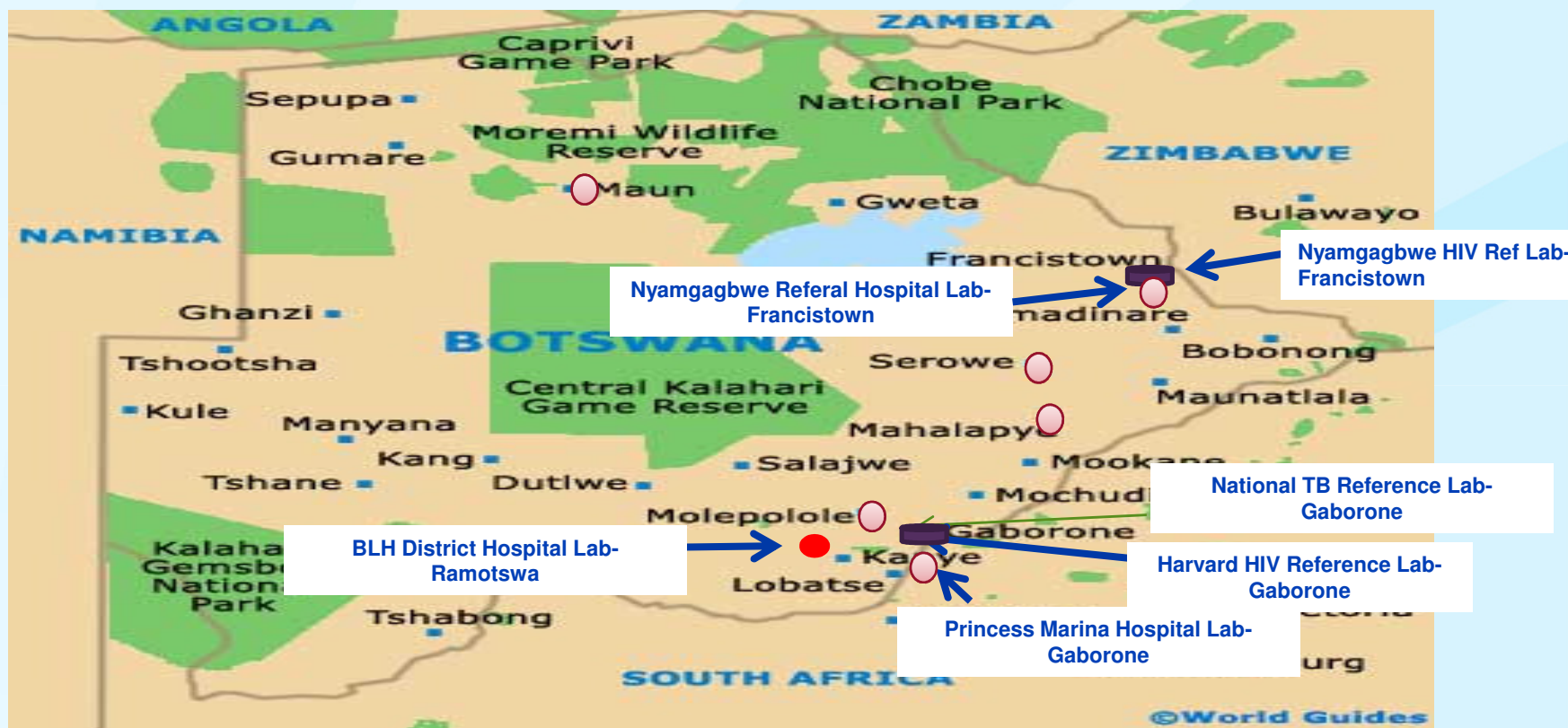





FIGURE 6: Performance of all laboratories at baseline and final assessments in January 2010 and January 2011, respectively, using the World Health Organization Regional Headquarters for Africa Stepwise Laboratory Quality Improvement Toward Accreditation (WHO–AFRO–SLIPTA) checklist.

