

2012 NEDSS Assessment

2012 National Electronic Disease Surveillance System Assessment

CSTE is conducting the 2012 National Electronic Disease Surveillance Systems (NEDSS) Assessment to evaluate the successes and challenges states experience in designing and implementing electronic solutions for state and local disease surveillance. This is a follow-up to national assessments conducted in 2007 and 2010 to evaluate states' electronic disease surveillance systems status, integration, and capacity.

The purpose of this assessment is to measure current jurisdictional capacity in implementing NEDSS-compatible systems. The scope includes reportable disease surveillance systems in your jurisdiction.

The following assessment should take approximately 25 minutes to complete. Your responses will be kept confidential and shared only in de-identified, aggregate form. Please answer as many questions as possible. The main respondent should be your jurisdiction's NEDSS Coordinator or someone with detailed knowledge of your jurisdiction's surveillance systems.

We encourage you to seek consultation with others, such as your state epidemiologist or staff with information technology expertise, while completing this assessment. We recommend printing this assessment as a worksheet to record responses and collect input from your NEDSS team prior to completing this online tool. Once a response has been initiated, this tool does not permit access to your specific form on computers other than the original machine. For easy printing, a PDF copy of the assessment was attached to the email you used to access this online tool.

Some jurisdictions may have recently responded to CDC's ELR Implementation Support and Monitoring Step 4 data collection. While every attempt was made to avoid redundant questions, some topical areas in this assessment overlap those in CDC's data collection activity. These questions were included to ensure the validity and reliability of data collected for longitudinal analyses, and we encourage jurisdictions to utilize their Step 4 responses as appropriate.

If you have any questions about this assessment, please contact Monica Huang at mhuang@cste.org.

Section 1: NEDSS Contact Information

*1. Please provide the name and contact information of the NEDSS/Surveillance Project Coordinator or assessment respondent.

Name:	
Title:	
State:	▼
Email Address:	
Phone Number:	

2. Are you the NEDSS Coordinator for your jurisdiction?

☐ Yes

☐ No

If no, please provide the name and email of your jurisdiction's NEDSS Coordinator:

	▼
	▼

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3. CSTE will use this information to create a sharable list of State & Territorial NEDSS/Surveillance Coordinators. May we include your NEDSS Coordinator's information in that list?

- ☐ Yes
- ☐ No

Section 2: Surveillance System Design and Capability by CDC Program Area

The following criteria* should be used to determine which of your jurisdiction's surveillance systems qualifies as your National Electronic Disease Surveillance System (NEDSS) system:

- A – Ability to conduct and support web browser-based data entry and data management
- B – Ability to accept, route, and process electronic HL7 messages containing laboratory and clinical content
- C – Includes an integrated data repository (data from multiple state-based and CDC categorical programs)
- D – Includes active data translation and exchange functionality
- E – Includes business logic (data validation, workflow, coding mapping, etc.)
- F – Includes data reporting and visualization capability
- G – Includes a shareable directory of public health personnel
- H – Ability to transmit data securely and within a secure architecture

*From "A Guide to the Implementation of the National Electronic Disease Surveillance System (NEDSS) in State Public Health Agencies" (http://www.cste.org/pdf/files/NEDSS_Book_Final.pdf)

4. Using the criteria above, what is the name of the surveillance system you consider to be your NEDSS system?

Your response will be referenced in later questions concerning your NEDSS system.

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5. For the system you named in number 4 above, which of the following criteria does the system meet? (Please select all that apply.)

