



**2013**  
**APHL**  
ANNUAL  
MEETING &  
7<sup>TH</sup> GOVERNMENT ENVIRONMENTAL  
LABORATORY CONFERENCE

**Public Health Laboratories Soaring  
to New Heights — The Wright Stuff**



# Solutions for Global Disease Surveillance and Data Management

Monday, June 3, 12:30 pm – 2 pm

Session 588-817-13



# Presentation Focus

- Barriers to reporting, aggregation and analysis of laboratory data
- Strategies for increasing timely, comprehensive access to and use of laboratory data for public health use
- APHL work to support collection, management and use of laboratory data for public health purposes

# Presenters

- Gaetano Borrielo, Open Data Kit Project, Computer Science & Engineering, University of Washington,,
- Jackson Hungo, Clinton Health Access Initiative (CHAI)
- Ralph Timperi, APHL

# LIS – What it does routinely

- Records and stores data on specimens, test process and quality control, personnel actions, instruments, and test results
- Interacts with instruments and people
- Documents data during the life of a specimen and links these data to patients
- Provides test report information and management information in standard reports; can provide live query

# LIS Unlocked

- Support quality laboratory operations
- Manage routine, emergency and surge testing services
- Provide timely, accurate case finding for disease treatment and prevention
  - Most effective means for improving epidemiologic surveillance
  - Most accurate means for tracking and guiding interventions during outbreaks

# APHL Support in LIS Global Arena

- Expertise and resources
  - Members, CDC Atlanta and CDC Country Staffs Expertise, Country Ministry of Health staffs
  - Staff in Global Health, Informatics, Laboratory Systems, Contracts, Accounting, Management
  - PEPFAR Funding
  - Contract consultants in countries
  - Contract services for LIS applications, hardware and maintenance services

# What we do

- Assess needs and develop plans for LIS implementations
- Contract for LIS applications and support
  - Application implementation
  - Hardware and cabling installation
  - Facility renovation and modification



# What we do

- Provide information to country ministries on LIS functions and uses
  - Presentations and discussions
  - APHL/GWU Institute
  - Arrange presentations by application providers

# Examples of APHL Activities - Tanzania

- Collaborate with Abbott Fund on wide-area network of 23 regional laboratories
- Implement and support LIS at national reference laboratory and select laboratories
- Implement database for proficiency testing
- Support strategic planning and participate in LIS Technical Working Group

# Examples of APHL Activities - Mozambique

- Implement and support LIS at national referral hospital, district hospitals and national TB laboratory
- In-country local consultants for support
- Database development for ministry laboratory division human resources, supply management

# Examples of APHL Activities - Kenya

- Implement and support LIS at national reference laboratory and provincial hospitals
- Management database for national equipment maintenance system
- Collaboration with Strathmore University to customize CDC open source system

# Examples of APHL Activities - Namibia

- Development of laboratory-based disease surveillance system with regular and on-demand report capability
  - Namibia Institute of Pathology operates a Medi-Tech WAN with 40 laboratories on-line
  - Medi-Tech data repository is Microsoft SQL Server platform
  - Stepwise implementation
    - NIP DR server
    - Build separate Db for MOHSS and import data from other laboratories

# Point of Care Laboratory Testing

- Extension of the laboratory and LIS, i.e., analytical instruments that provide patient test results and transmit test data
- One means (and an important one) to offset weak infrastructure in developing countries
- Laboratory quality management needed to collaborate with clinicians and allied health

# What are the strategic objectives?

- In order to improve population health and individual patient care, **integration** of technologies will be key to realization of the potential for access to quality laboratory services at every level of the health system, for timely laboratory-based disease surveillance and to improve population health for response to disease outbreaks.

# Future for APHL Global LIS

- Affect change in quality laboratory practices and health outcomes
- Appreciate and realize the synergy between global and domestic LIS initiatives and reap the value for our members as well as for world population health



# Questions?

- Can technological advances reduce costs (developed countries) and be affordable (developing countries)?
- How do we evaluate technology for public health applications?
- How do we choose, implement and realize the value of technology globally?

# What are your ideas and questions?



- THANK YOU FOR YOUR PARTICIPTION AND INPUT TO THIS IMPORTANT ISSUE

# Before and after eLIS implemented



# Where do errors occur?