# Map of Botswana Showing Accreditation Status of MOH Laboratories



## LEGEND

	4	State Reference Laboratories Accredited
	1	District Hospital Laboratory Accredited
	5	MOH district /referral Laboratories under Accreditation Cycle

# Tanzania: International Accreditation Status

Bugando lab, assessed by SADCAS, July 2012

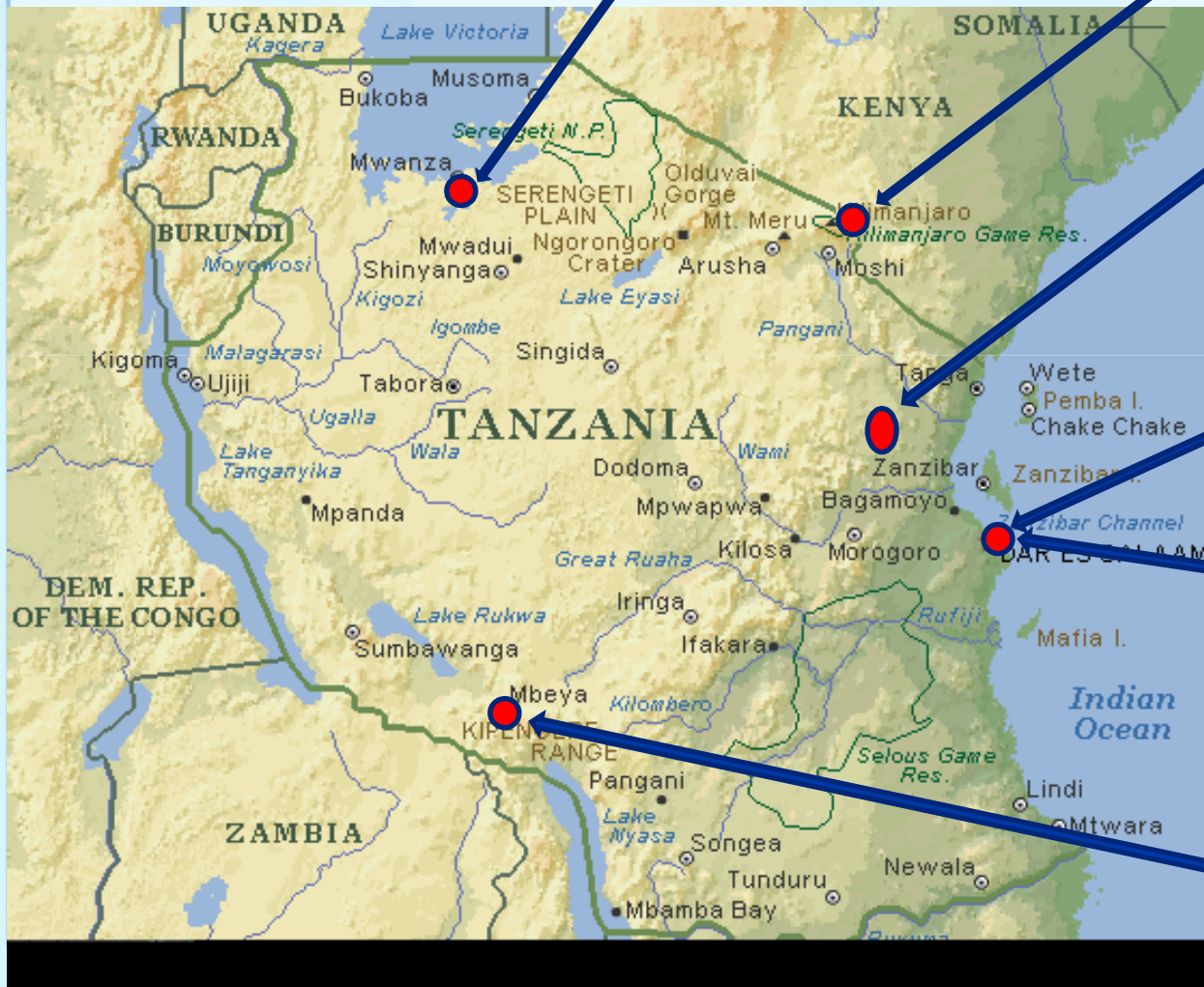
KCMC Referral Lab, awaiting application

Mnazi mmoja Lab, assessed by SADCAS

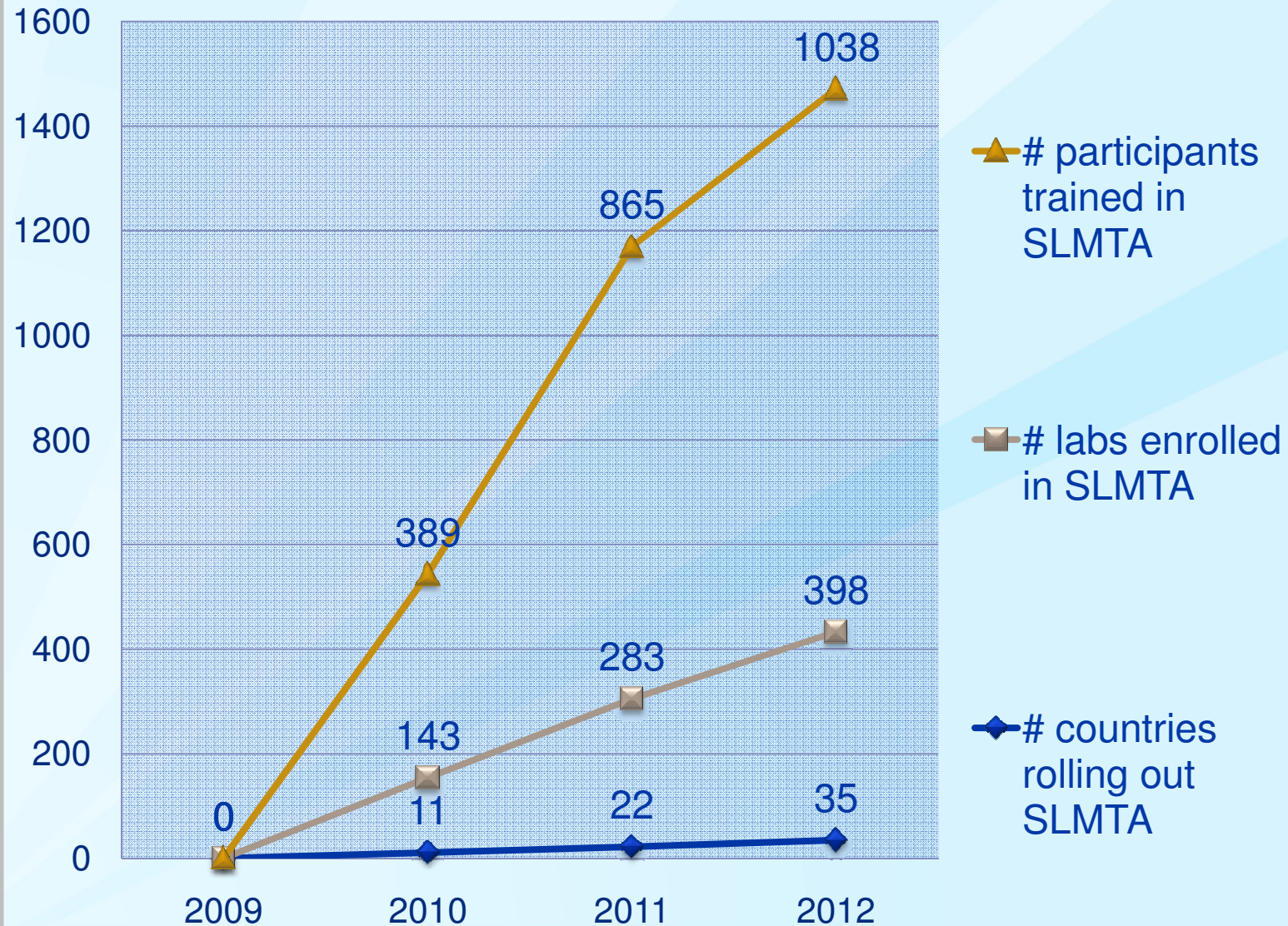
• National Health Laboratory Quality Assurance and Training Centre (Applied to SADCAS),

