

# **National Outbreak Reporting System (NORS) User Training Document — NORSDirect**



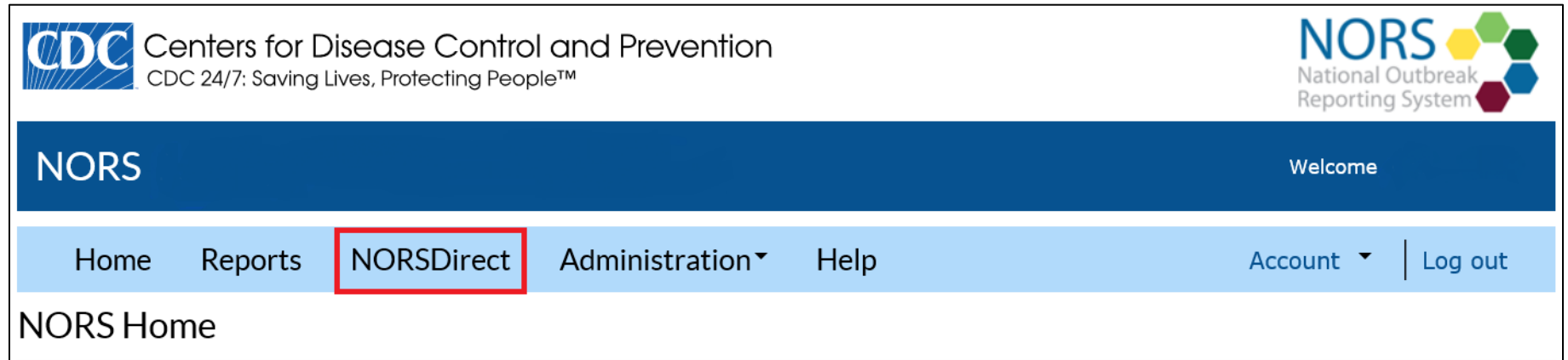
# National Outbreak Reporting System (NORS) User Training Document — NORSDirect

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## Introduction

NORSDirect is a feature of the National Outbreak Reporting System (NORS) that allows reporting sites to upload outbreak data from their reporting systems or from a completed NORS PDF form directly into NORS. Reporting sites have the option to send data to CDC securely either through the Public Health Information Networking Messaging System (PHIN MS, [www.cdc.gov/phinf/PHINms/index.html](http://www.cdc.gov/phinf/PHINms/index.html)) or online using the NORSDirect file upload feature, accessible by clicking on “NORSDirect” from the NORS home page.



There are benefits to either using PHIN MS or the NORSDirect site. The table below summarizes features of PHIN MS and of the NORSDirect file upload feature.

PHIN MS	NORSDirect File Upload
File size ≤ 10 MB	File size ≤ 4 MB
No login required to send files (NORS login required for correcting errors)	Requires NORS login with NORSDirect access to send files and correct errors
Additional software set up required	No software set up required
PHIN MS must be up and running	NORS interface must be up and running

Regardless of whether outbreak reports are transmitted through PHIN MS or through the NORSDirect file upload feature, reports will be validated and errors will be flagged for correction within the NORSDirect site.

This training guide provides instructions on how to successfully upload files using NORSDirect, as well as information on troubleshooting some common issues that may arise during the uploading process. This guide assumes familiarity with NORS. Additional training guides and resources for NORS can be found on the NORS website ([www.cdc.gov/nors/training/index.html](http://www.cdc.gov/nors/training/index.html)).

The NORS team can provide technical support for reporting sites interested in implementing NORSDirect. New users of NORSDirect may consult with NORS program staff and technical experts for assistance throughout implementation. Users can also upload test files in order to become familiar with the system.

This guide does not include information on how to upload files via PHIN MS; however, the file formatting and the process for correcting errors are the same. For additional information on PHIN MS, please see <https://www.cdc.gov/phinf/tools/phinms/index.html>. For more information on uploading NORS data via PHIN MS, please contact the NORS team at [NORSAdmin@cdc.gov](mailto:NORSAdmin@cdc.gov).

## General Overview

NORSDirect allows reporting sites to import multiple outbreak reports into NORS using one data file. The general flow of information into NORSDirect is as follows:

1. Report data are downloaded or extracted from the reporting site's outbreak database and combined into a single, flattened file compatible with NORSDirect, or else data from a single outbreak report are entered into a fillable PDF file.
2. File is uploaded into NORSDirect.
3. Individual reports are extracted from the file and validated.
4. Reports without errors are successfully imported and saved into the NORS database.
5. Reports with errors are flagged and must be either corrected within or deleted from NORSDirect.

NORSDirect now allows reporting sites to upload individual outbreak reports to NORS through the NORS PDF fillable form. For PDF files, the most recent version of the fillable PDF form should be used. This can be downloaded from the [NORSDirect Help Page](#). PDF upload is currently available for outbreaks with person-to-person, environmental contamination, indeterminate/unknown, foodborne, and animal contact modes of transmission. This feature is not yet available for outbreaks with waterborne transmission.

## Preparing Files for NORSDirect File Upload

To prepare a file for NORSDirect file upload, do one of the following:

1. Extract report data from the reporting site's outbreak database to create an Excel or CSV file
2. Create the file manually, by copying and pasting data for each report on a single row in an Excel or CSV file
3. Complete the NORS fillable PDF form for a single outbreak report.

All files must be converted to one of the supported file format types in order to be compatible with NORSDirect. **NORSDirect currently supports PDF, CSV, and Excel files up to 4 megabytes in size (10 megabytes if using PHIN MS).** The supported file extensions are: pdf, txt, csv, xls, xlsx, xlsb, and xslm.

### Excel or CSV File

	A	B	C	D	E	F	G	H	I	J	K	L	M	N	O	
	StateID	RecordStatus	PrimaryMode	DateFirstIll	DateLastIll	LocalReportDate	CDCReportDate	ExposureState	MultiStat	MultiStat	OtherState1	OtherState2	EstimatedPrimary	DeathsNum	DeathsInfo	Symptom
1	NORS-Direct	Active	Food	1/1/2010	1/2/2010	1/2/2010	1/2/2010	Alabama	FALSE	TRUE	Georgia	Mississippi	10	1	10	Abdomin
2	NORS-Direct	Active	Animal Contact	1/2/2010	1/3/2010	1/3/2010	1/3/2010	Alabama	TRUE	FALSE	Mississippi		13	4	13	Body ach
3	NORS-Direct	Active	Person-to-person	1/3/2010	1/4/2010	1/4/2010	1/4/2010	Alabama	TRUE	FALSE	Georgia		12	1	12	Nausea
4	NORS-Direct	Active	Environmental cc	1/4/2010	1/5/2010	1/5/2010	1/5/2010	Alabama	FALSE	FALSE			14	2	14	Chills
5	NORS-Direct	Deleted	Indeterminate/O	1/5/2010	1/6/2010	1/6/2010	1/6/2010	Alabama	FALSE	FALSE			15	0	15	Abdomin
6	NORS-Direct	Finalized	Water	1/6/2010	1/7/2010	1/7/2010	1/7/2010	Alabama	FALSE	FALSE			11	2	11	Cough
7	NORS-Direct	Active	Water	1/6/2010	1/7/2010	1/7/2010	1/7/2010	Alabama	FALSE	TRUE	Tennessee		36	0	28	Diarrhea

As seen in the Excel example above, variable names are placed in the first row, and data for each report are entered in the rows below, with corresponding data in columns. Each row corresponds to a single outbreak report with a unique State ID.

