Advancing Clinical Laboratory Biosafety From A National Perspective

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Challenges in clinical and public health laboratory biosafety remain
$21M over 2016-2018 to Enhance Biosafety

Creation of 62 biosafety positions

Biosafety training and tools

Outreach to sentinel clinical laboratories

CDC/APHL Biosafety and Biosecurity Program
Laboratory Exposures to *Brucella*, 2015-2017

- Samples from **nine** separate patients resulted in
  - **88** high-risk exposures
  - **101** low-risk exposures
  - **64** placed on prophylaxis
  - **187** under serological surveillance

Data from Joel Ackelsberg, MD, MPH, NYC Department of Health and Mental Hygiene, Bureau of Communicable Diseases
Laboratory Infections of *Salmonella*, 2011-2017

Clinical Laboratory Biosafety is a Critical Unmet National Need

Learn more about the Division of Laboratory Systems initiatives to fulfill biosafety demand
Limited Regulatory Environment

- Occupational Safety and Health Act (1970)
- OSHA final rule on occupational exposure to bloodborne pathogens (effective 1992)
- Clinical Laboratory Improvement Amendments (effective 1992)
Inconsistent and/or inadequate guidance

Lack of dependable, high-quality training materials or curriculum

Inadequate preparedness for handling public health emergencies
Division of Laboratory Systems (DLS)

Quality Laboratory Science

Highly Competent Laboratory Workforce

Safe and Prepared Laboratories

Accessible and Usable Laboratory Data
Some DLS Initiatives in Laboratory Biosafety

- Clinical laboratory biosafety needs assessment with APHL
- Laboratory biosafety training courses (e.g. Biosafety Cabinet, Chemical Fume Hood, Centrifuge Safety)
- CLSI guidance document: “Decontamination of Laboratory Equipment and Instrumentation” (QMS27)
Looking Ahead: Advancing Biorisk Management

World Health Organization Laboratory Biosafety Manual

International Organization for Standardization
International Standard 35001
“The Power of Safety,” March 2020, Atlanta, GA
Structured Community of Practice

Create a formal biorisk management community of practice that routinely meets by video teleconference to share challenges and solutions.
Develop a curriculum framework

• Target audience: public health and clinical laboratory workforce
• Competency informed: entry- and mid-level
• Tiered structure: core principles, operation-specific, laboratory-specific
Engage clinical laboratory accreditation organizations, and encourage oversight of safety in addition to quality.
Conduct hypothesis-driven controlled laboratory experiments to determine the effectiveness of “best laboratory practices and biosafety”
CDC remains committed to advancing biorisk management across the public health and clinical laboratory community.
Thank you!

For more information, contact CDC
1-800-CDC-INFO (232-4636)

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