- ☐ Ability to conduct and support web browser-based data entry and data management
- ☐ Ability to accept, route, and process electronic HL7 messages containing laboratory/clinical content
- ☐ Includes an integrated data repository (data from multiple state-based and CDC categorical programs)
- ☐ Includes active data translation and exchange functionality
- ☐ Includes business logic (data validation, workflow, coding mapping, etc.)
- ☐ Includes data reporting and visualization capability
- ☐ Includes a shareable directory of public health personnel ("shareable" means the directory is accessible to authorized individuals)
- ☐ Ability to transmit data securely and within a secure architecture

Section 2: Surveillance System Design and Capability by CDC Program Area

6. What type of system best describes your NEDSS system ([Q4])?

- ☐ NBS
- ☐ MAVEN
- ☐ Trisano
- ☐ Atlas
- ☐ STC
- ☐ eHARS
- ☐ STD-MIS
- ☐ Custom

7. Which of the following best describes [Q4]?

Definitions:

Case based refers to systems where the case is the observation of record and a person can be listed for every instance in which they are a case (allows for duplicate patients).

Person based refers to systems where the person is the observation of record and you have individual people, each of which can have multiple investigations (does not allow for duplicate patients).

Document based refers to systems where documents are the observations of record, e.g. eHARS.

- ☐ Case based
- ☐ Person based
- ☐ Document based
- ☐ Unsure

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8. What program area surveillance is [Q4] used for? Please select all that apply. (Specific diseases included in each program area could vary depending upon jurisdiction-specific reportable diseases.)

- ☐ STD
- ☐ HIV
- ☐ Hepatitis
- ☐ Lead
- ☐ General
- ☐ Enteric
- ☐ VPD
- ☐ Flu
- ☐ TB
- ☐ Zoonotic
- ☐ Arboviral
- ☐ Animal
- ☐ Environmental
- ☐ Poisoning
- ☐ Cancer
- ☐ Injury
- ☐ Occupational
- ☐ Other Chronic

Section 2: Surveillance System Details

9. Which kind of development best describes your NEDSS system ([Q4])?

- ☐ COTS (Commercial off the shelf: a system where the developer has actively marketed this system to multiple jurisdictions (e.g., STC, Maven, Atlas))
- ☐ State-Developed (a system intended for the deployment in a single jurisdiction, developed under the guidance of public health staff in that jurisdiction)
- ☐ CDC-Developed (e.g., NEDSS Base System (NBS), eHARS)
- ☐ CDC/State (combination of CDC and state-developed components)
- ☐ COTS/State (combination of purchased and state-developed components)
- ☐ Don't Know

10. What is the current status of [Q4]?

- ☐ Operational and implemented
- ☐ Under development, but not yet operational
- ☐ Future development
- ☐ Don't know

11. What kind of user interface does [Q4] have? (Select all that apply.)

- ☐ Web interface
- ☐ Client based/client server
- ☐ Other (specify)
- ☐ Don't know

12. Can [Q4] receive, process, and store electronic lab reports?

- ☐ Yes
- ☐ No
- ☐ Unsure

13. Can [Q4] receive, process, and store electronic case reports from health care professionals?

- ☐ Yes, excludes web data entry
- ☐ Yes, includes web data entry
- ☐ No
- ☐ Unsure

14. Can [Q4] receive, process, and store electronic case reports from another reporting jurisdiction?

- ☐ Yes
- ☐ No
- ☐ Unsure

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15. What formats can [Q4] currently send for CDC Notification? (Choose all that apply.)

- ☐ HL7 CDA
- ☐ HL7 v2.x Message
- ☐ NBS Master Message (Refers to messages being sent to CDC following a fixed XML based format for legacy program area modules (PAMs) from the NEDSS BASE SYSTEM (NBS).)
- ☐ NETSS File
- ☐ Not Applicable
- ☐ Other

Please specify

16. Can system users do a single query that tracks multiple diseases for an individual person across separate surveillance modules/components within [Q4]?

(Example: With a single query in one system, it can be determined that a TB contact investigation index case also has hepatitis C.)

- ☐ Yes
- ☐ No
- ☐ Unsure

Section 3: NEDSS Capabilities

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17. For each of the published guides listed below, please indicate the associated implementation status in your state. If you select "Not planning to implement," please explain why.

