

LA-UR-15-22549

Approved for public release; distribution is unlimited.

Title: Enhancing Situational Awareness for Infectious Disease Surveillance

Author(s): Daughton, Ashlynn Rae
Deshpande, Alina
Generous, Eric Nicholas Alexandre

Intended for: Handout describing tools

Issued: 2015-04-09

Disclaimer:

Los Alamos National Laboratory, an affirmative action/equal opportunity employer, is operated by the Los Alamos National Security, LLC for the National Nuclear Security Administration of the U.S. Department of Energy under contract DE-AC52-06NA25396. By approving this article, the publisher recognizes that the U.S. Government retains nonexclusive, royalty-free license to publish or reproduce the published form of this contribution, or to allow others to do so, for U.S. Government purposes. Los Alamos National Laboratory requests that the publisher identify this article as work performed under the auspices of the U.S. Department of Energy. Los Alamos National Laboratory strongly supports academic freedom and a researcher's right to publish; as an institution, however, the Laboratory does not endorse the viewpoint of a publication or guarantee its technical correctness.

Knowing the resources available
Matching resources to need
Identifying gaps in resources
Developing support tools
Building collaborations
Fostering innovation

ENHANCING SITUATIONAL AWARENESS FOR INFECTIOUS DISEASE SURVEILLANCE

Suite of tools being developed for decision support



Biosurveillance Resource Database
 Characterizes and facilitates selection of resources for local, national, and global disease surveillance



Infectious Disease Modeling Database
 Characterizes and facilitates selection of a model to inform decision making



Outbreak Situational Awareness App
 Provides context and a frame of reference for disease surveillance information

National Biosurveillance Priorities

Leverage Existing Capabilities: Know and take advantage of currently existing biosurveillance resources

Embrace an All-of-Nation Approach:
 Biosurveillance includes all sectors including Defense, Public Health, Animal and Plant Health, Biosecurity and Environmental monitoring

Maintain a Global Health Perspective:
 Biosurveillance recognizes no borders and must include shared participation in global health security

Seizing the Moment

The development of our capabilities has occurred at a unique time in our Nation's quest for establishing a

"well-integrated national biosurveillance enterprise that saves lives by providing essential information for better decision-making at all levels" - National Biosurveillance Strategy

Our tools are relevant, dynamic and have buy-in from a wide spectrum of stakeholders

Information Integration and Analysis Team

Dr. Alina Deshpande
 Systems Analysis and Surveillance, DSA-3
 Defense Systems and Analysis Division
 Los Alamos National Laboratory
deshpande_a@lanl.gov

Mr. Esteban Abeyta
Ms. Ashlynn Daughton
Mr. Geoffrey Fairchild
Mr. Nicholas Generous
Dr. Reid Priedhorsky
Dr. Kirsten Taylor-McCabe

Capabilities that Facilitate Biosurveillance

Tools based on robust and comprehensive frameworks developed and published by LANL

Tools validated with users through demos and webinars at international conferences, agency workshops, technology showcases, and biosurveillance working groups

Development of LANL Biosurveillance Gateway, available at: bsv.lanl.gov



Infectious Disease Modeling Database

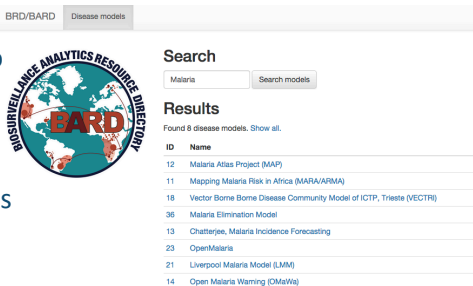
- Provides specific information about an operational model that has been comprehensively categorized

- Provides links to specific models with updated and accurate contact information for a model facilitating its immediate use

- Is a model characterization tool -Framework applicable to new models that may be included in the future

- Will offer precision through its search and find function

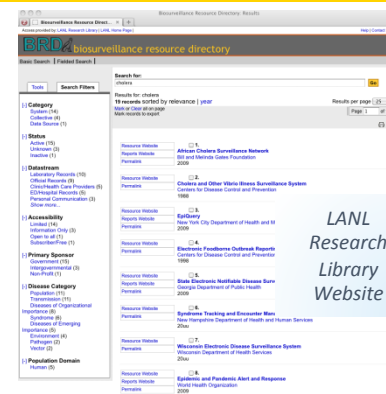
- Coming Spring 2015!



- Curated relational database of biosurveillance products and tools available worldwide
- Systematic and structured categorization based on biosurveillance system and data stream framework developed at LANL
- Searchable by multiple keywords geographic location, disease, sponsoring agency, contacts, data streams, etc.
- Linked to resource websites, contact information and associated documents

Available at: brd.lanl.gov

Biosurveillance Resource Database



The BRD aims to provide in-depth, highly curated, credible, and timely information relating to all aspects of biosurveillance



Outbreak Situational Awareness App

- Contextualizes information during an infectious disease outbreak
- Places a frame of reference for where a case count maybe during an outbreak
- Determines whether the unfolding events are still within a surveillance window
- Suggests additional information sources to support decision making



Available at: swap.lanl.gov