

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



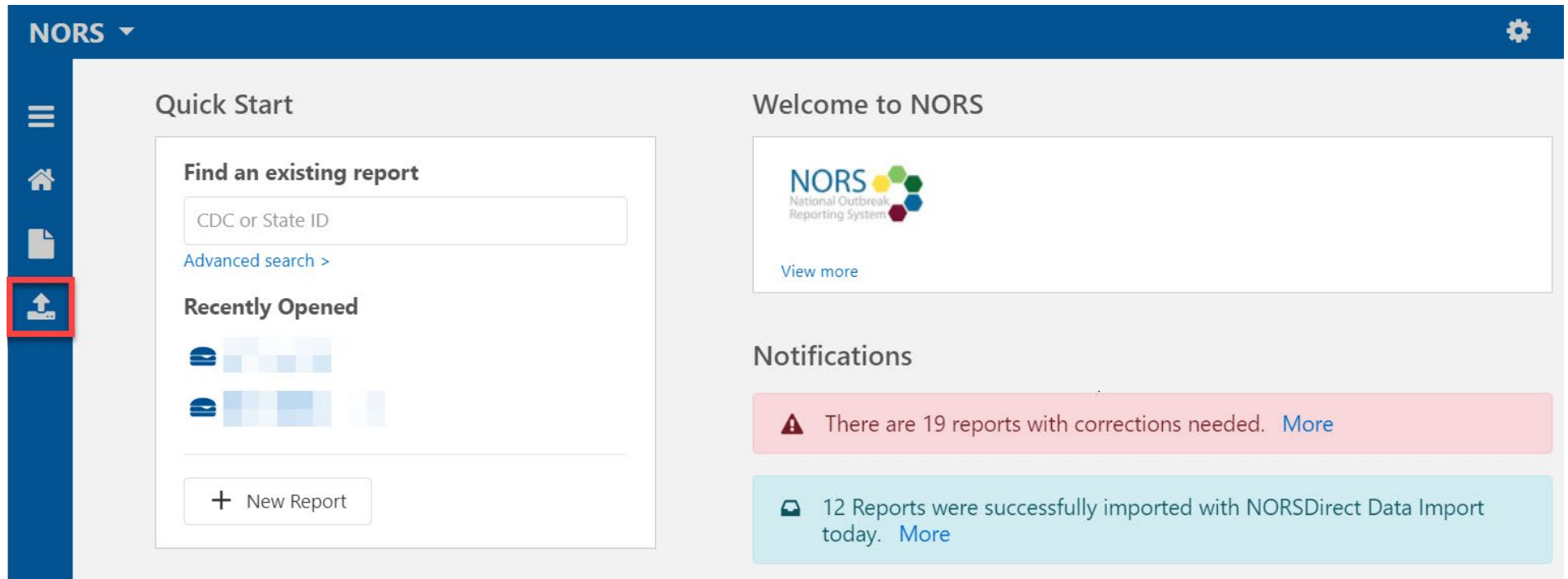
National Outbreak Reporting System (NORS) User Training Document — NORSDirect

Contents

- Introduction 2
- General Overview 3
- Preparing Files for NORSDirect File Upload 4
 - Excel File** 4
 - Uploading multiple states or counties in a single report** 6
- Data Specification 7
 - Groupings and Worksheets**..... 9
- List Value Mapping..... 12
- Import 14
- History 16
 - File Status** 17
 - Viewing reports for each file** 17
 - Imported with Warnings**..... 18
 - Skipped with warnings**..... 20
 - Correcting Errors** 21
- Correction Needed..... 22
- Sending Test Files..... 25
- Updating a NORS Report..... 26
 - Special Considerations for Updating Data Stored in Relational Tables** 27
- Key Things to Remember 29

Introduction

NORSDirect is a feature of the National Outbreak Reporting System (NORS) that allows reporting sites to upload outbreak data from their reporting systems directly into NORS. Reporting sites can upload reports using the NORSDirect Data Import feature, accessible by clicking on the NORSDirect icon on the left navigation bar on the NORS home page.



The screenshot shows the NORS home page. On the left, a blue navigation bar contains icons for home, reports, and an upload icon (highlighted with a red box). The main content area is divided into three sections: 'Quick Start' with a search box for 'Find an existing report' and a 'New Report' button; 'Welcome to NORS' with the NORS logo and a 'View more' link; and 'Notifications' with two messages: one about 19 reports needing corrections and another about 12 reports successfully imported via NORSDirect.

When outbreak reports are uploaded via the NORSDirect Data Import feature, they will be validated, and errors will be flagged on the NORSDirect History page. Errors should be fixed in the originating database and the updated file uploaded into NORSDirect. However, errors can also be fixed in the NORS interface.

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

The CDC NORS team (NORSAdmin@cdc.gov) 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.