When preparing an Excel or CSV file for upload via NORSDirect, remember the following:

1. Though NORS stores certain data (e.g., etiology and symptom data) in relational tables, data uploaded to NORSDirect via an Excel or CSV file must be submitted in a flattened format (i.e., each row of data in the submitted file corresponds to a single outbreak report with a unique State ID).

This is especially important for reporting site databases that store information in a relational format. In this example, symptom data for one outbreak was stored in this format:

Symptom	# with Symptom	# with information about Symptom
Vomiting	3	5
Diarrhea	4	5

This information must be reformatted for NORSDirect upload into the following flattened format:

Symptom1	SymptomCases1	SymptomInfo1	Symptom2	SymptomCases2	SymptomInfo2
Vomiting	3	5	Diarrhea	4	5

**NOTE:** For updating data that are stored by NORS in a relational table format, see the section on “Special Considerations for Updating Data Stored in Relational Tables.”

- Every file must have the five required variables for every report: StateID, ExposureState, PrimaryMode, DateFirstIll, and EstimatedPrimary. All variable names must match exactly. Variable names may be viewed on and downloaded from the Variables & Mapping page within NORSDirect.
- All data for a single report must be contained in the same file—data for a single outbreak report may not be split across multiple files.
- Data for a single report can be entered in multiple worksheets in a single workbook file. This may be necessary when using older versions of Excel that have a column limit or to improve file readability. The StateID column should be repeated on each sheet that has variable names at the top of the page, even if a report does not have any data present on that sheet. For example, if Sheet1 contains 20 outbreak reports, then the StateIDs of all 20 of those outbreak reports should also appear on Sheet2.
- CDCID is a value assigned by CDC and will automatically populate when a report is submitted. Agencies should not submit values for CDCID.
- Variable dependencies in NORSDirect are the same as in the NORS interface. For example, to enter school information for a foodborne outbreak, “school” must be selected as a location where food was prepared or a location where food was eaten.

For Excel files, multiple sheets may be used in one file. If multiple sheets are used, the State ID column should be repeated on each sheet. This ensures the same number of rows on each sheet.

For CSV files, all data must be in a single file and separated by commas. String or text fields containing commas should be wrapped in double quotes (Example 1). String or text fields containing quotes and commas should have the quotes delimited with another quote (Example 2).

	String/text	Required formatting
Example 1	This is a comment regarding cats, dogs, and sheep.	"This is a comment regarding cats, dogs, and sheep."
Example 2	This is a comment regarding "cats", "dogs", and "sheep".	"This a comment regarding ""cats"", ""dogs"", and ""sheep""."

### **PDF Fillable form**

The NORS fillable PDF form contains the proper variable names and flattened format automatically.

When preparing a PDF form for upload via NORSDirect, remember the following:

1. Make sure to use the most recent version of the PDF fillable form. This can be downloaded from the [NORSDirect Help Page](#). Save the file to your computer. Do not fill out the form within a web browser.

2. Certain variables in the PDF form must be entered in the proper format to be imported into NORS:

To enter the number of cases that occurred within a state, enter the state name, followed by the number of cases in parenthesis or separated by a hyphen. This applies to both the ExposureState and OtherState fields. For example, if there were 4 cases in Minnesota and 5 cases in Idaho, the field would be formatted "Minnesota – 4, Idaho – 5" or "Minnesota (4), Idaho (5)".

To enter multiple ingredients for food items, separate the individual ingredients by semi-colons. This applies to both the IngredientName and ContaminatedIngredient fields.

3. When importing a NORS report from a fillable PDF form, the five required variables--StateID, ExposureState, PrimaryMode, DateFirstIll, and EstimatedPrimary--must be completed.
4. All data for a single report must be contained in the same file, i.e., data for a single outbreak report may not be split across multiple PDF files.
5. CDCID is a value assigned by CDC and will automatically populate when a report is submitted. Agencies should not submit values for CDCID.
6. Variable dependencies in NORSDirect are the same as in the NORS interface, even if those questions are available on the PDF. For example, to enter school information for a foodborne outbreak, "school" must be selected as a location where food was prepared or a location where food was eaten.

## Variables & Mapping

The screen shot to the right displays the home page for the NORSDirect system. Variables supported by NORSDirect and their corresponding list values are described on the Variables & Mapping page. Unsupported variables in a report will be ignored during the import process.

The Variables & Mapping page contains information on every variable supported by NORSDirect, including

- the variable name
- a description of the variable
- the maximum number of fields supported
- whether or not the data is stored in a relational table (for more information on relational tables, please see the section entitled “Special Considerations for Updating Data Stored in Relational Tables”)
- the primary mode(s) of transmission to which the variable applies
- whether or not the variable is required for an upload or within its relational table
- the data type (e.g., yes/no, date/time)
- the acceptable values

[File Upload](#)
[Uploaded Files](#)
[Pending Reports \(0\)](#)
[Processed Reports](#)
[Variables & Mapping](#)
[Help](#)

### Welcome to NORSDirect!

**File Upload** - Upload files to be processed by NORSDirect.


**Uploaded Files** - View the history of uploaded files.

**Pending Reports** - View, correct, and delete outbreak reports that have not yet been imported and saved into the NORS database.

**Processed Reports** - View processed outbreak reports that have been imported into the NORS database or deleted from NORSDirect.

**Variables & Mapping** - View the variables supported by NORSDirect and their possible values. Setup list mappings.

**Help** - Get help using NORSDirect.


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### Variables & Mapping

Below is a list of the fields currently supported by NORSDirect. This page will be automatically updated when new variables are added or list values are added, removed, or updated. Variables sent in a NORSDirect file which are not in this list will be ignored.

**\* Note 1** - Bold text indicates the field has been added in the past 30 days. Italic text indicates the field has been added in the past 90 days.

**\* Note 2** - Variables that have the format VariableName{value#}\_ {set#} allow users to enter multiple values indicated by the number in the {value#} field while linking to a corresponding variable indicated by the number in the {set#} field. For each variable, the corresponding variable indicated by the {set#} field is specified in the variable description.