	Not planning to implement	Not yet in planning stage	Planning	Development/testing	Production	Unsure
Arboviral Case Notification MMG v1.2	☐	☐	☐	☐	☐	☐
Generic Case Notification MMG v1.0	☐	☐	☐	☐	☐	☐
Generic Summary Case Notification MMG v1.0	☐	☐	☐	☐	☐	☐
Tuberculosis Case Notification MMG v1.0	☐	☐	☐	☐	☐	☐
Tuberculosis Case Notification MMG v2.03	☐	☐	☐	☐	☐	☐
Varicella Case Notification MMG v1.0	☐	☐	☐	☐	☐	☐
Varicella Case Notification MMG v2.0	☐	☐	☐	☐	☐	☐

If "not planning to implement," please explain why.

18. On average, how long does it take your jurisdiction to implement a new case notification message mapping guide? (The average amount of time between building the module (if required) and sending the first test notification message that meets criteria in the published guide.)

- ☐ < 3 months
- ☐ 3 - < 6 months
- ☐ 6 - < 9 months
- ☐ 9 - < 12 months
- ☐ 12 months or more
- ☐ Have not implemented message mapping guides to date
- ☐ Not applicable

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19. What are the barriers to more timely implementation of message mapping guides? (Choose your top 3 issues and rank them from most critical to least critical. Enter only 1 choice per column.)

	Most Critical	Somewhat Critical	Least Critical
Staff resources	☐	☐	☐
Vendor costs	☐	☐	☐
Staff knowledge/training	☐	☐	☐
Internal competing priorities	☐	☐	☐
Lack of a core attribute message mapping guide	☐	☐	☐
CDC programmatic needs are not addressed by the message mapping guides (i.e. CDC programs require additional reporting beyond the content of the message mapping guides)	☐	☐	☐

20. What are the top 5 most frequently used tools* that your jurisdiction uses to perform advanced reporting, analytics, and/or visualization (AVR) of data from your integrated electronic disease surveillance system? (e.g., COGNOS, Business Objects, R, SAS, JMP, ASP.NET, ArcGIS, etc.) Please list in no particular order.

***The tool does not have to be integrated into your system.**

AVR definition: analysis tools that provide ability to query, filter, and analyze data; visualization includes support for GIS, production of linear graphs, charts, mapping, common operating picture; and reporting are tools that provide the ability to customize analysis/visualization output for diverse audiences.

1	
2	
3	
4	
5	

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21. What else can your jurisdiction's NEDSS system do beyond disease tracking?

(Choices: Yes - all, Yes - some, or No.)

Case Management

Case/Contact Tracing

Outbreak Management

Other

If other, please specify below.

22. From which of these sources is data being received electronically for reportable conditions (may be received in standard formats, non-standard formats, or via web entry)? Please select all that apply.

- ☐ Hospitals, not including hospital laboratories
- ☐ Clinicians (health providers)
- ☐ Laboratories (includes hospital labs)
- ☐ Another reporting jurisdiction
- ☐ Schools
- ☐ Electronic Immunization Information Systems and Registries
- ☐ Electronic Vital Records Systems
- ☐ Other electronic systems (e.g. patient management systems)
- ☐ Other reporters, please specify (e.g., veterinarians, child-care facilities, long term care facilities, etc)

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23. What level of access to your NEDSS is allowed for the reporters listed in Question 23 above?

No Access = no edit/view of their data

Read Only Access = provide data into the system and can view data

Write Access = provide, edit, and view data

	Level of Access
Hospitals (not including hospital laboratories)	
Clinicians	
Laboratories (includes hospital laboratories)	
Local Public Health	
Schools	
Electronic Immunization Information Systems and Registries	
Electronic Vital Records Systems	
Other electronic systems	
Other reporters	

24. If your NEDSS solution is a COTS system, does a Nationally Notifiable Disease message generated by your system require additional manipulation to format it to be received by CDC? (This only refers to case notifications and does not include data manipulation to send additional reports to categorical CDC program areas.)

