National Collaborative for BioPreparedness

- What is it
- Why it was created
- Who we are
- Value of NCBP to EMS data owners
- System Demo
- Engagement process
WHAT IT IS

• A collaboration of owners of data that expose threats to health and safety
• Visualization and analytics system provided to data owners at no cost
• Mature technology under development since 2011
• National integration and expansion in process
• Result:
  – National, near real time disease syndromic warning and tracking system
  – Business intelligence for data owners
 WHY NCBP WAS CREATED

• Funded by Department of Homeland Security
• To address a major gap in national biosurveillance
  - Human health
  - Animal health
  - Food security
  - Environmental hazards
• To enhance interaction of the national preparedness enterprise
  - Public health preparedness
  - Emergency responders
  - Emergency management
  - Public safety / law enforcement
  - Private sector infrastructure operators
Who We Are

- **University of North Carolina at Chapel Hill – Dr. Mark Holmes**
  - Research and development
  - Network development
- **Director: Jeff Runge, MD**
  - Emergency/EMS physician
  - Head of NHTSA (2001-2005)
- **Network development: Debra Durham, Heather Connell**
- **Analytics: Kristina Howard, Perduco Group**
  - US Army, DHS Office of Health Affairs Biosurveillance
- **Commercial Platform: Paul Runkle, Jon Woodworth, Biospatial, Inc.**
  - Providers of wide area surveillance and visual analytics to U.S. intelligence services
**NCBP Value to USG and Data Owners**

- **Using existing data:**
  - Federal and national authorities need biological information derived from data that is already being gathered.

- **Connections:**
  - Connect data owners to preparedness community through a collaborative tool.

- **Analytics:**
  - Overlay data sets, apply custom analytics that improve business processes of both data owners and preparedness authorities.
**Dual Goal**

- **Improved national biopreparedness**
  - Government agencies better equipped to protect public for significant health events
    - Naturally-occurring health events
    - Biological or chemical terrorism
    - Unexpected outbreaks – opioids, enterovirus, Ebola, VBD

- **Improved Service Optimization**
  - Local and state officials receive real-time business intelligence for service optimization
  - Enhance collaboration between emergency response, emergency management, and public safety / law enforcement
NCBP Model

- There is no cost to the data owner.
- Federal government subscribes to derivative information
- Data belongs to the data owners
- Highest levels of security are maintained (HIPAA, HITECH, FISMA)
- Critical information is derived from raw data without exposing the raw data
NCBP MODEL: HOW IT WORKS

• NCBP partners with states and local agencies, professional associations, and commercial data owners to form the Collaborative
• NCBP provides data management, security and analytics to turn data into information
• NCBP provides visualization and analytics at no monetary cost to the data owners
• The Federal government subscribes to the system to gain access to the derivative information (but not the raw data)
NCBP operates in full HIPAA-compliance

- Environment is HIPAA/HITECH compliant
- NCBP staff HIPAA trained and certified
- Data owners and NCBP operate as Business Associates
- NCBP system and policies are evaluated by external HIPAA consultant annually
- User organizations administer data access rights to appropriately trained users

NCBP operates in a maximum security environment

- NCBP management experience in classified systems
- Data environment FISMA-aligned
- Data fully encrypted in transfer and at rest
- Data owners retain full control of who can see what data
NCBP SYNDROMIC ALERTS

- **Respiratory syndromes**
  - Biological weapons – tularemia, anthrax, plague
  - Naturally occurring respiratory dz – EVD 68

- **Influenza-like illness**
  - Seasonal or pandemic
  - Novel ILI syndromes

- **Constitutional syndromes**
  - Botulism, occult poisonings

- **Opioid syndromes**
  - Heroin, Fentanyl derivatives – intentional, unintentional

- **Motor vehicle injury**
  - Injury crashes with location, time clustering
DATA REQUIREMENTS

• NEMSIS V2 or V3
  - 121 elements

• Streamlined onboarding process
  - Data Use and Business Associate Agreements
  - Test data
  - Organizational user access defined
  - Automated ETL routines applied
  - System credentials granted
  - System available to organization

• Requires little effort from data owner after setup
  - Sporadic troubleshooting
  - Participation in user groups (important but optional)
NCBP Goals

Accelerate nation’s bio-preparedness
Provide early detection of threats to health and safety to enable timely intervention

Synergize network of observers
Establish a network of owners of biological data willing to collaborate with federal, state and local officials to improve preparedness and event response

Enable improved service optimization
Leverage data owners’ data to improve their business processes, quality assurance and improvement, patient experience and operational priorities
Value/Benefits to Data Owners

- **Visualization of EMS organization’s own data**
- **Access to information in near-real time**
- **Improved shared situational awareness and decision quality**
- **Ensured HIPAA-compliant environment**
- **No cost service for data contributors**
Visit www.bioprep.us

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