Muhimbili National Hospital, awaiting application

Mbeya Referral Hospital, applied to SADCAS, awaiting assessment



## Update of the SLMTA Expansion: 2009-2012



# Spread of the SLMTA "Movement"

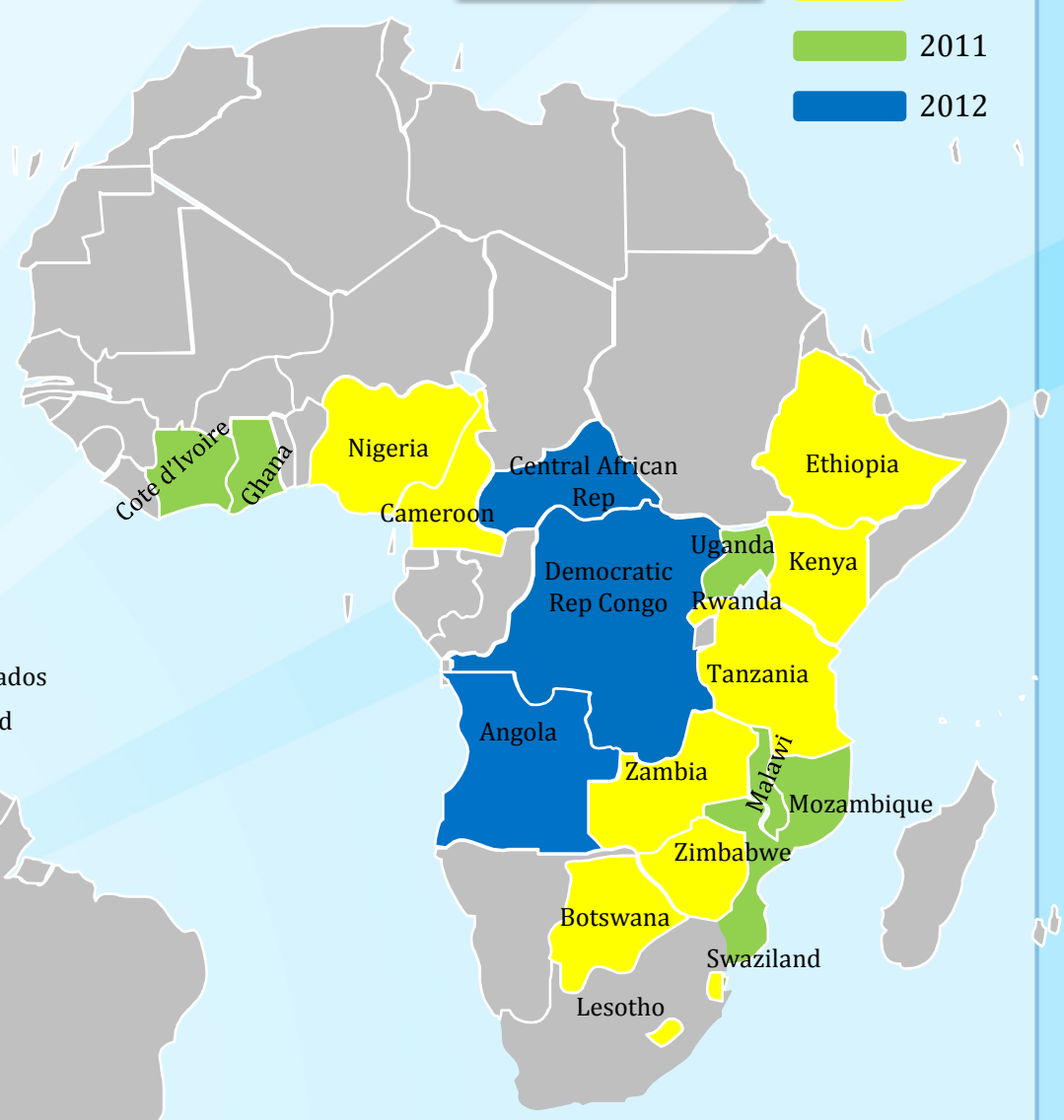
## Rollout

- 2010
- 2011
- 2012

South East Asia (N=2)



