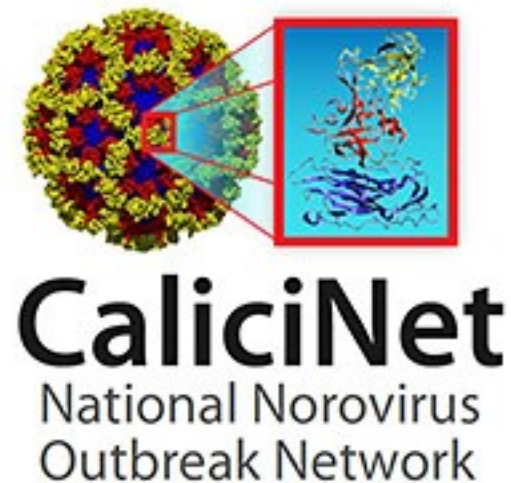


National Outbreak Reporting System (NORS)

User Training Document - NORS/CaliciNet Integration



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INTRODUCTION

This training document provides instruction on how to import norovirus strain data from CaliciNet. The document assumes you have already read the NORS User Training Document – General Section, Etiology, and Attachments Tabs. Additional information on specific questions can also be found by clicking the blue button with the question mark near the top of each question box within the NORS interface.

Etiology							
 Add Etiology							
Genus	Species	Serotype/ Genotype	Confirmed or Suspected	Other Characteristics	Detected In*	# Lab Confirmed Cases	
Norovirus	Genogroup II	GII.4 Sydney	Suspected			1	

CaliciNet is a national surveillance network of federal, state, and local public health laboratories that perform norovirus diagnostic testing for outbreaks. CDC launched CaliciNet in 2009 to collect information on norovirus strains associated with gastroenteritis outbreaks in the United States. This network plays an important role in monitoring circulating norovirus strains, identifying newly emerging norovirus strains, and using these data to potentially link norovirus outbreaks to a common source. More information on CaliciNet can be found on the website www.cdc.gov/norovirus/reporting/calicinet/index.html.

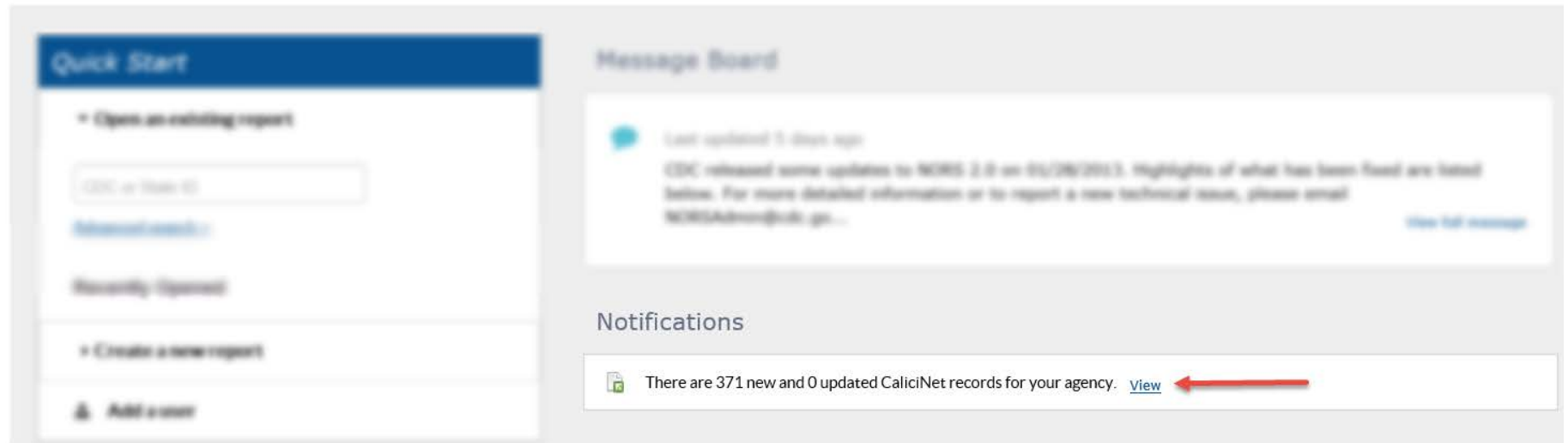
The NORS/CaliciNet integration allows users to import norovirus strain data from CaliciNet into a matching NORS record. CaliciNet reports are automatically matched to NORS records in which all of the following apply:

- NORS Reporting Site matches the CaliciNet Outbreak State,
- NORS State ID or CDC ID matches the CaliciNet NORS Number or State Outbreak Code, and
- First ill date in NORS is within 90 days of the Outbreak Date reported to CaliciNet.