**Sections:**

☒ All Variables
 ☐ Food
 ☐ Water General
 ☐ Water Etiology/Isolates

☐ General
 ☐ Animal
 ☐ Water Implicated
 ☐ Water Samples

☐ General Etiology/Isolates
 ☐ P2P/Env/Other/Unknown

Number of fields: 325 [Export All to Excel](#)

Import Field Name	Description	Maximum Number	Relational Table (# of fields)	Supported Modes	Required Field	Data Type	Max Length or Values
ASTOutbreak	Indicates whether any antimicrobial resistant strains were associated with the outbreak.			Water	False	YesNoUnknown	[Yes, True, 1, -1]; [No, False, 0]; [Undetermined, 7, 9]
ASTOutbreak	Indicates whether any antimicrobial resistant strains were associated with the outbreak.			Food, Animal, P2P, Environmental, Other/Unknown	False	YesNoUnknown	[Yes, True, 1, -1]; [No, False, 0]; [Undetermined, 7, 9]
ASTPerformed	Indicates whether antimicrobial susceptibility testing (AST) was performed.			Food, Animal, P2P, Environmental, Other/Unknown	False	YesNoUnknown	[Yes, True, 1, -1]; [No, False, 0]; [Undetermined, 7, 9]
ASTPerformed	Indicates whether antimicrobial susceptibility testing (AST) was performed.			Water	False	YesNoUnknown	[Yes, True, 1, -1]; [No, False, 0]; [Undetermined, 7, 9]
ASTWhere1 - ASTWhere99	Indicates where antimicrobial susceptibility testing (AST) was performed.			Food, Animal, P2P, Environmental, Other/Unknown	False	String	<a href="#">Values</a> <a href="#">Mappings(0)</a>
ASTWhere1 - ASTWhere99	Indicates where antimicrobial susceptibility testing (AST) was performed.			Water	False	String	<a href="#">Values</a> <a href="#">Mappings(0)</a>

The list can be filtered by NORS sections and sorted by clicking on the headers “Import Field Name,” “Relational Table,” and “Required Field.”



For variables typically stored in relational tables, the “Maximum #” column indicates the number of flattened relational fields that NORSDirect supports. For example, AnimalSetting1- AnimalSetting19 indicates that up to nineteen animal settings may be submitted through NORSDirect —AnimalSetting1, AnimalSetting2, AnimalSetting3, etc., through AnimalSetting19. Additional AnimalSetting fields submitted through NORSDirect will not be saved in the system. Variables such as AnimalReasonSuspected{value#}\_{set#} have two maximum values listed, one for the value# and one for the set#. For example, AnimalReasonSuspected{value#}\_{set#} allows up to 4 values for value# (the reasons suspected) and 99 values for set# (the animal suspected) - -- AnimalReasonSuspected1\_1, AnimalReasonSuspected2\_1, etc., through AnimalReasonSuspected4\_99. For variables formatted in this way, examples are listed in the variable description column.

The “# of Fields” within the Relational Table column indicates the number of fields within that relational table. The “Required Field” column indicates if the variable is required for NORSDirect upload (“True”) or if it is required within its relational table (“Within Table”).

For fields that use a set list of values, click on the “Values” button in the last column of the table to view the list of acceptable values. The screenshot below is an example of acceptable field values for the “Animal Setting” variable.

Field Values - AnimalSetting#	
	Values
Agricultural feed store	
Animal shelter or sanctuary	
Camp	
Child day care	
Farm/dairy	
Festival or fair	
Hospital	
Laboratory	
Live animal market	
Long-term care/nursing home/assisted living facility	
Other (specify)	
Other retail location	
Pet store or other retail location	
Petting zoo	
Prison/jail	
Private home/residence	
School/college/university	
Unknown	
Veterinary clinic	
Zoo or animal exhibit	

The list values used by reporting sites may not always match NORS list values. Values that do not match can be mapped to NORS list values before uploading files.

1. To create a mapping, click on the “Mappings” button in the “Max Length or Values” column of the Variables & Mapping table for the desired variable. This will open a pop-up window where a site-specific value can be mapped to the value used by CDC.
2. Enter in the site-specific value in the box next to “From.” Next, click on the drop-down box next to “To” to find the corresponding CDC value. Then click, “Add Mapping.”

**Edit Mappings - AnimalSetting#**

**Add New Mapping**

From:

To:

From (Agency Value)	To (CDC Value)	Mapping Actions
Veterinarian	Veterinary Clinic	<input type="button" value="Edit"/> <input type="button" value="Delete"/>

In the screenshot above, a user is mapping the value “Horse Show” to the NORS Value “Zoo or animal exhibit.” Below that, another user has already mapped the value “Veterinarian” to the CDC value “Veterinary Clinic.” Mappings can also be edited or deleted in this pop-up window by clicking on the buttons in the column “Mapping Actions” in the row for the mapped value.

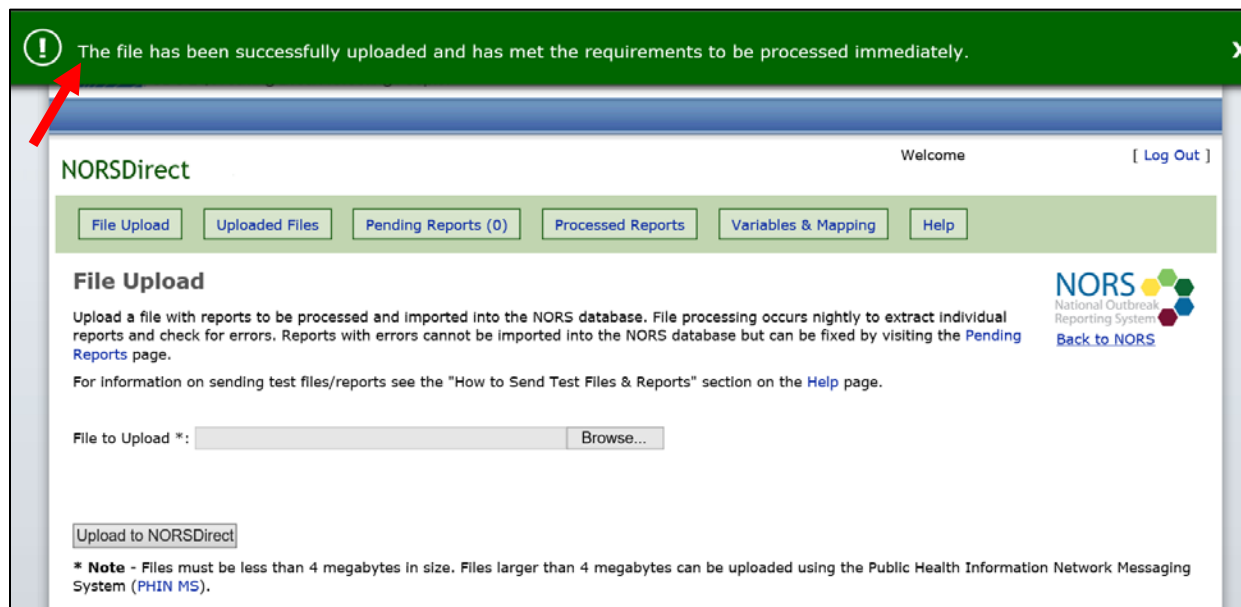
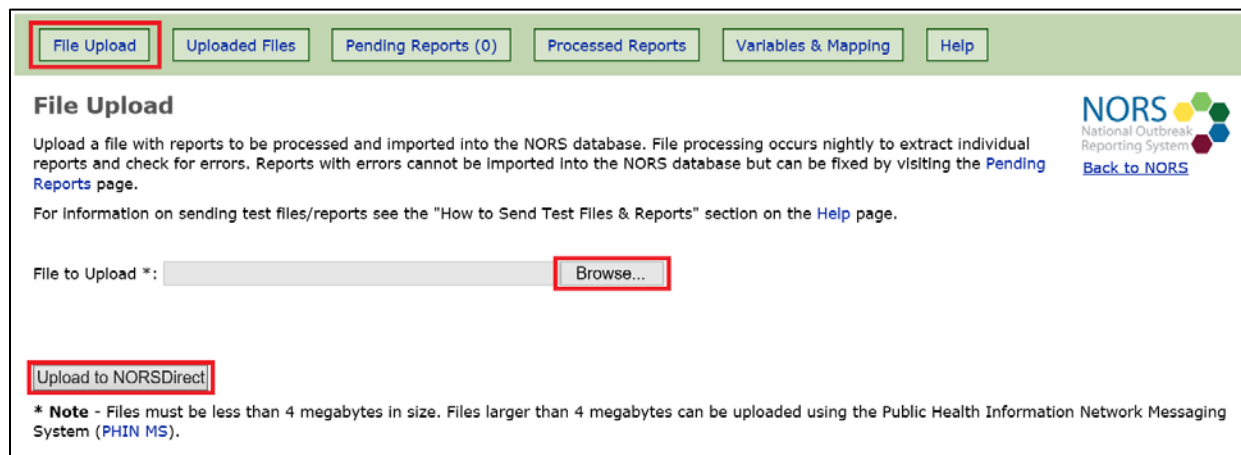
Mappings should be completed before uploading a file via NORSDirect. Mappings will be applied to all new reports and will affect all reports from the same reporting agency. Mappings will not affect reports that have already been processed unless the processed report is edited and saved after the mapping is created.