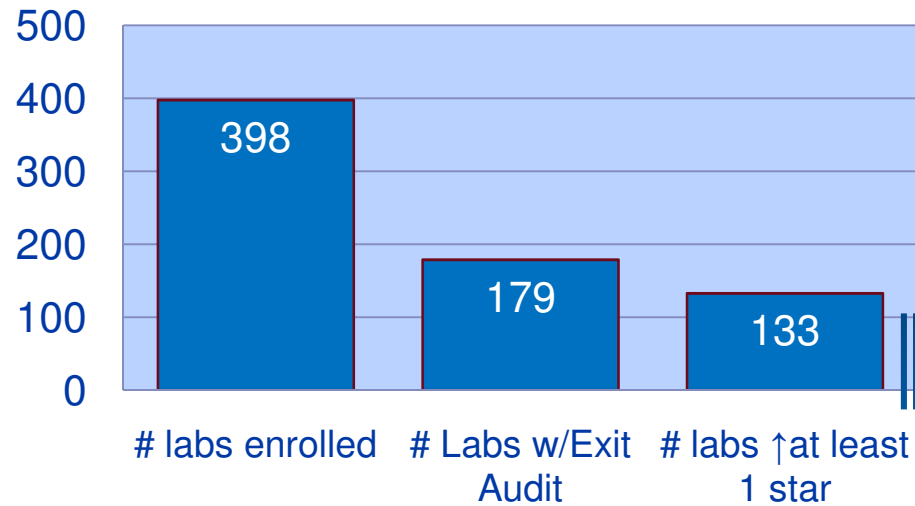
Africa (N=19)



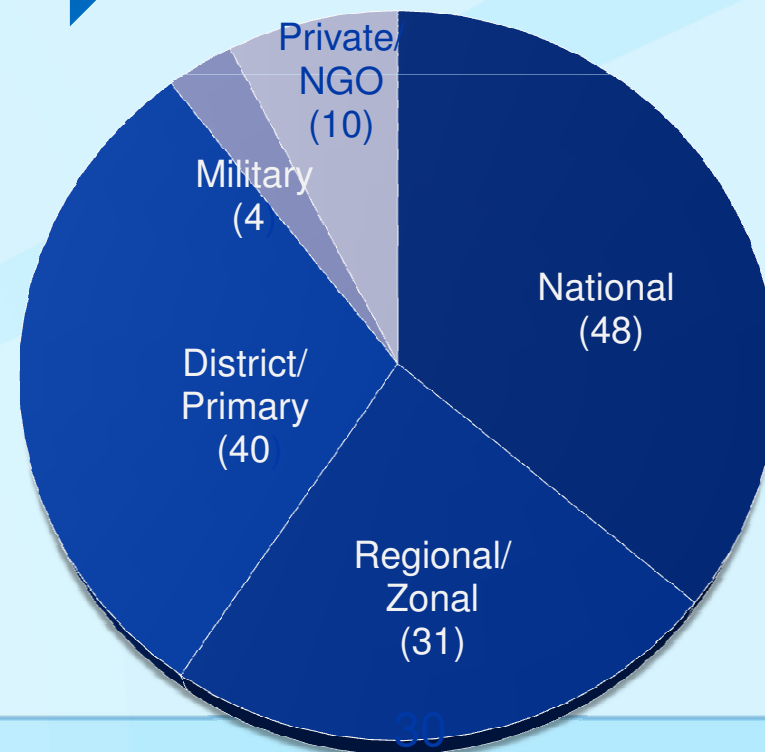
Latin America and the Caribbean Region (N=14)



## SLMTA Labs



Breakdown of the 133 laboratories



# SLMTA in Action in Botswana

Hi Heather-

In Botswana on TBIC evaluation- saw notebook with SLMTA written on it- a lab at Palapaye Hospital keeping track of microscopy turn around times- they have been reduced from 3-5 days to reach surrounding clinics to 24 hours- based on their records and reports from clinics- go SLMTA! The lab is also calling clinics directly when they have a smear+ specimen.

