



Arizona State Laboratory

Role of the Laboratory in Public Health

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Role of the State Laboratory

- 2000: Association of Public Health Laboratories defined a goal and a set of core functions for public health laboratories
 - Goal is for the control or elimination of disease through the fulfillment of 11 core functions and interaction with laboratory services providers



Role of the State Laboratory

- 2010: ASPHL revised definition to emphasize cooperation and synergy between public and private facilities and the end users of the data they generate
 - Goal is the control or elimination of disease through the fulfillment of 11 core functions in synergistic partnership with laboratory service providers and end users of generated data



11 Core Functions

- Disease Prevention, Control, and Surveillance
- Integrated Data Management
- Reference and Specialized Testing
- Environmental Health & Protection
- Food Safety
- Laboratory Improvement and Regulation

Core Functions continued

- Policy Development
- Public Health Preparedness and Response
- Public Health Related Research
- Training and Education
- Partnerships and Communication

Disease Prevention, Control and Surveillance

- Provide accurate and precise analytical data in a timely manner in support of:
 - outbreak recognition
 - disease prevention & control
 - population based surveillance
 - newborn screening
 - monitoring of low incidence / risk diseases
 - chemical exposures



Integrated Data Management

- Serve as the focal point for accumulating and disseminating scientific information:
 - Clinicians
 - Epidemiologists
 - Clinical lab partners
 - Policymakers





Reference and Specialized Testing

- Serve as the state's primary reference laboratory:
 - Aid in the diagnosis of unusual pathogens
 - Confirm atypical laboratory results
 - Test epidemiologically significant specimens
 - Provide reference diagnostic testing
 - Test for diseases of public health significance that are too rare or unusual for other labs' capacity



Environmental Health & Protection

- Conduct scientific analyses on environmental samples (air, soil, water) to identify and monitor potential threats to human health and assure compliance with environmental regulations
- Provide environmental chemistry testing including inorganic (metals and non-metals) and organic compounds
- Provide lab services to support the assurance of clean water in the state

Food Safety

- Test food and beverages implicated in foodborne illnesses to identify causes and sources
 - Biologics: *E. coli* O157, *Salmonella*, *Shigella*
 - Chemicals: pesticides, heavy metals, volatile organic compounds
 - Food Emergency Response Network (FERN)





Laboratory Improvement & Regulation

- The State Laboratory Office of Laboratory Licensure licenses, certifies, and inspects environmental and clinical laboratories



Policy Development

- Participates in the development of standards for all health related laboratories, including food, environmental, clinical, and research standards
- Provides data to lawmakers to create laws based on scientific evidence and sound reasoning



Preparedness & Emergency Response

- Provide laboratory support as part of local, state and national disaster preparedness plans
 - Laboratory Response Network B and C
 - Ensure surge capacity to handle large volumes of specimens during an emergency situation
 - Provide a rapid response system for contaminants in environmental samples and food poisoning outbreaks
 - Continuity Of Operations (COOP)



Training and Education

- Sponsor training opportunities to improve scientific and technical skills (National Laboratory Training Network)
- Provide or facilitate training workshops for laboratory staff in both public and private sector
 - Division 6.2 packaging/shipping
 - Rule Out / Refer procedures
- Opportunities for Arizona students
 - Med-Start
 - Internships



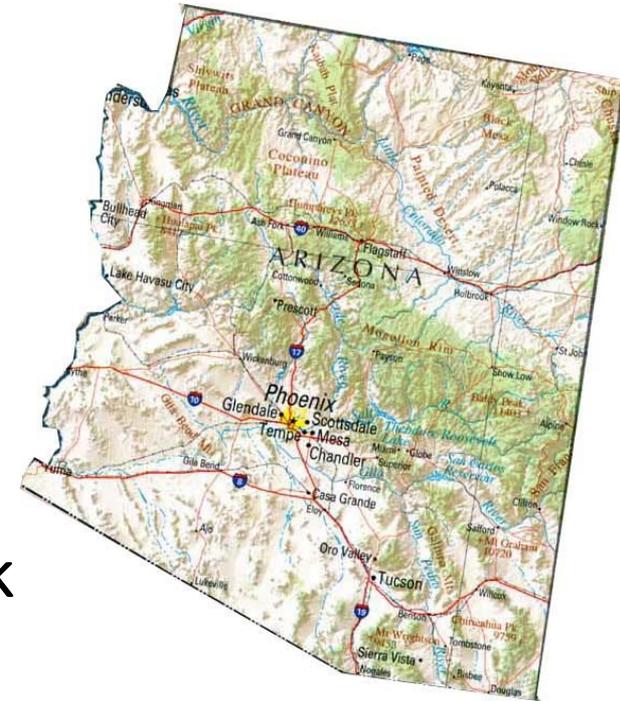
Public Health Related Research

- Conduct research to improve the public health laboratory practice
 - Novel technology
 - Collaboration



Partnerships and Communication

- Support the Public Health System
 - Link all partners
 - Engage non-traditional partners
 - Coordinate activities
 - First Responder outreach
 - Arizona Clinical Laboratory Network



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