Essential Components of Integrated National Laboratory Plans

2nd Meeting of the Global Laboratory Initiative

October 15 – 16, 2009

John Nkengasong, PhD
Chief, International Laboratory Branch
Global AIDS Program
CDC Atlanta
Outline

- Existing National Laboratory Health System and program support
- Surge in funding for programs and laboratory
- Essential elements of integrated Laboratory Plan
- Examples of laboratory system strengthening
Relationship between laboratory support and programs!

It is everything!

- Molecular testing – Polio, TB, Flu, HIV
- Microscopy – TB/Malaria
- Hematology, cytometry, and Chemistry - HIV
- Culture - TB
- Serology - HIV
Support Programs for:
Polio, Measles, Flu, Tuberculosis, Malaria, HIV/AIDS, Viral Hepatitis, Sexually Transmitted infections

Laboratory Systems

Quality Management System
Training & Retention Systems
Equipment Maintenance Systems
Supply Chain Management System
Laboratory Information Systems
Sample Referral Systems
Policies

Laboratory Services

Serology
Molecular Testing
Hematology
Chemistry
CD4
Culture
Microscopy

Strengthing Laboratory Health Systems & Sustainability
Silos of National Reference Laboratories

Disease-specific laboratories are a common practice
HIV and Polio Reference Laboratories
Network of Neglected National Laboratory Systems

Regional and District Laboratories

National Reference Laboratory
World Bank Multi-country AIDS Program (MAP)

EU

United Nations

General Assembly Special Session on HIV/AIDS
June 25-27 2001

World Health Organization

The 3 by 5 Initiative
TREAT THREE MILLION PEOPLE LIVING WITH HIV/AIDS BY 2005

DFID - UK Department for International Development

The Bill and Melinda GATES FOUNDATION

EDCTP

WELCOME TRUST

Clinton Foundation

USAID JICA GTZ FIND GLI
The Great Funding Surge
HIV/AIDS now attracts billions of dollars each year, extending millions of lives.

Where Have All The Dollars Gone?
The feasts before the famine?

Implication for Laboratory Health Systems!
HIV/AIDS: Follow the Money

Money Flows

Funding by Donor
- 22% PEPFAR
- 21% Bilateral
- 21% Global Fund
- 28% World Bank/UNAIDS
- 8% Private

Total Annual Resources Available for HIV/AIDS

Year
$ Millions
0 2,000 4,000 6,000 8,000 10,000

Signing of Declaration of Commitment on HIV/AIDS, UNGASS
World Bank MAP launch
Gates Foundation
Global Fund
PEPFAR
An Era of Increased Resources: An Opportunity or a Challenge?

Generosity can be a burden: Risk of emergence of parallel lab networks!
Expanding Access to Antiretroviral Therapy in Sub-Saharan Africa: Avoiding the Pitfalls and Dangers, Capitalizing on the Opportunities - McCoy D. et al

FIGURE 1—The virtuous and vicious cycles of rapid ART expansion.

Note. ART = antiretroviral therapy, PHC = primary health care.
National Laboratory Policy

Foundation for developing sustainable laboratory health systems

National Strategic Laboratory Plans
The Maputo Declaration on Strengthening of Laboratory Systems

Call on national governments to support laboratory systems as a priority by developing a national laboratory policy within the national health development plan that will guide the implementation of a national strategic laboratory plan. Governments should establish a department of laboratory systems within the Ministry of Health.

Call on national governments with support of their donors and partners in resource-limited settings to develop national strategic laboratory plans that integrate laboratory support for the major diseases of public health importance including HIV, tuberculosis, and malaria.
Tear down the walls between disease-specific laboratories
Diseases of Public Health Importance Whose Surge in Funding Can Drive Overall Laboratory Strengthening Efforts

National Strategic Plans Should Integrate Major Diseases

Malaria  HIV  Tuberculosis  Polio, Influenza
Diseases of Public Health Importance Whose Surge in Funding Can Drive Overall Laboratory Strengthening Efforts

Cross-Cutting Streams

- Training/Retention
- Infrastructure Development
- Supply chain/maintenance of equipment
- Specimen Referral Systems
- Quality Management Systems
- Governance/Regulatory Policy

National Strategic Plans Should Integrate Major Diseases

- Malaria
- HIV
- Tuberculosis
- Polio, Influenza

Centers for Disease Control and Prevention
Guidance for Development of National Laboratory Strategic Plans

Produced with the collaboration of:

WHO-AFRO
WHO-GENEVA
U.S. Centers for Disease Control and Prevention
The Association of Public Health Laboratories
The American Society for Clinical Pathology
The Bill and Melinda Gates Foundation
The Clinton Foundation
The Global Fund
## Development of National Strategic Laboratory Plan in PEPFAR-Supported Countries

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<tr>
<th>Country Engaged in Discussion</th>
<th>Coordinating &amp; Technical Committees Formed</th>
<th>Strategic Plan Developed</th>
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Kenyan Laboratory Strategic Plans and Policy
The Lab Strategic Plan
Train is on the Move!
Laboratory Network Guidance


• Focuses on how to enhancing multi-disease laboratory networks
Diseases of Public Health Importance Whose Surge in Funding Can Drive Overall Laboratory Strengthening Efforts

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- HIV
- Tuberculosis
- Polio, Influenza
Policy Makers and Managers
Make it happen!
TB, HIV, Malaria - Integrated Training Center, Zaria, Nigeria
Strengthened Laboratory Infrastructure for HIV/AIDS is being used to combat other diseases.

Reference Laboratory for HIV, TB, AI and Malaria
Training, Mentorship, and Retention Strategies

Training and Retention

70% Lab Technologists

- Lab Testing:
  - Quality Assurance
  - PCR
  - TB Microscopy
Training, Mentorship, and Retention Strategies

Training and Retention

20%
Lab Managers
- Public Health Microbiology
- Lab Management
- Training
- Forecasting

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Training and Retention

- Retention Strategy
- Role of Labs in Health System
- Career Development of Labs

Public Health Microbiology
Lab Management
Training
Forecasting

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Lab Policy Makers
Lab Managers
Lab Technologists

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WHO AFRO Laboratory Accreditation – A Step-Wise Approach Towards Quality Improvement

Commitment to continuous improvement
Media Coverage of Stepwise WHO-AFRO Accreditation

Health organizations launch new lab accreditation process
Government and health officials from across Africa meet