

**Version 14 10-20-06**  
**Biosurveillance Data Steering Group (BDSG)**  
**Preconditions for Deciding on Minimum Data Set Elements**

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**Purpose: The BDSG considered these guiding principles and assumptions when determining which Minimum Data Set (MDS) elements would support public health preparedness.**

1. The BDSG will utilize the ASTHO Biosurveillance definition<sup>1</sup> as a working definition for the group.
2. MDS elements will not meet all current public health data stream needs (i.e., our charge is to develop the minimum data set). State and local jurisdictions will continue to receive fully identifiable data based on current regulations for notifiable diseases/conditions.
3. The BDSG will focus on readily available electronic data entry with essentially no new clinician and/or facility effort from ambulatory care settings (i.e., emergency department and outpatient), inpatient settings (i.e., hospital and nursing home), and laboratories. We recognize there may be some effort to mobilize and implement an action plan to acquire some data elements. While the Health Information Technology Standards Panel (HITSP) may suggest an implementation plan, we recognize that there may be some near term barriers in acquiring some of these data.
4. Use and collection of secondary clinical data will help support the following preparedness functional areas (see Functional Area Matrix):
  - a. Early event detection
  - b. Situational awareness
  - c. Outbreak management
  - d. Countermeasure and response administration
5. Optimally, data will be available in real-time, but will not exceed 24 hours before reporting. Additional data requests or expansion of the MDS may potentially delay data transmission. Automated systems should not be equated with instantaneous delivery. System derived date/time stamps will be associated with all data messages.
6. Patient-specific information will only be accessed by registered, authorized health care professionals and public health officials and only be used for biosurveillance and other public health purposes.
7. All non-essential Protected Health Information (PHI) will be filtered out and retained by the submitting facility before sending to public health authorities.
8. Information transmission from data sources will require some filtering. Precisely how filtering occurs (e.g., receive everything except *x*, vs. a specific listing of everything desired) should be determined. The purpose and principles of filtering (e.g., limited to specific conditions, avoidance of confidential information disclosure or the public health evidence to support filtering) should be explicitly developed. Imposing specific approaches to data filtering may affect the timeliness of reporting.

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9. A linking process (e.g., randomly-generated, encoded number) will assure that patient-level information (i.e., name and address), removed prior to submission, is retrievable if required. Only authorized public health officials should have access to facility and patient-level information during a public health investigation.
10. A multi-jurisdictional approach includes collaborative decision-making and coordinated efforts to assure maximal benefits to all partners. All authorized jurisdictions (i.e., federal, state and local), capable of receiving data, should have simultaneous access to timely data
11. Specific data elements for multi-jurisdictional sharing will be based on the level of jurisdictional accountability and responsibility. Although simultaneous data sharing is expected, the scope of shared data elements (e.g., PHI) should differ by jurisdiction and legislative rule.
12. Data will be shared to support initial public health investigations while preserving traditional comprehensive public health investigatory roles and responsibilities. Biosurveillance systems should support public health practice at all jurisdictional levels.
13. Local health departments (LHDs) will be involved in biosurveillance systems development and implementation. Any widespread MDS capture should leverage and complement existing relationships between LHDs and local hospitals/providers.<sup>2</sup>
14. Information gathered by public health agencies should enable (wherever possible) near real-time sharing with clinical providers (e.g., emergency departments and infection control practitioners) to improve their ability to respond to rapidly evolving events.
15. The BDSG will not prescribe the method by which MDS elements will be transferred. The architecture for transmission should synergize with and leverage local, regional and state health information exchange investments that adhere to and support emerging national standards.
16. Ongoing efforts will be made to evaluate what is available, feasible, useful and valuable for multi-jurisdictional data sharing. While this MDS is a good first approximation, new elements should be added as they are proven to have utility.
17. The BDSG considered the feasibility of transmitting each MDS element. Given very practical implications, feasibility encompasses defining requirements and mandatory lead time for MDS transmission. The BDSG took into account what reasonable, real-world timeframes for compliance would be. For example, HIPAA was a phased, non-trivial process over multiple years. The spectrum and range of HIT capacities and variation in adoption and successful HIT implementations will significantly impact on reporting burden, acceptance and compliance with anticipated MDS requirements. Lead time for modifying a main-frame system generally requires a minimum of 1 to 2 years given budget cycles and competing demands. Given that background, feasibility

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was defined as “Could each data element be transmitted electronically by 25% of reporting facilities with currently available resources in the: short term (< 1 year), longer term (1 to 2 years) or not feasible (>2 years)?”

18. The process of MDS transmission will require some piloting prior to widespread implementation. Pilot efforts should be undertaken to determine what are potential pitfalls and methods to enhance adoption through reuse of knowledge and methods that promote technical assistance for health care organizations. Piloting should also address BDSG suggested tools that are based on proposed standards yet to be universally adopted. For example, the Hospital Availability Exchange (HAVE)<sup>3</sup> is a proposed standard the BDSG suggests to gather many of the daily facility summary report elements. Such piloting will help assess feasibility but may delay early widespread MDS implementation.

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<sup>1</sup> ASTHO: Biosurveillance is often referred to as syndromic surveillance; however the ability to detect events early requires a broader set of information than that of syndromes. While there is no single agreed upon definition, there is agreement that such “biosurveillance” systems need to take advantage of integrated data from multiple sources including public health information as well as electronic health information not traditionally monitored by public health. Biosurveillance systems must leverage two major surveillance methods:

- 1) Well established public health surveillance methods and sources used for the tracking, monitoring, and reporting of health-related information, such as epidemiologic investigations of infectious disease outbreaks or environmental conditions, are needed to ensure a broad coverage of data sources, to use as baselines comparisons, and to support the accuracy and reliability of the biosurveillance findings.
- 2) Early event detection and situational awareness, the use of an automated system to evaluate case and suspect case reporting along with statistical surveillance and data visualization of pre-diagnostic and diagnostic data to support the earliest possible detection of events that may signal a public health emergency, is an essential component for near real-time detection of natural or man-made health events.

<sup>2</sup> National Association of County and City Health Officials, Statement of Policy: Biosurveillance. No. 06-02, confirmed July 25, 2006

<sup>3</sup> Hospital AVailability Exchange (HAVE) is a draft XML specification that allows the communication of the status of a hospital and its resources to other emergency agencies, including bed capacity and availability, emergency department status, the available service coverage, and the status of a hospital’s facility and operations. <http://www.comcare.org/HAVE.html>