SEARCHING FOR MATCHED RECORDS

Users can search for matched records in NORS and will have the option to import the etiology and norovirus strain data from CaliciNet into an existing NORS record. The “Notifications” section of the NORS homepage will display the number of NORS records that have newly matched or updated CaliciNet data available to import. Clicking on the “View” link in this section will direct users to the Reports page, where new and updated CaliciNet records within the user’s agency will be listed by default.

NORS Home



CaliciNet records that match to NORS records fall into three categories:

- *New CaliciNet Records*: NORS reports that have been newly matched to a CaliciNet record, and no action has yet been taken (i.e., the user has not elected to replace, append, or ignore the CaliciNet data).
- *Updated CaliciNet Records*: NORS reports with matched CaliciNet data already added or ignored and with recently updated CaliciNet data (e.g., additional sequences were uploaded to CaliciNet).
- *Ignored/Added CaliciNet Records*: NORS reports that have been matched to a CaliciNet record, and the CaliciNet data have already been added to the NORS record or ignored.

If a user navigates directly to the Reports page or by clicking on the “Advanced search” link in the Quick Start menu on the home page, matching CaliciNet records will not be listed by default. Users must select the checkboxes in the CaliciNet Records section of the Search Reports navigation bar and click “Search.”

Reports

New Report

Search Reports

CDC or State ID

First Ill Date

From: 10/10/2012

To: 10/10/2017

Primary Mode Of Transmission

☐ Food
 ☐ Water
 ☐ Animal Contact
 ☐ Person-to-person
 ☐ Environmental
 ☐ Indeterminate/Unknown

Author Site/Agency

CaliciNet Records

☒ New
 ☒ Updated
 ☐ Ignored/Added

Clear

Search

View and Select Reports

Choose Action

Download

<input type="checkbox"/>	CDC ID	State ID	Primary Mode of Transmission	First Ill	Report Status	CDC Status	Agency	Site	Report Author	CaliciNet Records	PDF
<input type="checkbox"/>			Person-to-person	03/27/2017	Active					New	
<input type="checkbox"/>			Food	04/13/2013	Active					New	
<input type="checkbox"/>			Person-to-person	04/10/2013	Active					New	
<input type="checkbox"/>			Person-to-person	04/09/2013	Active					New	
<input type="checkbox"/>			Person-to-person	04/07/2013	Active					New	
<input type="checkbox"/>			Intermediate/Unknown	04/06/2013	Active					New	
<input type="checkbox"/>			Person-to-person	04/06/2013	Active					New	
<input type="checkbox"/>			Person-to-person	04/04/2013	Active					New	

4

[illegible]

5

REVIEWING NORS ETIOLOGY DATA

If the NORS record has been matched to data from CaliciNet, the Etiology (from CaliciNet) table will appear below the existing NORS Etiology table for that record. The Etiology (from CaliciNet) table will contain data from CaliciNet that have been formatted to match the NORS Etiology table. All etiology data imported from CaliciNet will include “Imported from CaliciNet” under “Other Characteristics” by default.

The data in the Etiology (from CaliciNet) table cannot be edited or deleted before being added to the NORS record. If there is an error in the CaliciNet data, please contact NORSAdmin@cdc.gov. CaliciNet data that have been added or appended to a NORS report become a part of the NORS record and can then be edited, deleted, or downloaded.

Etiology						
+ Add Etiology						
Genus	Species	Serotype/ Genotype	Confirmed or Suspected	Other Characteristics	Detected In*	# Lab Confirmed Cases
Norovirus	Genogroup II		Confirmed			8
<i>*Detected in (choose all that apply): 1 - patient specimen; 2 - food specimen; 3 - environment specimen; 4 - food worker specimen; 5 - water sample; 6 - animal specimen</i>						
Etiology (from CaliciNet)						
+ Replace with CaliciNet Etiologies + Append CaliciNet Etiologies + Ignore CaliciNet Etiologies						
Genus	Species	Serotype	Confirmed or Suspected	Other Characteristics	Detected In*	# Lab Confirmed Cases
Norovirus	Genogroup II	GII.P7 - GII.6	Confirmed	Imported from CaliciNet		3
Norovirus	Genogroup II	GII.6	Suspected	Imported from CaliciNet		1
Norovirus	Genogroup II	unknown	Confirmed	Imported from CaliciNet		11

