Global Health Security (GHS) Agenda\(^1\)
Launched in 2014, the GHS Agenda aims to create a safer world from global health threats with the following goals: prevent and reduce the likelihood of outbreaks, detect threats early, and provide rapid response with multi-sectoral, international coordination and communication. Over the next five years, the U.S. will work with over 30 countries to address nine objectives, including addressing antimicrobial resistance, establishing national biosafety and biosecurity systems, and deploying novel laboratory diagnostics.

The GHS Agenda aims to strengthen the efforts of the revised 2005 International Health Regulations (IHR\(^2\)), a global mechanism for the coordinated reporting of public health emergencies. 194 States adopted the revised IHR (2005), but over 80% were unable to meet the minimum eight core capacities, including risk communications, surveillance, response, and laboratory by the June 2012 deadline.

The Laboratory Response Network (LRN)\(^3\)
The LRN, established in 1999 by the U.S. Centers for Disease Control and Prevention (CDC), Federal Bureau of Investigation (FBI) and the Association of Public Health Laboratories (APHL), is an integrated network of local, state, and federal public health, sentinel clinical, food, veterinary, environmental, military, and international laboratories that provide capability and capacity for the detection of biological and chemical threats as well as emerging infectious diseases, and other public health emergencies. State and local public health laboratories comprise about 70% of the 160 LRN for Biological Threats (LRN-B) Reference laboratories and almost 100% of the 54 LRN for Chemical Threats (LRN-C) laboratories.

The Laboratory Information Management System Integration (LIMSi) project addresses time-consuming double data entry by connecting the LRN-B Reference laboratories internal LIMS directly with CDC for electronic result reporting. Presently, LRN Laboratories are becoming better equipped to detect and respond to public health threats by employing innovative technologies for more rapid, definitive testing.

As of 2014, there are approximately 160 LRN-B laboratories strategically located in all 50 states, Australia, the United Kingdom, Mexico, and South Korea. The majority of these are public health laboratories have standardized testing capabilities.

Acknowledgements / Sources

For More Information
To learn more about APHL and the Public Health Preparedness and Response Program, visit www.aphl.org or contact PHPR staff at emergency.preparedness@aphl.org

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Laboratory Networks: Assets for GHS & IHR
GHS Agenda Goals and Objectives
- Prevent
  - National biosafety & biosecurity systems
  - Reduced number/magnitude of outbreaks
- Detect
  - Global networks for real-time biosurveillance
  - Rapid, transparent disease reporting and sample sharing
  - Novel diagnostics and stronger laboratory systems
- Respond
  - Interconnected global network of emergency operations centers (EOCs) and response to biological threats

IHR Core Capacities and Indicators
- Surveillance
  - Routine/ event based surveillance (including early warning function)
- Response
  - Emergency response mechanisms
- Preparedness
  - Effective risk communications mechanisms
- Laboratory
  - Coordinated mechanism for laboratory services
  - Services are available to test priority health threats
  - Collection, packaging, and transport of specimens
  - Biosafety and biosecurity practices
  - Data management and reporting

Opportunities To Get Involved
Public health laboratories can assist the advancement of the GHS Agenda and IHR (2005) goals by not only providing models of success but also strengthening laboratory systems and programs in-country:
- Technical Assistance
  - Standard Operating Procedure (SOP) Development
  - Informatics (e.g. Open ELIS in Vietnam)
- Strategic Planning and Mapping
- Continuity of Operations Planning
- Training
  - Instrumentation
  - Biosafety and Biosecurity
  - Software and Hardware
- Data Messaging & Integration with Epidemiology
- Laboratory Management & Leadership
- Twinning & Mentorship