(COTS: Commercial off the shelf: a system where the developer has actively marketed this system to multiple jurisdictions (e.g., STC, Maven, Atlas))

Note: consultation with your messaging or IT expert may be necessary.

- ☐ Yes
- ☐ No
- ☐ N/A if you don't use a COTS system (see definition above)

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25. If your NEDSS system can import case reports from providers and hospitals, what message formats are supported? (Choose all that apply.)

- ☐ HL7 CDA
- ☐ HL7 v2.x Message
- ☐ Unsure
- ☐ Cannot import case reports
- ☐ Other

If other, please specify below.

26. What do you think are the biggest challenges in creating/improving interfaces with your NEDSS system (Select all that apply)?

Interface Definition: Electronic communication between two independently developed systems. (Interoperability is a type of interface)

- ☐ No challenges; system can interface with other systems without problems
- ☐ The value of interfaces is not recognized by agency stakeholders
- ☐ System configuration does not allow for interface with other systems
- ☐ Lack of person hours available to work on interfaces
- ☐ Difficulty parsing values out of free text blocks or blobs
- ☐ Lack of skills available to work on interfaces
- ☐ Data variables not comparable
- ☐ Inability to modify commercial data systems/applications
- ☐ Lack of funding to support interface work
- ☐ Other systems within my jurisdiction lack interfacing capability

Section 4: NEDSS Resources and Infrastructure

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27. What percentage of the total annual cost to maintain your NEDSS system is funded from the sources listed below?

Please estimate in whole numbers only that sum to 100% over all categories. Please enter only numeric characters and do not include the "%" sign.

Epidemiology Lab and Capacity Grant (ELC)

Epidemiology Lab and Capacity Grant (ELC) ACA

Public Health Emergency Preparedness Grant (PHEP)

Assistant Secretary for Preparedness Response Grant (Hospital Preparedness Program) (ASPR)

State funding

Other federal funding

Other funding

28. How many Full Time Equivalent (FTE) staff are responsible for the NEDSS system in your jurisdiction? FTE total could be any combination of state staff, contractors, and consultants, depending upon how the system is supported in your jurisdiction.

Please estimate to the nearest 0.5 FTE.

Full time equivalent IT (includes programmers, database administrators, network administrators, etc.)

Full time equivalent informaticist (includes health systems architects, messaging experts, vocabulary experts, etc.)

Full time equivalent programmatic staff (includes epidemiologists, public health nurses, and disease investigators, etc.)

Full time equivalent administrative staff

Full time equivalent other staff

29. Addition of what type and how many FTEs of each position would be most useful as your state implements or maintains NEDSS?

Please estimate to the nearest 0.5 FTE.

Full time equivalent IT (includes programmers, database administrators, network administrators, etc.)

Full time equivalent informaticist (includes health systems architects, messaging experts, vocabulary experts, etc.)

Full time equivalent programmatic staff (includes epidemiologists, public health nurses, and disease investigators, etc.)

Full time equivalent administrative staff

Full time equivalent other staff

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30. What kind of training for existing staff would be most helpful as your state implements or maintains NEDSS? Please RANK your top 5 choices.

	1	2	3	4	5
Project Management	☐	☐	☐	☐	☐
Epidemiology	☐	☐	☐	☐	☐
General IT training	☐	☐	☐	☐	☐
Vocabulary coding	☐	☐	☐	☐	☐
HL7 messaging	☐	☐	☐	☐	☐
Electronic data interchange (example: Rhapsody administration)	☐	☐	☐	☐	☐
Programming	☐	☐	☐	☐	☐
Transport training (example: PHIN MS, SFTP, HTTPS, Direct)	☐	☐	☐	☐	☐
Workflow/procedure	☐	☐	☐	☐	☐
Security	☐	☐	☐	☐	☐
Other	☐	☐	☐	☐	☐

31. What are (or were) the three greatest barriers to production implementation of NEDSS in your jurisdiction? Please rank 3 options from 1 (most important) to 3 (least important).