## File Upload

To reach all NORS users and allow for flexibility, reporting agencies have the option to send data to CDC securely either through PHIN MS or online through the NORSDirect file upload feature of the NORS interface. For more information on uploading NORS data via PHIN MS, please contact the NORS team. To upload a file through the NORSDirect File Upload page, follow the instructions below.

1. Click the "File Upload" menu item to upload a file.
2. Select "Browse" to search for the file, and click "Open" when the desired file has been located. Then click "Upload to NORSDirect."
3. If the file uploads properly, a green banner will appear at the top of the page to inform the user that the upload was successful.

**NOTE:** Files must be less than 4 megabytes in size to upload. Larger files should be divided into smaller files (making sure all data for each outbreak report are in the same file) or uploaded through PHIN MS.



## Uploaded Files

Files successfully uploaded through NORSDirect undergo a process in which individual reports are extracted and validated before being imported and saved into the NORS database. PDF files will be processed immediately when uploaded. Small Excel and CSV files may be processed immediately, while processing for larger files may take up to 24 hours.

### In Process

Files that have been uploaded but have not yet been processed will appear in the “In Process” section under the Uploaded Files page.

**NOTE:** Files sent with PHIN MS will not be listed under “In Process.” They will be listed as “Processed” once processing is completed.

### Processed

Clicking on the “Processed” radio button will show files that have been successfully processed to extract individual reports. The last column of the table also shows how many individual NORS reports were extracted from each file. Reports without errors will be imported into NORS.

The screenshot shows the 'Uploaded Files' page of the NORS system. The 'Uploaded Files' tab is highlighted with a red box. Below the tabs, the 'In Process' radio button is selected and highlighted with a red box. The description for 'In Process' states: 'Files that have been uploaded via the File Upload page but have not been processed. Processing typically occurs overnight. This does not include files uploaded using PHIN MS.' The 'Processed' and 'Rejected/Failed' options are also visible. The date filter is set from 11/3/2018 to 1/3/2019. The number of matching files is 0. The table header shows columns: File Name, User, Upload Source, Upload Date, and File Actions. The page is labeled 'Page 1 of 1'.

The screenshot shows the 'Uploaded Files' page of the NORS system. The 'Uploaded Files' tab is highlighted with a red box. Below the tabs, the 'Processed' radio button is selected and highlighted with a red box. The description for 'Processed' states: 'Files that have been uploaded and processed to extract individual reports. Reports with errors can be viewed and corrected on the Pending Reports page. Reports without errors will be imported into the NORS database and listed on the Processed Reports page.' The 'In Process' and 'Rejected/Failed' options are also visible. The date filter is set from 10/31/2018 to 12/31/2018. The number of matching files is 193. The table header shows columns: File Name, User, Upload Source, Upload Date, and Number of Reports. The table contains three rows of data.

File Name	User	Upload Source	Upload Date	Number of Reports
Fillable_5213_34_food_13.pdf		WebUpload	12/31/2018 1:25:11 PM	1
Fillable_5213_34_food_school.pdf		WebUpload	12/31/2018 1:02:13 PM	1
Fillable_5213_34_food_23.pdf		WebUpload	12/17/2018 4:02:37 PM	1

## Rejected/Failed

Uploaded files containing critical errors will be rejected during processing. These files will appear in the “Rejected/Failed” section. None of the reports included in a rejected file will be imported.

[File Upload](#) [Uploaded Files](#) [Pending Reports \(21\)](#) [Processed Reports](#) [Variables & Mapping](#) [Help](#)

### Uploaded Files

Below is a list of any files uploaded using the File Upload page or PHIN MS. Use the radio buttons to view files by their processing status. Limit the number of results by using the optional date filter. Sort the tables by File Name, User, or Upload Date by clicking the column header.

Dates:  to  [Update](#)

☐ **In Process** Files that have been uploaded via the File Upload page but have not been processed. Processing typically occurs overnight. This does not include files uploaded using PHIN MS.

☐ **Processed** Files that have been uploaded and processed to extract individual reports. Reports with errors can be viewed and corrected on the Pending Reports page. Reports without errors will be imported into the NORS database and listed on the Processed Reports page.


☒ **Rejected/Failed** Files that were uploaded but were rejected during processing, most likely due to a missing or invalid required field.

Number of matching files: 1 [Export All to Excel](#)

File Name	User	Upload Source	Upload Date	File Actions
NORSDirect.xlsx	CPM_Georgia_RSA, Georgia Department of Public Health	WebUpload	12/28/2018 9:35:33 AM	<a href="#">Errors</a>

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Items per page:  [v](#)



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Excel and CSV files may be rejected for the following reasons:

- The file is empty/does not contain data
- The file is too large
- The file is an exact duplicate of a NORSDirect file that has already been uploaded and is “In Process”
- The file cannot be read by the server – it may be encrypted, corrupted, or an invalid file type
- Any of the following required variables (StateID, ExposureState, PrimaryMode, DateFirstIll, EstimatedPrimary) is missing
- There are multiple worksheets in the file, but the number of StateIDs (rows) is not the same on each worksheet
- Column names are repeated

PDF files may be rejected if the file cannot be read by the server—it may be encrypted, corrupted, or an invalid file type. A PDF form that is empty or missing a value for a required variable will appear in the “Errors” section within the Pending Reports page.

## Pending Reports

Individual reports are validated by NORSDirect after they are extracted from processed files. During the data validation process, NORSDirect will check for any data conflicts or duplicate reports. For example, there is a validation check to ensure that the date entered in DateFirstIll is before the date entered in DateLastIll.

### In Process

If a report appears under the status “In Process,” the report is awaiting validation checks. Since data validation typically occurs in real time, this generally indicates that the report is new or has been very recently edited within NORSDirect. These reports may be edited or deleted by clicking the respective buttons in the “Report Actions” column. Typically, reports will only appear here if the uploaded file is very large.