Once the CaliciNet data have been reviewed, users can choose one of three options, listed on top of the Etiology (from CaliciNet) table:

- *Replace with CaliciNet Etiologies* – Clicking this option will replace the data in the NORS Etiology table with the data shown in the Etiology (from CaliciNet) table.
- *Append CaliciNet Etiologies* – Clicking this option will add the data from the Etiology (from CaliciNet) table to the NORS Etiology table without altering the data currently in the NORS Etiology table.
- *Ignore CaliciNet Etiologies* – Clicking this option will hide the Etiology (from CaliciNet) table. No data will be added to or changed in the NORS Etiology table.

Once you have clicked one of the above options, the Etiology (from CaliciNet) table will be hidden, and the sentence “Etiology data from CaliciNet has been added or ignored” will appear, along with a “Show CaliciNet Etiologies” link. Click the “Show CaliciNet Etiologies” link to view the Etiology (from CaliciNet) table again. Clicking on one of the above options will also change the status of the CaliciNet record from “New” or “Updated” to “Ignored/Added” in the Reports page.

The Etiology (from CaliciNet) table will list the etiology as confirmed or suspected based on the number of positive outbreak specimens in CaliciNet that match the listed norovirus genotype. In the example below, the number of lab confirmed cases in the Etiology (from CaliciNet) table is two, so the etiology (GI.6) is listed as “Confirmed.” If the number of lab confirmed cases as reported to CaliciNet is less than two, the etiology will be listed as “Suspected.”

Etiology (from CaliciNet)						
+ Replace with CaliciNet Etiologies + Append CaliciNet Etiologies + Ignore CaliciNet Etiologies						
Genus	Species	Serotype	Confirmed or Suspected	Other Characteristics	Detected In*	# Lab Confirmed Cases
Norovirus	Genogroup I	GI.6	Confirmed	Imported from CaliciNet		2

REPLACE WITH CALICINET ETIOLOGIES

Selecting the option to “Replace with CaliciNet Etiologies” will replace all data previously entered in the NORS Etiology table with all of the data shown in the Etiology (from CaliciNet) table. This cannot be undone. Once imported from the Etiology (from CaliciNet) table into the NORS Etiology table, the imported CaliciNet etiology data can be edited by clicking on the row, as you would with any other NORS etiology data.

Once you have clicked “Replace with CaliciNet Etiologies”, the Etiology (from CaliciNet) table will be hidden and the following text will appear: “Etiology data from CaliciNet has been added or ignored. Show CaliciNet Etiologies”. Click the “Show CaliciNet Etiologies” link to view the Etiology (from CaliciNet) table again.

Etiology

+ Add Etiology

Genus	Species	Serotype/ Genotype	Confirmed or Suspected	Other Characteristics	Detected In*	# Lab Confirmed Cases
Norovirus	Genogroup II		Confirmed			8

**Detected in (choose all that apply): 1 - patient specimen; 2 - food specimen; 3 - environment specimen; 4 - food worker specimen; 5 - water sample; 6 - animal specimen*

Etiology (from CaliciNet)

+ Replace with CaliciNet Etiologies
+ Append CaliciNet Etiologies
+ Ignore CaliciNet Etiologies

Genus	Species	Serotype	Confirmed or Suspected	Other Characteristics	Detected In*	# Lab Confirmed Cases
Norovirus	Genogroup II	GII.P7 - GII.6	Confirmed	Imported from CaliciNet		3
Norovirus	Genogroup II	GII.6	Suspected	Imported from CaliciNet		1
Norovirus	Genogroup II	unknown	Confirmed	Imported from CaliciNet		11

Etiology





+ Add Etiology

Genus	Species	Serotype/ Genotype	Confirmed or Suspected	Other Characteristics	Detected In*	# Lab Confirmed Cases
Norovirus	Genogroup II	GII.P7 - GII.6	Confirmed	Imported from CaliciNet		3
Norovirus	Genogroup II	GII.6	Suspected	Imported from CaliciNet		1
Norovirus	Genogroup II	unknown	Confirmed	Imported from CaliciNet		11

**Detected in (choose all that apply): 1 - patient specimen; 2 - food specimen; 3 - environment specimen; 4 - food worker specimen; 5 - water sample; 6 - animal specimen*

Etiology data from CaliciNet has been added or ignored. [Show CaliciNet Etiologies](#)

