NEMSIS TAC Whitepaper

NEMSIS V3 Version Change Checklist for States and Territories

Date

February 6, 2020

Authors

Joshua Legler – NEMSIS Consultant
Monet Iheanacho – State Support
N. Clay Mann – NEMSIS P.I.

Overview

This checklist is for states and territories that have already implemented a version of NEMSIS V3 and need to implement a new version of NEMSIS V3 (for example, states that have implemented NEMSIS v3.4.0 and need to implement NEMSIS v3.5.0).

Planning

☐ Find out when your state-level software and the various products used at the local agency level within your state will be certified compliant on the new NEMSIS version

Contact the vendor of your state software to find out when they plan to be certified compliant. Aside from planning, most of the steps in this guide cannot be done until your vendor has fully deployed support for the new version in your state system. Contact vendors of agency systems to get an idea of how soon the first ones will be ready to support the new version and how long it will take for the others to be ready.

☐ Create a project schedule for your transition

Create a schedule for all remaining steps in this guide. Pad the schedule with extra time to allow for vendor development delays, testing, and bug fixes. On the schedule, identify dependencies; in other words, tasks that must be completed before certain other tasks can be done.

☐ Share your transition schedule with agencies, software vendors, and other stakeholders

You could disseminate the schedule via email, on your website, and on your state page of the NEMSIS website.

☐ Ask each agency to create its transition schedule

Ask each agency to find out when its vendor will be ready and then set a target date for switching to the new NEMSIS version. Instruct each agency to identify configuration changes and training needs that they will need to address.

☐ Create a training plan and materials that focus on the changes introduced by the new NEMSIS version

You may utilize the information sheets developed by the NEMSIS TAC that introduce the major changes associated with the new NEMSIS version. Supplement that information with details specific to your state.

☐ Participate in NEMSIS TAC V3 Implementation Calls, public webinars, and one-on-one technical assistance sessions

NEMSIS TAC V3 Implementation Calls are held twice a month. State training sessions and public training sessions are also available. See nemsis.org -> Calls and Trainings for upcoming training dates and recordings of past trainings. You may also schedule a one-on-one call with NEMSIS TAC staff to discuss the transition.

State Resources and Requirements

☐ Update your state system configuration and StateDataSet file

If you are moving to NEMSIS version 3.5 or higher, your state software product is required to auto-generate your StateDataSet file from your state system configuration. Either way, you need to determine the content of your StateDataSet file and ensure that your state system configuration and StateDataSet match each other. The components are listed below:

- Custom Elements

  Check if the new NEMSIS version standardizes anything that you have published as a custom element. If it does, you can retire the custom element from your StateDataSet. If you have custom elements that extend an existing NEMSIS element, make sure that element still exists in the new NEMSIS version. If you have any custom elements that are no longer needed, now is a good time to retire them. If you add or modify any custom elements, give vendors at least three months to implement.

- ## State Collected Elements

  If there are any elements on your state list that were retired in the new NEMSIS version, remove them from your list and add suitable replacements if needed. Review the elements that have been added in the new NEMSIS version; if they are national elements, add them to your state list; otherwise, work with stakeholders to determine whether they should be added. If there are any elements on your state list that no longer need to be, now is a good time to remove them.

- ## State Certification/Licensure Levels

  If any of your certification/licensure levels have been retired in the new NEMSIS version, remove them from your list and add suitable replacements if needed.

- ## Procedures Permitted by the State

  Now is a good time to update your procedures list. Check the current NEMSIS suggested list for procedures and consider changes as needed. Run a frequency count of procedures recorded in your state system. Identify any commonly reported procedures that are not on your state list and consider adding them. Also identify any procedures on your state list that are rarely used and consider removing them. If you have made changes to certification/licensure levels, make sure there is a correct procedure list for each level.

- ## Medications Permitted by the State

  Now is a good time to update your medication list in the same way as your procedure list.

- ## Protocols Permitted by the State

  If your state protocol list has any protocols that have been retired in the new NEMSIS version, remove them from your list and add suitable substitutes if needed. If the new NEMSIS version has any new protocol elements, review them and consider adding them to your state list. If your state has protocols that are not on the NEMSIS protocol list, configure them as custom elements.

- ## EMS Agencies

  The new NEMSIS version shouldn't impact your agency list, but now is a good time to make sure it's up to date.

- ## Facilities

  If the new NEMSIS version added any new data elements related to facilities, consider filling in that data for each facility. Otherwise, the new NEMSIS version shouldn't impact your facility list, but now is a good time to make sure it's up to date.

☐ Update and publish your state validation rules in Schematron format

Review each of your state Schematron rules. Remove rules that are already enforced by the national XSD or Schematron rules. Remove or modify rules that refer to data elements that were retired or modified in the new NEMSIS version. Add or remove rules based on updates you made to your State Collected Elements list. Add rules related to data elements that were added in the new NEMSIS version as needed. Create Schematron files, test them, and send them to the NEMSIS TAC for publication in your state repository. Include a change log to help agencies and vendors know what changed. Remember, you can have Schematron rules for agency demographic data as well as PCR data.