[File Upload](#) [Uploaded Files](#) [Pending Reports \(21\)](#) [Processed Reports](#) [Variables & Mapping](#) [Help](#)

### Pending Reports

Below is a list of reports that are either waiting to be processed or have errors that prevent the reports from being imported into the NORS database. Use the radio buttons to view reports by their pending status. Sort the tables by State ID, Mode of Transmission, User, Upload Date, or Error Summary by clicking on the column header.

☒ **In Process** Reports that are awaiting validation checks. This action typically occurs in real time.

☐ **Errors** Reports that contain one or more errors that need to be addressed before the report can be imported into the NORS database.

☐ **Confirmation Required** Reports where changes must be confirmed before the report can be updated in the NORS database.


☐ **NORSDirect Duplicate** Reports that exactly match reports already in NORSDirect. NORSDirect duplicates can be deleted on this page.

Number of matching reports: 0 [Export All to Excel](#)

State ID	Exposure State	Mode of Transmission	First Ill Date	Report Status	User	Upload Date	Error Summary	Report Actions
----------	----------------	----------------------	----------------	---------------	------	-------------	---------------	----------------

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Items per page: 30

  
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## Errors

If a report appears under the “Errors” tab, the report has validation errors that must be corrected before it can be imported into NORS. The “Error Summary” column specifies which fields contain errors.

[File Upload](#) [Uploaded Files](#) [Pending Reports \(20\)](#) [Processed Reports](#) [Variables & Mapping](#) [Help](#)

### Pending Reports

Below is a list of reports that are either waiting to be processed or have errors that prevent the reports from being imported into the NORS database. Use the radio buttons to view reports by their pending status. Sort the tables by State ID, Mode of Transmission, User, Upload Date, or Error Summary by clicking on the column header.

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☐ **In Process** Reports that are awaiting validation checks. This action typically occurs in real time.

☒ **Errors** Reports that contain one or more errors that need to be addressed before the report can be imported into the NORS database.

☐ **Confirmation Required** Reports where changes must be confirmed before the report can be updated in the NORS database.

☐ **NORSDirect Duplicate** Reports that exactly match reports already in NORSDirect. NORSDirect duplicates can be deleted on this page.

Number of matching reports: 20 [Delete All Reports Below](#) [Export All to Excel](#)

State ID	Exposure State	Mode of Transmission	First Ill Date	Report Status	User	Upload Date	Error Summary	Report Actions
TSE_overwriting_02	Alabama	Food	07/01/2018	Errors		11/21/2018 2:00:58 PM	SpecimenCollected - Specimen Collected must be set to "Yes" or "True" when tested specimen/sample data is supplied.	<a href="#">Edit</a> <a href="#">Delete</a>

If the report needs to be updated within the reporting site database and resubmitted, click the “Delete” button in the “Report Actions” column to delete the report from NORSDirect. If there is an attempt to resubmit a report with the same State ID, DateFirstIll, ExposureState, and PrimaryMode as another report currently within NORSDirect without deleting the original report, the resubmitted report will be flagged as a NORSDirect Duplicate.

If the report does not need to be edited in the reporting site database, it can be edited in the Edit Report view.

## Correcting Validation Errors

1. To correct report errors within NORSDirect, click the “Edit” button under the “Report Actions” column, as seen in the screenshot on the previous page.

2. As pictured in the screenshot to the right, a pop-up window containing the report data transmitted via NORSDirect will appear. Fields containing errors will be highlighted in gray. To show empty fields (i.e., variables sent in the NORSDirect upload file that did not contain any data), click on the checkbox in the upper-right corner.

For reports uploaded through a PDF file, if the genus is “Norovirus”, the corresponding serotypename variable will not appear in the variable list when you select “show empty fields”. Instead, the corresponding capsid and polymerase variables will appear in the variable list.

**Edit Report**

State ID: **AK\_30SEP14\_test4**  
First Ill Date: **1/8/1950**  
Primary Mode: **P2P**

☐ Show empty fields.

Error Type	Field	Error Message
BusinessRuleFailure	symptom1	Failed to locate matching lookup value (symptom1, Abdom).

Field	Data Type	Max Length	Current Value	New Value
datefirstill	DateTime		1/8/1950 12:00:00 AM	1/8/1950
durlongunit	String		Hours	Hours
durmedianunit	String		Hours	Hours
durshortunit	String		Hours	Hours
durunknown	YesNo		True	True
estimatedprimary	Integer		32	32
inlongunit	String		Hours	Hours
inmedianunit	String		Hours	Hours
inshortunit	String		Hours	Hours
incunknown	YesNo		True	True
investigationmethod1	String		Interviews only of ill persons	Interviews only of ill persons
primarymode	String		Person-to-person	Person-to-person
recordstatus	String		Active	Active
reportingstate	String		CDC	CDC
stataid	String	50	AK_30SEP14_test4	AK_30SEP14_test4
symptom1	String		Abdom	Abdom

**Save** **Cancel**

3. In the example, the information submitted for the field “symptom1” (“Abdom”) did not match the picklist values in NORSDirect. An acceptable value is “Abdominal Cramps.” In the Edit Report view, the values submitted by the user will appear in the column labeled “Current Value” and can be updated in the column labeled “New Value.”



If a field has a list of values, the user can click on the arrow next to the “New Value” field to select the appropriate value. The first item in the list is the current value; selecting this item allows the user to leave the entry as is. The second item is an empty value; selecting this item will clear the field. All valid values follow the first two selections. For free text, date, and numeric fields, delete the text in the field under the “New Value” column, and enter the correct information.

- Another common error occurs when a user submits information for one field but submits missing or invalid information for a related field. For example, in the screenshot, the “IncShort,” “IncShortUnit,” and other incubation fields are completed, and the IncUnknown field is “True.” However, the incubation fields should only be completed if the related field “IncUnknown” has a value of “False.” Correct this error by updating the IncUnknown value to “False” in the field under the “New Value” column.

Error Type	Field	Error Message
BusinessRuleFailure	IncUnknown	If incubation is unknown incubation short, median, long must not be set.

Field	Data Type	Max Length	Current Value	New Value
datefirststill	DateTime		1/1/2009 12:00:00 AM	1/1/2009
durlongunit	String		Hours	Hours
durmedian	Decimal	48	48	48
durmedianunit	String		Hours	Hours
durshortunit	String		Hours	Hours
durunknown	YesNo		False	False
estimatedprimary	Integer		121	121
inlong	Decimal	6	6	6
inlongunit	String		Hours	Hours
inmedian	Decimal	5	5	5
inmedianunit	String		Hours	Hours
inshort	Decimal	4	4	4
inshortunit	String		Hours	Hours
incunknown	YesNo		True	True
investigationmethod1	String		Other	Other

- State ID:

AK\_30SEP14\_test5

First Ill Date:

4/18/2009

Primary Mode:

Environmental

☒ Show empty fields.

Error Type	Field	Error Message
BusinessRuleFailure	DurLongUnit	If duration long has a value duration long unit must have a value.
BusinessRuleFailure	DurMedianUnit	If duration median has a value duration median unit must have a value.
BusinessRuleFailure	DurShortUnit	If duration short has a value duration short unit must have a value.
BusinessRuleFailure	IncLongUnit	If incubation long has a value incubation long unit must have a value.
BusinessRuleFailure	IncMedianUnit	If incubation median has a value incubation median unit must have a value.
BusinessRuleFailure	IncShortUnit	If incubation short has a value incubation short unit must have a value.