	1	2	3
Compliance with Standards	☐	☐	☐
Lack of Health Department incentives	☐	☐	☐
Lack of Infrastructure Support	☐	☐	☐
Mandated electronic reporting	☐	☐	☐
Message/Vocabulary Variation	☐	☐	☐
Health Department Funding Shortage	☐	☐	☐
Lack of Partner incentivization/assistance	☐	☐	☐

Other (please specify)

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32. Are there innovative solutions (beyond additional funding) that your state leverages to enhance/improve current surveillance systems capacity? Please indicate the greatest barrier you experienced with each solution you use. Please select all solutions that apply.

Potential barriers:

Finding appropriate people to participate

Legal barriers

Organizational barriers

Organizational priorities

Resources

Other

	Yes, No, Unknown	Experienced any barriers?
Health Information Exchanges		
Collaboration with Hospitals and/or Providers		
Regional Health Collaboration		
Collaboration with academic institution		
Partnering with other external organizations		
Other collaborative innovations		
Innovative technology solutions		
Cloud technology		
Standard messaging		
Standard document exchange		
Standard vocabulary		
Use of open-source software		
Integrating separate surveillance systems		
Integrating/Interoperating surveillance systems with other public health systems (e.g. immunization registries, vital records, Master Patient Index, etc.)		
Other technology innovations		

Please use this space to describe any other innovative solutions and/or barriers you experienced with these solutions.

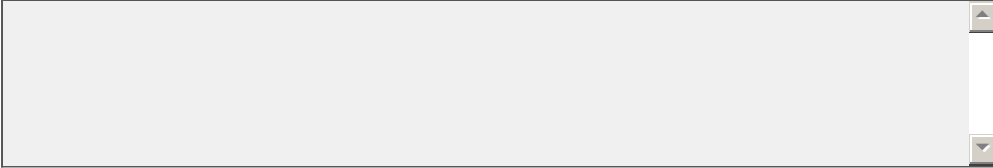
NNDSS Evaluation

CSTE and CDC are beginning an evaluation of the current status of the National Notifiable Disease Surveillance System (NNDSS) from a state and local health department perspective. The evaluation will focus on critical NNDSS issues that health departments will face in the next 5 years—including how they obtain data from health care providers and

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laboratories, how they manage, analyze, interpret, display, use, disseminate, and share the data with each other and CDC. The evaluation will lead to recommendations for how CSTE and CDC can best support health departments' reportable/notifiable disease surveillance systems.

33. In the space below, please describe two leading NNDSS issues that you believe should be addressed in this evaluation and why they are important to sustaining NNDSS at the state and local level over the next 5 years.

A large rectangular text input area with a light gray background and a vertical scrollbar on the right side.

34. How satisfied are you with the current functional capacity of [Q4]?

- ☐ Very satisfied
- ☐ Somewhat satisfied
- ☐ Neither satisfied nor dissatisfied
- ☐ Somewhat dissatisfied
- ☐ Very dissatisfied

Please explain your level of satisfaction with [Q4].

A large rectangular text input area with a light gray background and a vertical scrollbar on the right side.

35. Please fill in the blank: "My jurisdiction is currently planning to replace [Q4] to improve functional capacity in the next..."

- ☐ <6 months.
- ☐ 6 months - <1 year.
- ☐ 1 year - <3 years.
- ☐ 3 or more years.
- ☐ We are not currently planning to replace [Q4].

Comments

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36. Were there any questions in this assessment that were confusing to you or that you could not answer?

☐ Yes

☐ No

If yes, please indicate which question and explain below.

37. Are there any questions that we should have asked but did not?

☐ Yes

☐ No

If yes, please explain below.

38. Please use the space below to add any additional comments about this assessment.

Thank You!

Thank you for completing this assessment. For more information or questions about the assessment, please contact Monica Huang at the CSTE National Office: mhuang@cste.org.

You will be redirected to the CSTE website.