

# NNDSS Modernization Initiative Technical Assistance Coordination Team Update

September 26, 2014

Colleagues,

Welcome to the first issue of the National Notifiable Diseases Surveillance System (NNDSS) Modernization Initiative (NMI) Technical Assistance (TA) Coordination Team Update. These e-mail updates are a collaboration among the Centers for Disease Control and Prevention (CDC), Council of State and Territorial Epidemiologists (CSTE), and the Association of Public Health Laboratories (APHL) and will be sent biweekly in an effort to keep reporting jurisdictions and other partners and stakeholders updated on the progress of NMI.

With the evolution of technology and data and exchange standards, CDC now has the opportunity to strengthen and modernize the infrastructure supporting NNDSS. As part of the [CDC Surveillance Strategy](#), the NNDSS Modernization Initiative is underway to enhance the system's surveillance capabilities to provide more comprehensive, timely, and higher quality data than ever before for public health decision making. Through this multi-year initiative, CDC seeks to increase the robustness of the NNDSS technological infrastructure so that it is based on interoperable, standardized data and exchange mechanisms.

NMI has three key components:

1. development of prioritized Message Mapping Guides (MMGs) for case notification—the following six MMGs were prioritized for development and implementation for the first year of this initiative: Generic guide v2, STD, Hepatitis, Congenital Syphilis, Pertussis, and Mumps;
2. development of the CDC Platform (CDCP), a state-of-the art standardized data and software platform that will facilitate the receipt and distribution of notifiable disease data; and
3. technical assistance through CSTE and APHL for implementation of MMGs in jurisdictions submitting case notifications to NNDSS. (Please note that jurisdictions using the National Electronic Disease Surveillance System [NEDSS] Base System [NBS] will receive technical assistance from CDC's NBS vendor contractor.)

Please find the first NMI update below. For more information on NMI, please see the NMI FAQs at <http://www.cdc.gov/nmi/faq.html>. If you have questions not answered in the FAQs, please send them to [edx@cdc.gov](mailto:edx@cdc.gov).

## NMI Overall Updates

- Lesliann Helmus, the permanent NNDSS Program Manager, Division of Health Informatics and Surveillance (DHIS), CDC, started on September 22, 2014. In this position, she will be responsible for coordinating NMI.
- Lesliann's background includes the following:
  - Previously, she served as the disease surveillance and informatics lead for the Division of Surveillance and Investigation at the Virginia Department of Health. There, she guided the teams responsible for general reportable disease surveillance and syndromic surveillance. In addition, she ensured the integration of informatics into the practice of

- public health and coordinated across divisions and offices on shared informatics initiatives. She was responsible for implementation of the state's syndromic surveillance system and NEDSS-compliant integrated surveillance system. She led the agency's electronic laboratory reporting and Meaningful Use initiatives and coordinated surveillance for emergency response.
- Prior to this, Lesliann served in a variety of epidemiology and surveillance positions at the Ohio Department of Health. She directed both infectious disease and chronic disease surveillance and coordinated the implementation of the state-developed NEDSS-compliant system. In addition, she was involved in surveillance for general infectious diseases, STD/HIV/AIDS, tuberculosis, hepatitis, vaccine preventable diseases, and arboviral disease. She oversaw the operations of the cancer registry and conducted occupational and injury epidemiology.
  - Lesliann has been active in CSTE, recently chairing the Surveillance Practice and Implementation Subcommittee. This workgroup establishes surveillance and informatics practice, defines collaborative standards, and provides a forum for dissemination and consensus building on surveillance and informatics topics. She and other members of the subcommittee partnered closely with CDC on NNDSS initiatives, the Reportable Condition Knowledge Management System, and other collaborative efforts to improve the quality of surveillance data and the efficiency of surveillance processes.
  - Please access her complete bio at <http://www.cdc.gov/ophss/csels/leadership/bios/helmus.html>.

### **Message Mapping Guide Development Updates**

- **Priority MMG Status Updates:**
  - Progress has been delayed for the priority MMGs due to the need to address the differentiation of unknown vs. missing values in HL7 messages for both numeric and date data elements.
    - CDC programs and reporting jurisdictions may need to identify the numeric and date data elements requiring indicators in MMGs that would allow differentiation between unknown and missing values.
    - To address this issue, CDC is developing a draft proposal, which will be shared to solicit feedback first with the CDC programs developing priority MMGs and then with the reporting jurisdictions. In addition, all draft MMGs will need to be updated to implement the agreed-upon solution.
  - **Mumps and Pertussis MMGs**
    - These MMGs are in the Stage I–Draft Phase.
    - Both MMGS are awaiting the solution for differentiating unknowns vs. missing values in HL7 messages for both numeric and date data elements.
    - CDC will update the timeline for development of these two MMGs, which will include a second external review in which the draft guides will be reviewed by reporting jurisdictions during the open comment period of 6 weeks.
    - CDC will revise the MMGs and artifacts based on reconciled comments from the second external review period.
  - **Congenital Syphilis and STD MMGS**
    - These MMGs are in the Stage II–Reconciled Draft Phase.