Field	Data Type	Max Length	Current Value	New Value
datefirststill	DateTime		4/18/2009 12:00:00 AM	4/18/2009
durationnum	Integer			
durlong	Decimal	47	47	
durlongunit	String			
durmedian	Decimal	28	28	
durmedianunit	String			
durshort	Decimal	12	12	
durshortunit	String			
durunknown	YesNo		False	False
estimatedprimary	Integer	115	115	
inclong	Decimal	50	50	
inclongunit	String			
incmedian	Decimal	30	30	
incmedianunit	String			
incshort	Decimal	13	13	
incshortunit	String			
incubationnum	Integer			
incubationunit	String			

- When all errors in the report have been corrected, click “Save” at the bottom of the pop-up window. The report will immediately be re-processed and checked for any additional errors. If there are additional errors in the report, a red warning will appear at the top of the page, and the report will be highlighted in gray in the table.

Additional errors may appear after the initial set of errors has been corrected. For example, if “DateFirstIll” is updated when correcting the initial set of errors, the additional validation checks may find that the “DateLastIll” now occurs before the “DateFirstIll” and also needs to be corrected.

**NORSDirect** Welcome [ Log Out ]  
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File Upload Uploaded Files Pending Reports (20) Processed Reports Variables & Mapping Help

### Pending Reports

Below is a list of reports that are either waiting to be processed or have errors that prevent the reports from being imported into the NORS database. Use the radio buttons to view reports by their pending status. Sort the tables by State ID, Mode of Transmission, User, Upload Date, or Error Summary by clicking on the column header.

☐ In Process Reports that are awaiting validation checks. This action typically occurs in real time.  
☒ **Errors** Reports that contain one or more errors that need to be addressed before the report can be imported into the NORS database.  
☐ Confirmation Required Reports where changes must be confirmed before the report can be updated in the NORS database.  
☐ NORSDirect Duplicate Reports that exactly match reports already in NORSDirect. NORSDirect duplicates can be deleted on this page.

Number of matching reports: 20 [Delete All Reports Below](#) [Export All to Excel](#)

State ID	Exposure State	Mode of Transmission	First Ill Date	Report Status	User	Upload Date	Error Summary	Report Actions
TSE	Alabama	Food	07/01/2018	Errors		11/21/2018 2:00:58 PM	SpecimenCollected - Specimen Collected must be set to "Yes" or "True" when tested specimen/sample data is supplied.	<a href="#">Edit</a> <a href="#">Delete</a>

- If there are no additional errors in the report, a green banner will appear at the top of the page to inform the user that the report was successfully imported and saved to NORS. The report will then appear on the Processed Reports page and will no longer appear on the Pending Reports page.

**NORSDirect** Welcome [ Log Out ]  
All Agencies

File Upload Uploaded Files Pending Reports (19) Processed Reports Variables & Mapping Help

### Pending Reports

Below is a list of reports that are either waiting to be processed or have errors that prevent the reports from being imported into the NORS database. Use the radio buttons to view reports by their pending status. Sort the tables by State ID, Mode of Transmission, User, Upload Date, or Error Summary by clicking on the column header.

☐ In Process Reports that are awaiting validation checks. This action typically occurs in real time.  
☒ **Errors** Reports that contain one or more errors that need to be addressed before the report can be imported into the NORS database.

8. **NOTE:** Changing the primary mode of a report using the NORSDirect user interface (i.e., in the Edit Report pop-up window) may result in different fields being available for the report. For example, if a user updates the primary mode for a report within the NORSDirect interface from “Person-to-person” to “Food” and saves the change, the variable "MajorSetting" and any other person-to-person-specific variables will be ignored, as they are no longer valid. If any food-specific variables were included in the original NORSDirect file, they will now be included in the report. If the report contains no errors, it will be saved in NORS with the new primary mode. If the report contains any errors, the report will remain in the Errors section of the Pending Reports page. Selecting "Edit" under "Report Actions" will show all fields available under the new primary mode, which can then be edited as needed.
9. You may also click the Cancel button in the Edit Report pop-up to discard all changes, including any change to primary mode. The report will remain in the Errors section of the Pending Reports page until it is either deleted from NORSDirect or the errors are addressed.

### Confirmation Required

If a pending report has a status of “Confirmation Required,” it means that changes to a finalized report in NORS were submitted through NORSDirect. The “Confirmation Required” status and associated tasks are designed to protect against unintentional updates. To make the changes to the report, click on “Confirm Update” under the “Report Actions” column. When the update has been completed, a green banner will appear at the top of the screen to inform the user that the report was successfully saved in NORS. The uploaded report data may also be edited or deleted by clicking the buttons in the “Report Actions” column. Users may also use the “Confirm Update of All Reports Below” button to confirm all updates to finalized reports submitted through NORSDirect.


If updates were made in error, users may delete all reports on the page by using the “Delete All Reports Below” button or by using the “Delete” button in the Report Actions column to delete a single report.

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### Pending Reports

Below is a list of reports that are either waiting to be processed or have errors that prevent the reports from being imported into the NORS database. Use the radio buttons to view reports by their pending status. Sort the tables by State ID, Mode of Transmission, User, Upload Date, or Error Summary by clicking on the column header.

☐ **In Process** Reports that are awaiting validation checks. This action typically occurs in real time.
 ☐ **Errors** Reports that contain one or more errors that need to be addressed before the report can be imported into the NORS database.
 ☒ **Confirmation Required** Reports where changes must be confirmed before the report can be updated in the NORS database.
 ☐ **NORSDirect Duplicate** Reports that exactly match reports already in NORSDirect. NORSDirect duplicates can be deleted on this page.



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Number of matching reports: 1

[Delete All Reports Below](#)
[Confirm Update of All Reports Below](#)
[Export All to Excel](#)

State ID	Exposure State	Mode of Transmission	First Ill Date	Report Status	User	Upload Date	Error Summary	Report Actions
ALABAMA	Food	07/02/2017	ConfirmationNeeded		12/31/2018 2:50:20 PM	This report exists in NORS and is finalized. You must confirm updates to a finalized report.	<a href="#">Confirm update</a> <a href="#">Edit</a> <a href="#">Delete</a>	

## NORSDirect Duplicates


Pending reports will have a status of “NORSDirect Duplicate” if there is another report in NORSDirect with the same State ID, DateFirstIll, ExposureState, and PrimaryMode. If a report with identical values for these four fields is pending, then the report will be flagged as a duplicate.

Duplicate NORSDirect reports should be deleted using the “Delete” button in the “Report Actions” column. Alternatively, if the report should be unique, the State ID may be changed to a unique ID using the “Edit” button in the “Report Actions” column.

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### Pending Reports

Below is a list of reports that are either waiting to be processed or have errors that prevent the reports from being imported into the NORS database. Use the radio buttons to view reports by their pending status. Sort the tables by State ID, Mode of Transmission, User, Upload Date, or Error Summary by clicking on the column header.

  
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☐ **In Process**

Reports that are awaiting validation checks. This action typically occurs in real time.