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 pulled from the reporting site's outbreak database.
2. Any report data from multiple sources are combined into a single Excel file.
3. File is uploaded to NORSDirect.
4. Individual reports are extracted from the file and saved to NORS.
5. Report data are automatically checked for errors. Errors can be corrected directly in the NORS interface, or by uploading a new file containing the corrected data.

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 file.
2. Create the file manually, by copying and pasting data for each report onto a single row in an Excel file.

Note: Every file must contain the following required variables: StateID, AgencyName, PrimaryMode, DateFirstIll, ExposureState, and EstimatedPrimary. For multistate exposure and multistate residency outbreaks, the State# variable is also required.

All files must be converted to the supported Excel file format (.xlsx) in order to be compatible with NORSDirect. **NORSDirect currently supports Excel files up to 4 megabytes in size.** You must have a NORS login with NORSDirect access to send files and view NORSDirect. No other software setup is required.

NORSDirect no longer has the capability to import a fillable PDF or CSV file. However, the CDC NORS Team has developed a REDCap data dictionary for reporting sites using REDCap, which allows users to export data in a format compatible with NORSDirect. If you're interested in using the NORS REDCap data dictionary, please email NORSAdmin@cdc.gov.

Excel File

As seen in the example below, 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. Required variables are highlighted with red boxes.

	A	B	C	D	E	F	G
1	StateID	AgencyName	RecordStatus	PrimaryMode	DateFirstIll	ExposureState	EstimatedPrimary
2	Test1	CDC	Active	Animal Contact	1/1/2020	Georgia	100
3	Test2	CDC	Active	Food	1/2/2020	Minnesota	100
4	Test3	CDC	Active	Indeterminate/Unknown	1/3/2020	Delaware	3
5	Test4	CDC	Active	Environmental contamination other than food/water	1/4/2020	Mississippi	8
6	Test5	CDC	Active	Person-to-person	1/5/2020	Minnesota	27
7	Test6	CDC	Active	Water	1/6/2020	Wisconsin	29
8	Test7	CDC	Active	Food	1/7/2020	Nebraska	65
9	Test8	CDC	Active	Indeterminate/Unknown	1/8/2020	California	4
10	Test9	CDC	Active	Environmental contamination other than food/water	1/9/2020	Arizona	18
11	Test10	CDC	Active	Person-to-person	1/10/2020	Maine	2
12							

When preparing an Excel file (workbook) for upload via NORSDirect, remember the following:

1. Though NORS stores certain data in relational tables (e.g., etiology and symptom data), data uploaded to NORSDirect 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.”

2. Every file must have **six** required variables for every report: **StateID, AgencyName, ExposureState, PrimaryMode, DateFirstIll, and EstimatedPrimary**. All variable names must match exactly. Variable names may be viewed and downloaded from the Data Specification page in NORSDirect.
3. 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.
4. Data for a single report can be entered in multiple worksheets (tabs) in a single Excel file. This may be necessary when using older versions of Excel that have a column limit or to improve file readability.
 - a. If splitting data across multiple worksheets in a single Excel file, repeat the StateID and AgencyName columns once on each worksheet. Make sure that variables are organized into their designated worksheets, as defined on the Data Specification page. A multiple-tab template is also available for download from the NORSDirect Help page. Not all outbreak reports need to be repeated on each worksheet, if there is no data for that outbreak on that sheet. Multiple-tab files do not have to include all worksheets and variables.

5. StateID is a unique identifier for a NORS report in each NORS Reporting Agency. When updating a report that has been previously entered in NORS, the StateID should match exactly. If you upload a report that has the same StateID as an existing NORS report, you will overwrite the existing NORS report. **Deleted/overwritten data CANNOT be retrieved.**
6. CDCID is a value assigned by CDC and will automatically populate when a report is submitted. Agencies should not submit values for CDCID. If a value is entered in the CDCID variable, it will be ignored.
7. Variable dependencies in NORSDirect are the same as in the NORS interface. For example, to enter school setting information for an outbreak, “school/college/university” must be selected as an outbreak setting; to enter etiology or isolate variables, the variable “EtiologyKnown” must be set to “yes”.

Uploading multiple states or counties in a single report

When uploading a NORS report where multiple states or counties are listed, NORSDirect files must be formatted properly for accurate data upload.

For reports with a single exposure state, upload the exposure state in the “ExposureState” variable. If exposure occurred in multiple states, leave the variable “ExposureState” blank, and include the multiple exposure states in the State# variable. If exposure occurred in a single state but cases resided in multiple states, specify the additional states under the State# variables.

Note: Even if ExposureState is blank, it must be included as a variable in every NORSDirect upload.

<i>Example: report type</i>	ExposureState	State1	State2	State3
<i>Single state exposure</i>	Georgia			
<i>Multi-state exposure</i>		Georgia	Arkansas	Arizona
<i>Single state exposure & multi-state residency</i>	Georgia	Arkansas	Arizona	

For reports with multiple states listed, list state specific case counts under the ExposureStateCount and StateCount# variables.