Cheers-

Courtney



Conscience, Nurtured by Truth  
**The Guardian**  
N I G E R I A

## 'Why Nigeria loses grants for HIV, clinical trials'

MORE reasons have been adduced for Nigerian laboratories' continued misdiagnose and under-diagnose of life threatening ailments and the country losing grants for clinical trials for Human Immuno-deficiency Virus (HIV)/Acquired Immune Deficiency Syndrome (AIDS), tuberculosis and malaria vaccines worth hundreds of billions of naira in foreign exchange.

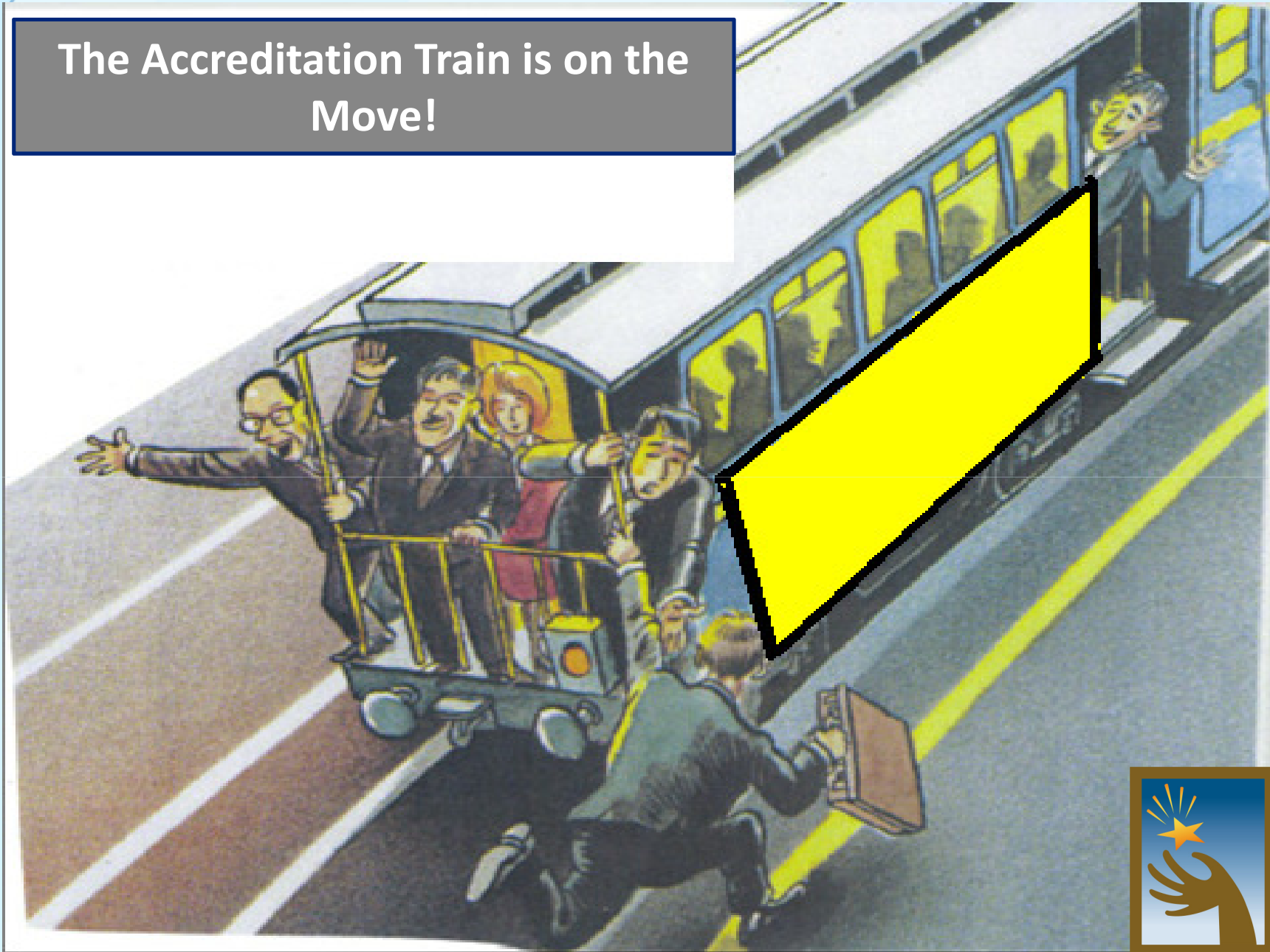


Dr. Innocent Ujah, Director-General  
Nigerian Institute for Medical Research (NIMR)

Dr. Oni Idigbe, told The Guardian that SLMTA was going to ensure that Nigerian laboratories get ISO accreditation and WHO certification.