☐ **Errors**

Reports that contain one or more errors that need to be addressed before the report can be imported into the NORS database.

☐ **Confirmation Required**

Reports where changes must be confirmed before the report can be updated in the NORS database.

☒ **NORSDirect Duplicate**

Reports that exactly match reports already in NORSDirect. NORSDirect duplicates can be deleted on this page.

Number of matching reports: 1

[Delete All Reports Below](#)

[Export All to Excel](#)

State ID	Exposure State	Mode of Transmission	First Ill Date	Report Status	User	Upload Date	Error Summary	Report Actions
	ALABAMA	Food	07/02/2017	DuplicateNorsDirect		12/31/2018 2:55:12 PM	Duplicate NORSDirect report Id: 62453	<a href="#">Edit</a> <a href="#">Delete</a>

## Processed Reports

The Processed Reports page shows all reports that have either been imported into the NORS database or have been deleted by the user from NORSDirect.

### Imported to NORS

Reports that are listed when the radio button “Imported to NORS” is selected have been successfully imported into the NORS database. These reports may now be viewed or edited within the NORS interface and data from the reports may be downloaded in NORS using the PDF download feature. After an additional day, data may be downloaded from NORS through the download reports feature.

### Deleted from NORSDirect

When “Deleted from NORSDirect” is selected, reports that were deleted by a NORSDirect user appear. Reports can be restored by selecting “Undelete” in the “Report Actions” column. Reports that are undeleted will be re-processed and validated as if they had just been uploaded. Errors may need to be corrected before the report can be successfully imported into NORS.

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### Processed Reports

Below is a list of reports that have either been imported into the NORS database or have been deleted from NORSDirect. No further action needs to be taken for these reports.

Limit the number of results by using the optional date filter. Sort the table by State ID, User, or Imported/Deleted Date by clicking on the column header.

Dates: 10/31/2018 to 12/31/2018

☒ **Imported to NORS** Reports that have been successfully imported into the NORS database.
 ☐ **Deleted From NORSDirect** Reports that have been deleted from NORSDirect without being imported into the NORS database.

Number of matching reports: 190 [Export All to Excel](#)

State ID	CDC ID	NORS Action	Exposure State	First Ill Date	Mode of Transmission	User	Imported/Deleted Date	Report Actions
TSE	91142	Report Updated		07/01/2018	Food		12/31/2018 2:39:32 PM	
CPM	91225	Report Updated		07/02/2017	Food		12/31/2018 1:25:33 PM	

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### Processed Reports

Below is a list of reports that have either been imported into the NORS database or have been deleted from NORSDirect. No further action needs to be taken for these reports.

Limit the number of results by using the optional date filter. Sort the table by State ID, User, or Imported/Deleted Date by clicking on the column header.

Dates: 10/31/2018 to 12/31/2018

☐ **Imported to NORS** Reports that have been successfully imported into the NORS database.
 ☒ **Deleted From NORSDirect** Reports that have been deleted from NORSDirect without being imported into the NORS database.

Number of matching reports: 9 [Export All to Excel](#)

State ID	CDC ID	NORS Action	Exposure State	First Ill Date	Mode of Transmission	User	Imported/Deleted Date	Report Actions
CPM_34_FOOD_S		Unknown		07/02/2017	Food		12/31/2018 1:56:56 PM	<a href="#">Undelete</a>
CPM_34_FOOD_3		Unknown		07/02/2017	Food		12/17/2018 3:05:37 PM	<a href="#">Undelete</a>
CPM_31_TEST_A		Unknown		01/01/2016	Animal		11/26/2018 10:47:04 AM	<a href="#">Undelete</a>

## Sending Test Files

There is no testing site for NORSDirect. All data uploaded and processed through NORSDirect will be saved into the live NORS database. These reports will be available for viewing and download via the NORS interface. New users are strongly encouraged to upload a small number of test reports before attempting to submit a large batch of state data. This helps users verify that the upload process works as expected and highlight any variables that may need to be mapped before uploading a large NORSDirect file.

To create test reports that are easily distinguishable from true outbreak reports, please do the following:

1. In the NORSDirect upload file, name each report with a StateID that begins with “Test,” e.g., “Test\_LTCF-155.”
2. Set the ReportStatus field of each report to either “Active” or “Finalized.” Items with a status of “Deleted” are not viewable in the NORS interface.
3. Set the DateFirstIll to “1/1/1950.” Other dates, like DateLastIll, InitialExposure, LastExposure, CDCReportDate, and LocalReportDate, may also need to be updated accordingly so as to pass the validation checks.

	A	B	C	D	E	F
1	StateID	RecordStatus	PrimaryMode	DateFirstIll	DateLastIll	ReportingAgency
2	Test_9314_1	Finalized	Food	01/01/1950	03/01/1950	CDC
3	Test_9314_2	Finalized	Person-to-person	01/01/1950	01/02/1950	CDC
4	Test_9314_3	Active	Water	01/01/1950	03/01/1950	CDC
5	Test_9314_4	Active	Person-to-person	01/01/1950	04/08/1950	CDC
6	Test_9314_5	Active	Environmental contamin	01/01/1950	06/03/1950	CDC
7						

4. Upload the test file via NORSDirect or PHIN MS.
5. Correct any errors that may have been flagged in NORSDirect and add or update mappings on the Variables & Mapping page as needed.
6. **Open the report in NORS to verify the data saved as expected. Then mark the report as “Deleted” using the Reports page in NORS. You may delete all test files at once by searching for all reports with the year 1950 and a State ID of “Test”.**

## Updating a NORS Report

Uploading a file to NORSDirect that contains a report with a StateID that matches the StateID of an existing NORS report from the user's reporting site will update that existing NORS record with the data sent via NORSDirect. To update an existing NORS record using NORSDirect:

1. Prepare the file containing the updated report as you normally would for a NORSDirect transmission.
  - a. Please remember to include all five required variables (StateID, ExposureState, PrimaryMode, DateFirstIll, EstimatedPrimary); otherwise, the file will be rejected.
  - b. For variables that are dependent on or linked to other variables (e.g., species is dependent on genus), you must include all variables in that relationship.
  - c. Sending a blank or null value in a column will delete any information already stored in NORS. In the example below, the text in GeneralComments was deleted (i.e., overwritten with a null value) because a null value was sent via NORSDirect. **NOTE: Check all blank fields to ensure values are not accidentally deleted.**
    - i. Any variables that are not included in the uploaded file will not override current values. For example, if the original NORS report contained information in the GeneralComments field, but that column was not included in the NORSDirect file, then no changes would be made to GeneralComments.

	StateID	PrimaryMode	ExposureState	DateFirstIll	EstimatedPrimary	
	Test- 3	Food	Georgia	1/6/2013	10	
	Test- 3	Food	Georgia	1/6/2013	10	
	Test- 3	Food	Georgia	1/6/2013	10	

- d. For best results and to simplify the update process, include all variables and data in all NORSDirect updates, even if the data are unchanged.
2. Make sure that the StateID of the updated report exactly matches the StateID of the report already saved in NORS.
3. Upload the file using either PHIN MS or the NORSDirect File Upload page.
4. Correct any errors that were caught during the NORSDirect validation process until the report is successfully imported into NORS. If the report being updated has a status of "Finalized" in NORS, updates must be confirmed in the Pending Reports page before the report will be saved to NORS.
5. Once the report has been processed and validated, open the report in NORS to ensure the updates were successful.