If the number of real-time positive specimens entered into CaliciNet is greater than the number of sequenced specimens, the Etiology (from CaliciNet) table will display an extra row containing information on positive but not sequenced specimens. In the example below, 15 total specimens were obtained, tested positive by RT-PCR for norovirus GII, and that information entered into CaliciNet. Four of the specimens were sequenced as GII.6 and GII.P7 – GII.6. The remaining 11 specimens were positive for norovirus GII but could not be sequenced. They are represented in the last row of the Etiology (from CaliciNet) table. If additional specimens tested positive for norovirus by RT-PCR but the information was not submitted to CaliciNet, the user may wish to manually add additional rows to note the additional laboratory testing information.

Etiology (from CaliciNet) 						
 Replace with CaliciNet Etiologies  Append CaliciNet Etiologies  Ignore CaliciNet Etiologies						
Genus	Species	Serotype	Confirmed or Suspected	Other Characteristics	Detected In*	# Lab Confirmed Cases
Norovirus	Genogroup II	GII.P7 - GII.6	Confirmed	Imported from CaliciNet		3
Norovirus	Genogroup II	GII.6	Suspected	Imported from CaliciNet		1
Norovirus	Genogroup II	unknown	Confirmed	Imported from CaliciNet		11

APPEND CALICINET ETIOLOGIES

Selecting the option to “Append CaliciNet Etiologies” will append data from the Etiology (from CaliciNet) table to the NORS Etiology table without affecting the existing data in the NORS Etiology table. The CaliciNet data will appear as a new row in the NORS Etiology table. Once appended to the NORS Etiology table, the imported CaliciNet etiology data can be edited by clicking on the row, as you would with any other NORS etiology data.

When appending CaliciNet data to a NORS record, care should be taken to avoid data duplication. In the example shown, the user previously entered Norovirus Genogroup II as an etiology in NORS. The appended CaliciNet data provide further detail, showing that the genotype was GII.4 Sydney.

If these results refer to the same four specimens, the user should consider deleting the previously entered etiology information in order to avoid duplication. However, if four specimens were genotyped as GII.4 Sydney and four additional specimens were RT-PCR positive for Genogroup II but not sequenced, the user should keep both entries.

Once you have clicked “Append CaliciNet Etiologies”, the Etiology (from CaliciNet) table will be hidden and the following text will appear: “Etiology data from CaliciNet has been added or ignored. Show CaliciNet Etiologies”. Click the “Show CaliciNet Etiologies” link to view the Etiology (from CaliciNet) table again.

Etiology

[+ Add Etiology](#)

Genus	Species	Serotype/ Genotype	Confirmed or Suspected	Other Characteristics	Detected In*	# Lab Confirmed Cases
Norovirus	Genogroup II		Confirmed			4

**Detected in (choose all that apply): 1 - patient specimen; 2 - food specimen; 3 - environment specimen; 4 - food worker specimen; 5 - water sample; 6 - animal specimen*

Etiology (from CaliciNet)

[+ Replace with CaliciNet Etiologies](#)
[+ Append CaliciNet Etiologies](#)
[+ Ignore CaliciNet Etiologies](#)

Genus	Species	Serotype	Confirmed or Suspected	Other Characteristics	Detected In*	# Lab Confirmed Cases
Norovirus	Genogroup II	GI.4 Sydney	Confirmed	Imported from CaliciNet		4

Etiology

[+ Add Etiology](#)

Genus	Species	Serotype/ Genotype	Confirmed or Suspected	Other Characteristics	Detected In*	# Lab Confirmed Cases
Norovirus	Genogroup II		Confirmed			4
Norovirus	Genogroup II	GI.4 Sydney	Confirmed	Imported from CaliciNet		4

**Detected in (choose all that apply): 1 - patient specimen; 2 - food specimen; 3 - environment specimen; 4 - food worker specimen; 5 - water sample; 6 - animal specimen*

Etiology data from CaliciNet has been added or ignored. [Show CaliciNet Etiologies](#)

IGNORE CALICINET ETIOLOGIES

After reviewing the matched CaliciNet data, a user may decide not to include this information in the NORS report. In this case, clicking on the “Ignore CaliciNet Etiologies” option will hide the Etiology (from CaliciNet) table from view, and the NORS Etiology table will remain unchanged.