# The Accreditation Train is on the Move!



# ASLM

AFRICAN SOCIETY FOR LABORATORY MEDICINE

# 2020

Vision: Improve healthcare in Africa by strengthening laboratory services

Mission: Advance professional laboratory medicine practices, science and networks in Africa

## Strengthened Laboratories Improve Healthcare

**Goal 1 – African Laboratory Workforce Development:** Train and certify 30,000 laboratory professionals and clinicians

**Goal 2 –Laboratory Accreditation:** Enroll 2,500 laboratories in the WHO SLIPTA quality improvement program and enable 250 laboratories to achieve accreditation

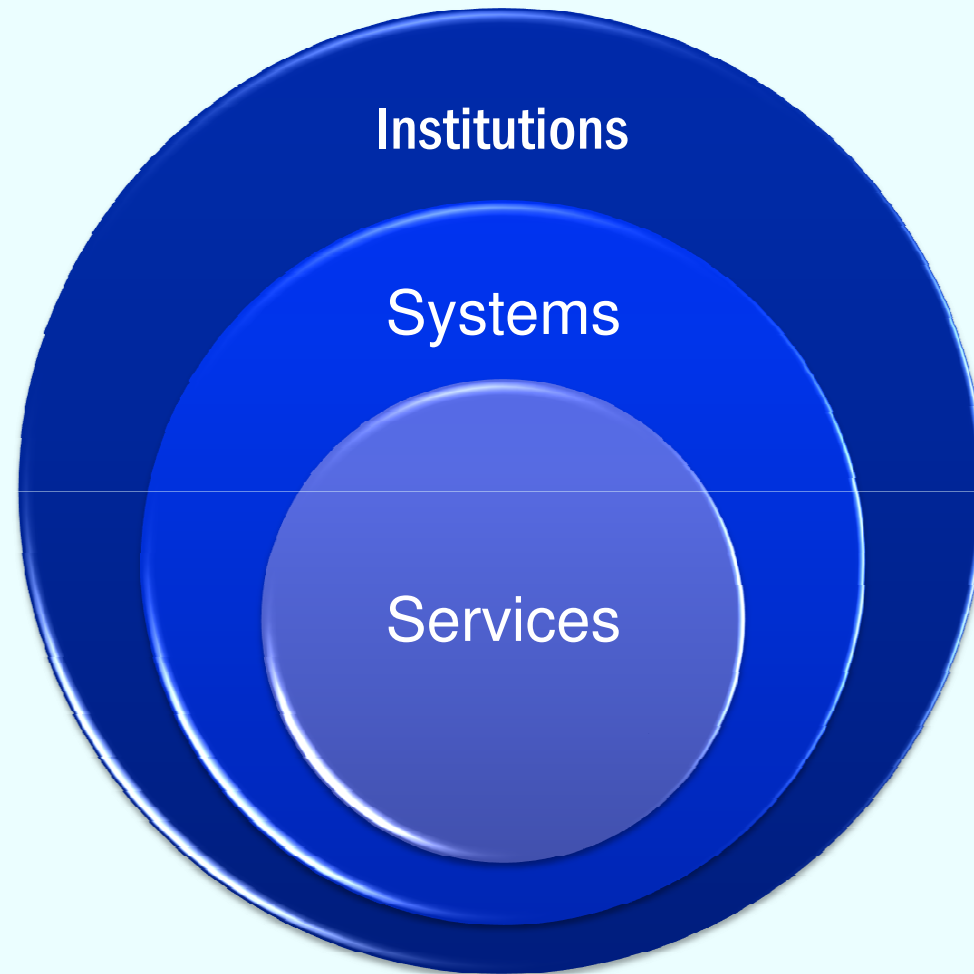
**Goal 3 –African National and Regional Regulatory Environments:** Raise regulatory standards for diagnostic products to stringent international standards in 25 countries (50 %) and promote harmonization in the 5 economic regions of Africa