☐ ### Update your state-specific data dictionary if needed

If you have developed a state-specific data dictionary, review it to determine whether a state-specific data dictionary is still necessary. It is possible that changes made in the new NEMSIS version eliminate the need to continue maintaining a state-specific data dictionary. If that is the case, notify the NEMSIS TAC, and they will remove the state-specific data dictionary from your state-specific resource repository for the new NEMSIS version while leaving it available for older NEMSIS versions. If you need to continue to maintain a state-specific data dictionary, incorporate the changes from the new NEMSIS version and send it to the NEMSIS TAC for publishing in your state-specific repository.

Data Entry Form

☐ ### Verify that your data entry form supports the changes introduced in the new NEMSIS version

If you added or removed elements on your Custom Elements and State Collected Elements lists, update the data entry form in your state system to match. Make sure that elements and codes/values that were retired in the new NEMSIS version are no longer available. Make sure that elements and codes/values that were added in the new NEMSIS version are available if needed in your state.

Data Validation

☐ ### Deploy the national and state Schematron schemas for the new NEMSIS version in your system

Use an interface provided by your software or ask your vendor to deploy the new Schematron schemas.

☐ ### Verify that your system performs data validation using the XML Schemas (XSDs) and Schematron schemas for the new NEMSIS version

Test this by submitting intentionally invalid data to your state system in the new NEMSIS version. You could test by partnering with an agency whose vendor supports the new version. The XML Schema (XSD) and both the national and state Schematron schemas should be used for validation of imports and direct-entry PCRs in your system. The XSD and national (but not state) Schematron schemas should be used for exports from your system to the national EMS database.

Web Services

☐ **Verify that agencies can submit data in the new NEMSIS version to your state via web services**

Ask software vendor or an EMS agency to test submission of data in the new NEMSIS version. Verify that your state system accepts valid data in the new NEMSIS version. Test agency demographic data and PCR data.

☐ **Verify that your system properly processes web service submissions in the new NEMSIS version**

After testing web services submissions, look for the data in your system. Verify that it is available and that it matches what was submitted.

Agency Transitions

☐ **Contact each agency prior to its target transition date**

Use the target agency transition dates from the planning phase to schedule your assistance to agencies. Contact each agency about three months prior to its target transition date. Send the training materials and ask the agency to begin by updating and submitting its agency demographic data in the new NEMSIS version.

☐ **Receive and verify agency demographic data**

Ensure that each agency submits agency demographic data in the new NEMSIS version via web services (or updates demographic data in the state system if they are using the state system directly) before you allow the agency to submit PCRs in the new NEMSIS version.

☐ **Receive and verify PCR data**

After an agency has completed demographic data in the new NEMSIS version, ensure that the agency submits PCR data via web services in the new NEMSIS version (or continues submitting PCRs in the state system if they are using the state system directly). For the first few weeks, closely watch the number and quality of the PCRs, especially focusing on data elements that changed in the new NEMSIS version.

National EMS Database Submission

☐ **If required, obtain updated approval from your institutional review board (IRB) to submit data to the national EMS database in the new NEMSIS version**

If the new NEMSIS version added or removed any national elements, that will change what information your state will submit to the national database. If you obtained IRB approval to submit data, you may need to request an update to the approval.

☐ **Sign an updated data use agreement for sending data to the national EMS database**

If the new NEMSIS version added or removed any national elements, update the data element list in your data use agreement with NHTSA, and execute the updated agreement. If your state has determined that it does not need a data use agreement, send a written statement indicating such to the NEMSIS TAC.

☐ **Test data submission to the National EMS Database in the new NEMSIS version**

Obtain the onboarding and production web services URLs for the new NEMSIS version from the NEMSIS TAC. Work with your vendor to submit demographic data and PCR data for at least one agency to the national EMS database onboarding environment in the new NEMSIS version. Work with NEMSIS TAC staff to verify successful submission.

☐ **Configure and verify automatic data submission to the National EMS Database for agency demographic data and patient care report data**

Configure your state system so that data submitted in the new NEMSIS version is automatically sent to the national EMS database production environment in the new version. As each agency transitions to the new version, send updated demographic data, followed by PCR data. Ensure that data submitted to your state system in older NEMSIS versions is sent to the national EMS database in the same version as it was received.

Analytical Reporting

☐ **Verify that your system generates accurate analytical reports**

Check the analytical reporting capabilities in your state system. Verify that existing reports that you use regularly are still accurate after receiving data in the new NEMSIS version. Verify that data elements that were added in the new NEMSIS version are available for use in analytical reports. Work with your vendor to support consistent analytical reporting across NEMSIS versions.

What to Expect from NEMSIS

You will continue to have access to many tools that help you monitor and analyze your data:

- **Weekly NEMSIS Submission Summary:** You'll continue to receive a weekly email summarizing your data submissions to the national EMS database. Click on the summary to be taken to an interactive report detailing your data submissions and any errors, warnings, or other problems. Drill down by agency or software product to pinpoint problems.

- **State EMS Data Cube:** In addition to a public-access data cube, the NEMSIS TAC provides you with a state-specific data cube that contains details not available to the public. Use the cube for ad-hoc analysis and exploration of your data. Access it at nemsis.org -> View Reports -> State Reports -> State EMS Data Cube.

- **Dashboards:** Several dashboards are available to track current issues in EMS, such as overdoses, STEMI, flu, mass casualty incidents, and motor vehicle crashes, as well as data quality topics. Access them at nemsis.org -> View Reports -> State Reports -> Version 3 Dashboards.

Please contact the NEMSIS TAC at any time for technical assistance with data collection, submission to the national EMS database, or analysis.