- Both MMGS are awaiting the solution for differentiating unknowns vs. missing values in HL7 messages for both numeric and date data elements.
- **Generic v2 and Hepatitis MMGs**
  - These MMGs are in the Stage III—Pilot Test-ready Draft Phase.
  - The beta testing process will include one pilot jurisdiction (Michigan) for both guides.
    - Beta testing will help evaluate and adjust processes.
    - Pilot testing will expand to other identified jurisdictions post-beta testing.
- Those jurisdictions selected for pilot testing of the test-ready versions of MMGs should wait until contacted by the NMI Technical Assistance Coordination Team before using the test-ready MMGs and before submitting test messages to CDC. All other jurisdictions should not plan to submit data to CDC until the final MMGs have been posted to the Public Health Information Network (PHIN) Web site.
- For more information about MMG development, please see the NMI FAQs at <http://www.cdc.gov/nmi/faq.html>.

### CDC Platform Updates

- CDC has developed and provided data provisioning requirements to AgileX (CDCP-Message Validation and Processing System [CDCP-MVPS] development contractor) for the Generic v2, Hepatitis, STD, and Congenital Syphilis MMGs. The CDCP-MVPS is a component of the CDCP that will validate and process data messages sent by jurisdictions before provisioning those data to the CDC programs.
  - Processing and provisioning of data are essential components to provide CDC public health professionals the data needed to conduct surveillance. Data provisioning requirements identify the data relationships and data format necessary for the data to be provided accurately and completely. Based on the data provisioning requirements, database structures (such as tables, views, and stored procedures) are defined that will be used to store and send data to programs to provision and use for their various programmatic and reporting activities.
  - The CDCP team is clarifying questions posed by AgileX related to the Congenital Syphilis data provisioning requirements.
  - CDC has received the data provisioning build for Generic v2.
  - The data provisioning build for Hepatitis is due from AgileX on September 26, 2014, and for STD and Congenital Syphilis on October 17, 2014.
  - The CDCP team will not define dates for CDCP-MVPS activities related to Mumps and Pertussis until those MMGs are finalized and posted for external partner review.
- On 9/3/2014, CDC NMI leads and project stakeholders met with CSTE and APHL representatives to discuss key NMI project facets and work flow, including the beta testing process with the pilot state Michigan.
  - The objectives of the meeting were as follows:
    - Determine process for user acceptance testing and validation across MMGs, including stakeholders, logistics, decision points, and communication.
    - Develop an approach for applying standards, addressing outstanding inputs, and reviewing all documentation accompanying MMGs.
    - Understand CDCP-MVPS infrastructure to plan for state implementation and message handling. Review the overall timeline/roadmap.

- CDC will provide more details from the meeting as soon as possible.
- CDC has created a testing tool to test data provisioning for Generic v2 and the National Electronic Telecommunications System for Surveillance (NETSS).
- For more information about the CDCP-MVPS, please see the NMI FAQs at <http://www.cdc.gov/nmi/faq.html>.

### **Technical Assistance Updates**

- To ensure a smooth and translatable technical assistance approach with all pilot jurisdictions, the NMI Technical Assistance Coordination Team is working with a single jurisdiction, Michigan, as the initial pilot site for the NMI TA project.
  - APHL has worked with Michigan to identify a project plan and develop a project timeline and is conducting a gap analysis of their current Hepatitis data extraction vs. the updated MMG.
  - The APHL TA team will be onsite in Lansing, Michigan, the first week of October 2014 to begin implementing the route for Hepatitis and the Generic v2 core data elements and to prepare for testing, with plans to send test messages to the CDCP-MVPS by early November.
- APHL has begun conducting initial calls with the next wave of pilot jurisdictions to review technical details and projected timelines for implementing the Hepatitis and Generic v2 MMGs. If you work in a pilot jurisdiction and have not been contacted yet, please stand by for APHL's communication soon.
- Once the remaining MMGs have moved into the Stage III: Pilot Test-ready Phase, APHL will cycle back through the pilot jurisdictions to make plans for implementing those MMGs.
- Throughout the TA site visit planning process, the NMI TA Coordination Team has collected existing tools and resources that could be used for training purposes. APHL is building reusable components, such as Rhapsody outbound message definition files and validators based on MMGs, that will be available for all sites to use. APHL will continue to build and collect these resources as they provide TA to pilot jurisdictions and will develop new resources where training gaps exist. This resource collection will culminate in a toolkit of diverse training and building materials for jurisdictions to use when implementing MMGs. The toolkit will be released when available.
- For more information about Technical Assistance:
  - Please see the NMI FAQs at <http://www.cdc.gov/nmi/faq.html>.
  - For pilot jurisdictions: If you have questions specific to NMI TA, please contact Laura Carlton, contractor to APHL, at [lcarlton@TSJG.com](mailto:lcarlton@TSJG.com).
  - For non-pilot jurisdictions: If you have questions or would like to request TA for MMG implementation through the Epidemiology and Laboratory Capacity for Infectious Diseases (ELC) Cooperative Agreement, please email [edx@cdc.gov](mailto:edx@cdc.gov).

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