**Goal 4 - African Network of National Public Health Reference Laboratories:** Develop national public health reference laboratories in 30 countries and an African Network of National Public Health Reference laboratories

3

# Need for Laboratory Institutions





# Launch of the African Society for Laboratory Medicine



# ASLM

AFRICAN SOCIETY FOR LABORATORY MEDICINE

## African Society for Laboratory Medicine Launch



## ASLM MISSION

To advance professional laboratory medicine practice, science, systems and networks in Africa needed to support preventive medicine, quality care of patients and disease control through partnership with governments and relevant organizations.



**ASLM** | 2012  
AFRICAN SOCIETY FOR LABORATORY MEDICINE

**1ST INTERNATIONAL CONFERENCE OF  
THE AFRICAN SOCIETY FOR LABORATORY MEDICINE**

# Theme: Accurate Laboratory Diagnostics— A Pillar of Quality Healthcare

Cape Town International Convention Centre, South Africa ■ December 4–7, 2012

**ASLM** | 2012  
AFRICAN SOCIETY FOR LABORATORY MEDICINE

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## Theme: Accurate Laboratory Diagnostics— A Pillar of Quality Healthcare

Cape Town International Convention Centre, South Africa ■ December 4–7, 2012

Don't miss this  
historic conference —  
register early for  
the best deals!

It is a pleasure to invite you join an expected 1500 participants at the First International Conference of the African Society for Laboratory Medicine (ASLM) to be held December 4–7, 2012 at the Cape Town International Convention Centre, South Africa.

#### What is ASLM?

The African Society for Laboratory Medicine ([www.asfm.org](http://www.asfm.org)) was launched in March 2011 with the mission to: advance professional laboratory medicine practice, science, systems, and networks in Africa needed to support preventive medicine, quality care of patients and disease control through partnership with governments and relevant organizations.

The African Society for Laboratory Medicine is a Pan-African professional body, endorsed by the African Union, working with countries to advocate for the critical role and needs of laboratory medicine and networks.

#### Who should attend ASLM2012?

The conference is open to laboratory professionals, clinicians, program managers, epidemiologists, researchers, students, and policy makers with an interest in advancing laboratory diagnostics for quality health care in Africa and elsewhere.

#### Objective of ASLM2012

The objective of this meeting is to convene healthcare professionals and policy makers from Africa and around the world to present and discuss the latest developments and initiatives for strengthening national laboratory health systems and networks, diagnostics, and their impact on healthcare delivery and disease surveillance.

Specifically, the conference will provide a forum for:

- Problem-solving to improve access to, regulation of, and policy regarding quality point of care laboratory diagnostics
- Discussing ways to strengthen laboratory-based surveillance, biosafety, and biosecurity, and to reduce antimicrobial resistance
- Prioritizing and enhancing mobilization and utilization of resources for local capacity
- Operationalizing laboratory research to meet evolving disease needs in the 21st century
- Exchanging knowledge, skills, and best practices to improve access to high quality laboratory services
- Sharing experiences on establishing functional laboratory networks for disease-specific needs and for multiple diseases

#### ASLM2012 Conference Format

The conference will consist of plenary sessions, symposiums, oral sessions and posters. In addition, pre- and post-conference workshops and satellite sessions will offer opportunities for training and networking.

ASLM2012 REGISTRATION AND ABSTRACT SUBMISSION WILL OPEN IN JANUARY 2012 AT THE ASLM WEBSITE:  
[WWW.AFSLM.ORG](http://WWW.AFSLM.ORG). FOR MORE INFORMATION PLEASE CONTACT: [ETALEM.ENGEDA \(EENGEDA@AFSLM.ORG\)](mailto:ETALEM.ENGEDA@AFSLM.ORG).

## Conclusions

- Promote accreditation as measure of lab quality
- Bridge the gap between Laboratory – Clinical interface
- Strengthen Institutions

# Thank You



**Thinkers Are Great But Doers  
Change The World**