Etiology

[+ Add Etiology](#)

Genus	Species	Serotype/ Genotype	Confirmed or Suspected	Other Characteristics	Detected In*	# Lab Confirmed Cases
Norovirus	Genogroup I	GI.6	Suspected			1

**Detected in (choose all that apply): 1 - patient specimen; 2 - food specimen; 3 - environment specimen; 4 - food worker specimen;
5 - water sample; 6 - animal specimen*

Etiology (from CaliciNet)

[+ Replace with CaliciNet Etiologies](#) [+ Append CaliciNet Etiologies](#) [+ Ignore CaliciNet Etiologies](#)

Genus	Species	Serotype	Confirmed or Suspected	Other Characteristics	Detected In*	# Lab Confirmed Cases
Norovirus	Genogroup I	GI.6	Suspected	Imported from CaliciNet		1

Etiology

[+ Add Etiology](#)

Genus	Species	Serotype/ Genotype	Confirmed or Suspected	Other Characteristics	Detected In*	# Lab Confirmed Cases
Norovirus	Genogroup I	GI.6	Suspected			1

**Detected in (choose all that apply): 1 - patient specimen; 2 - food specimen; 3 - environment specimen; 4 - food worker specimen;
5 - water sample; 6 - animal specimen*

Etiology data from CaliciNet has been added or ignored. [Show CaliciNet Etiologies](#)

Once you have clicked “Ignore CaliciNet Etiologies”, the Etiology (from CaliciNet) table will be hidden and the following text will appear: “Etiology data from CaliciNet has been added or ignored. Show CaliciNet Etiologies”. Click the “Show CaliciNet Etiologies” link to view the Etiology (from CaliciNet) table again. The user may again elect to replace, append, or ignore the CaliciNet data shown.

REVIEWING NORS ISOLATES DATA

Similar to the Etiology table, the Isolates table in the General Etiology section of the NORS report can also be updated with matched CaliciNet data. If the NORS record has been matched to data from CaliciNet, an Isolates (from CaliciNet) table will appear below the existing NORS Isolates table for that record. The additional table will contain norovirus genotype data from CaliciNet that have been formatted to match the NORS Isolates table. The CDC System field will be automatically populated to denote that the data are from CaliciNet.

The data in the Isolates (from CaliciNet) table cannot be edited or deleted before being added to the NORS record. If there is an error in the CaliciNet data, please contact NORSAdmin@cdc.gov. CaliciNet data that have been added or appended to a NORS report become a part of the NORS record and can then be edited, deleted, or downloaded.

Isolates						
+ Add Isolate						
Isolates (from CaliciNet)						
+ Replace with CaliciNet Isolates + Append CaliciNet Isolates + Ignore CaliciNet Isolates						
CDC System	State lab ID/Accession ID/CaliciNet key/PulseNet key	PulseNet Outbreak Code or CaliciNet Outbreak Number	CDC PulseNet Pattern Designation for Enzyme 1	CDC PulseNet Pattern Designation for Enzyme 2	CaliciNet Sequenced Region/Whole Genome Sequencing ID	CaliciNet Genotype/Other Molecular Designation
CaliciNet	1001_2013-09-09	2013-09-09				GI.6

Users can replace, append, or ignore the data in the Isolates (from CaliciNet) table in the same ways described above for the Etiology (from CaliciNet) table:

- *Replace with CaliciNet Isolates* – Clicking this option will replace the data in the NORS Isolates table with the data shown in the Isolates (from CaliciNet) table.
- *Append CaliciNet Isolates* – Clicking this option will add the CaliciNet Isolates data to the NORS Isolates table without altering the data currently in the NORS Isolates table.
- *Ignore CaliciNet Isolates* – Clicking this option will hide the Isolates (from CaliciNet) table. No data will be added to or changed in the NORS Isolates table

Once you have clicked one of the above options, the Isolates (from CaliciNet) table will be hidden, and the following text will appear: “Isolate data from CaliciNet has been added or ignored. Show CaliciNet Isolates”. Click the “Show CaliciNet Isolates” link to view the Isolates (from CaliciNet) table again.

NORSDIRECT USERS

NORSDirect users should note that any changes made to the NORS Etiology or Isolates tables using the CaliciNet integration tool must also be made in respective state databases. Any changes that are made using the CaliciNet integration tool will be overwritten by any subsequent NORSDirect uploads that do not include the imported CaliciNet data.

ADDITIONAL INFORMATION

If you need assistance in completing other sections of NORS, please refer to the online technical and guidance documents located at www.cdc.gov/nors/forms.html.

For further assistance or for questions or comments, please email us at NORSAdmin@cdc.gov.