## Special Considerations for Updating Data Stored in Relational Tables

Though NORS stores certain data (e.g., etiology and symptom data) in relational tables, data uploaded using NORSDirect must be submitted in a flattened format. If any data from one of these relational tables is sent, all of the existing data in that table will be overwritten with the new data. To view which variables belong in a relational table, check the “Relational Table” column on the Variables & Mapping page of NORSDirect.

The “# of Fields” within the “Relational Table” column indicates the number of variables within the relational table. This count does not include CDCID, which links reports between relational tables. The “Required Field” column lists if the variable is required within its respective relational table (e.g. GenusName1 is required within the Gen Etiology table).

This information is provided so that users can easily see which variables are grouped together in a relational table and which variables must be included when importing any variables from that relational table. However, users should remember that the data uploaded using NORSDirect must be submitted in a flattened format and the relational table names do not need to appear anywhere in the uploaded file.

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### Variables & Mapping

Below is a list of the fields currently supported by NORSDirect. This page will be automatically updated when new variables are added or list values are added, removed, or updated. Variables sent in a NORSDirect file which are not in this list will be ignored.

**\* Note 1** - Bold text indicates the field has been added in the past 30 days. Italic text indicates the field has been added in the past 90 days.

**\* Note 2** - Variables that have the format VariableName{value#}\_ {set#} allow users to enter multiple values indicated by the number in the {value#} field while linking to a corresponding variable indicated by the number in the {set#} field. For each variable, the corresponding variable indicated by the {set#} field is specified in the variable description.

**Sections:**

☐ All Variables

☐ Food

☐ Water General

☐ Water Etiology/Isolates

☒ General

☐ Animal

☐ Water Implicated

☐ Water Samples

☐ General Etiology/Isolates

☐ P2P/Env/Other/Unknown

Number of fields: 96 [Export All to Excel](#)

Import Field Name	Description	Maximum Number	Relational Table (# of fields)	Supported Modes	Required Field	Data Type	Max Length or Values
TracebackCountry1 - TracebackCountry99	Country for the source in the traceback listed in the corresponding TracebackSource field.	99	Traceback (5 fields)	All	No	String	<a href="#">Values</a> <a href="#">Mappings(1)</a>
TracebackComments1 - TracebackComments99	Additional remarks concerning the traceback listed in the corresponding TracebackSource field.	99	Traceback (5 fields)	All	No	String	300
TracebackSource1 - TracebackSource99	Name of source for the traceback, e.g. TracebackSource1 is the name of the source of the first traceback.	99	Traceback (5 fields)	All	Within Table	String	75
TracebackType1 - TracebackType99	Source type for the traceback listed in the corresponding TracebackSource field.	99	Traceback (5 fields)	All	No	String	75
TracebackState1 - TracebackState99	U.S. state for the source in the traceback listed in the corresponding TracebackSource field.	99	Traceback (5 fields)	All	No	String	<a href="#">Values</a> <a href="#">Mappings(0)</a>
SymptomCases1 - SymptomCases99	Number of cases with the symptom specified in the corresponding Symptom field.	99	Symptoms (3 fields)	All	No	Integer	

On the next page are some examples of how relational data are updated using NORSDirect. Please note that the required variables have not been included in the examples to save space but should be included in all NORSDirect transmissions.

Revised 2/15/2019

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**Example 1:** Updating relational values. In order to update the field “Confirmed1,” all related fields must also be included in the NORSDirect file. Here, the original NORS report contains information only for GenusName1 and SpeciesName1, so those must be included in the NORSDirect update file along with the updated field “Confirmed1.” If the original NORS report also includes serotype/genotype information or other etiology fields, then those fields must also be included in the NORSDirect file or else their values will be deleted. In this example, a second etiology (Norovirus Genogroup II) has also been added to the NORS report.

	StateID	GenusName1	SpeciesName1	Confirmed1	GenusName2	SpeciesName2	Confirmed2
<b>Currently in NORS</b>	Test-Report-4	Norovirus	Unknown	false			
<b>Sent with NORSDirect</b>	Test-Report-4	Norovirus	Genogroup I	true	Norovirus	Genogroup II	true
<b>Now in NORS</b>	Test-Report-4	Norovirus	Genogroup I	true	Norovirus	Genogroup II	true

**Example 2:** Deleting all relational values. The only submitted etiology data is a null genus value, which deletes all etiology data for this NORS report. Because etiology data are in a relational table, with multiple etiology values linked to a single outbreak, all etiology data are replaced with the null value that is sent via NORSDirect.

	StateID	GenusName1	SpeciesName1	Confirmed1	GenusName2	SpeciesName2	Confirmed2
<b>Currently in NORS</b>	Test-Report-4	Norovirus	Unknown	false			
	StateID	GenusName1					
<b>Sent with NORSDirect</b>	Test-Report-4						
	StateID	GenusName1	SpeciesName1	Confirmed1	GenusName2	SpeciesName2	Confirmed2
<b>Now in NORS</b>	Test-Report-4						

**Example 3:** Partially deleting relational data. The original NORS report contains two etiologies, but only one etiology is sent in the NORSDirect update file. This overwrites the etiologies in the existing NORS record with the etiology information sent via NORSDirect.

	StateID	GenusName1	SpeciesName1	Confirmed1	GenusName2	SpeciesName2	Confirmed2
<b>Currently in NORS</b>	Test-Report-4	Norovirus	Unknown	false	Norovirus	Genogroup II	true
<b>Sent with NORSDirect</b>	Test-Report-4				Norovirus	Genogroup II	true
<b>Now in NORS</b>	Test-Report-4	Norovirus	Genogroup II	true			

## Key Things to Remember:

- NORSDirect currently supports CSV and Excel files up to 4 megabytes in size if using the File Upload feature, and up to 10 megabytes if using PHIN MS.
- For PDF files, the most recent version of the fillable PDF form should be used. This can be downloaded from the NORSDirect help page. Save the file to your computer. Do not fill out the form within a web browser.
- PDF upload is available for outbreaks with person-to-person, environmental contamination, indeterminate/unknown, foodborne, and animal contact modes of transmission. It is not yet available for outbreaks with waterborne transmission.
- Every file must have five required variables for every report: StateID, ExposureState, PrimaryMode, DateFirstIll, and EstimatedPrimary.
- Excel and CSV files should contain variable names in the first row and data corresponding to each variable in columns.
- When splitting data across multiple worksheets in a single Excel workbook, only the StateID column should be repeated once on each worksheet.
- The Variables & Mapping page can be used to reduce the number of errors found. Match state picklist values to NORS picklist values before files are imported.
- When updating data, especially during data cleaning, changes should be made in the NORSDirect file that is uploaded. Otherwise, any changes may be overwritten the next time the file is uploaded.

If assistance is needed with other functions of NORS, please refer to the online training guides and guidance documents located on the NORS website (<https://www.cdc.gov/NORS>). For further assistance, questions, or comments, please email the NORS team ([NORSAdmin@cdc.gov](mailto:NORSAdmin@cdc.gov)).