<i>Example: report type</i>	ExposureState	ExposureStateCount	State1	StateCount1
<i>Single state exposure</i>	Georgia			
<i>Multi-state exposure</i>			Arkansas	5
<i>Single state exposure & multi-state residency</i>	Georgia	5	Arizona	10

For reports with a single exposure state, county information can be uploaded via the ExposureCounty and County# variables. If exposure occurred in a single county, enter the county name in the ExposureCounty variable. If exposure occurred in multiple counties, leave the ExposureCounty# field blank and upload the county names in the County# variable. If exposure occurred in a single county but some or all cases resided in different counties, specify the additional residential counties in the County# variables.

Example: report type	ExposureCounty	County1	County2	County3
Single county exposure	Georgia			
Multi-county exposure		Georgia	Arkansas	Arizona
Single county exposure & multi-county residency	Georgia	Arkansas	Arizona	

Data Specification

Variables supported by NORSDirect and their corresponding list values are described on the Data Specification page. Unsupported or extraneous variables will be ignored during the import process. See the screenshot below for an example of the Data Specification page.

The Data Specification page contains information on every variable supported by NORSDirect, including

- Worksheet name
- Field or variable name
- Whether or not the variable is importable (Yes/No)
- Data type (e.g., Boolean, date/time, string, integer)
- Grouping or relational table the variable is stored in
- Primary mode(s) of transmission to which the variable applies
- Whether the variable is required to create a new record
- Whether the variable is required within a worksheet, for grouping, or sub-grouping
- Acceptable values or picklist name
- Description of the variable

NORS Direct – Data Import

[Import](#)
[History](#)
[Correction Needed](#)
[Data Specification](#)
[List Value Mapping](#)
[Help](#)

View a list of fields currently supported by NORSDirect along with their values and descriptions. [More](#)

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Worksheet	Field	Import	DataType	Grouping	Modes	Required for New Record	Required for	Values
AnimalContact	StateID	Yes	string		Animal		Worksheet	
AnimalContact	AgencyName	Yes	string		Animal		Worksheet	
AnimalContact	AnimalUndetermined	Yes	Boolean		Animal			[Yes, True, 1] [No, False, 0]
AnimalContact	AnimalReasonUnd#	Yes	string	Animal Reason Undetermined	Animal		Grouping	List - ReasonsSupportingAn
AnimalContact	AnimalReasonUndSp	Yes	string	Animal Reason Undetermined	Animal			
AnimalContact	AnimalNum	Yes	int		Animal			
AnimalContact	AnimalNumUnk	Yes	Boolean		Animal			[Yes, True, 1] [No, False, 0]
AnimalContact	AnimalDeaths	Yes	int		Animal			
AnimalContact	AnimalDeathsUnk	Yes	Boolean		Animal			[Yes, True, 1] [No, False, 0]
AnimalContact	AnimalDeathsIll	Yes	int		Animal			

15 20 **50** 100

Page 1 of 11 (535 items) < **1** 2 3 4 5 ... 11 >

The “Values” column lists the picklist name or acceptable values for that particular variable. To view the values in that picklist, either download the picklist values by selecting the export icon in the upper right-hand corner of the screen and then selecting “Download list values” or by viewing picklists and their values on the List Value Mapping page.

The Data Specification list can be filtered or sorted by any column and exported for use. To export the Data Specification document, select the export icon on the upper right-hand side, and select “Download field definitions”.

View a list of fields currently supported by NORSDirect along with their values and descriptions. [More](#)

Worksheet	Field	Import	DataType	Grouping	Modes	Required for New	Worksheet
AnimalContact	StateID	Yes	string		Animal		Worksheet
AnimalContact	AgencyName	Yes	string		Animal		Worksheet
AnimalContact	AnimalUndetermined	Yes	Boolean		Animal		[Yes, True, 1] [No, False, 0]
AnimalContact	AnimalReasonUnd#	Yes	string	Animal Reason Undetermined	Animal		Grouping List - ReasonsSupportingAn
AnimalContact	AnimalReasonUndSp	Yes	string	Animal Reason Undetermined	Animal		
AnimalContact	AnimalNum	Yes	int		Animal		
AnimalContact	AnimalNumUnk	Yes	Boolean		Animal		[Yes, True, 1] [No, False, 0]
AnimalContact	AnimalDeaths	Yes	int		Animal		
AnimalContact	AnimalDeathsUnk	Yes	Boolean		Animal		[Yes, True, 1] [No, False, 0]
AnimalContact	AnimalDeathsIll	Yes	int		Animal		

15 20 50 100 Page 1 of 11 (535 items) 1 2 3 4 5 ... 11

Groupings and Worksheets

When uploading a file into NORSDirect, it is important to note that data dependencies in NORS and NORSDirect are the same. These can be viewed in the “Grouping” and “Required for” columns on the Data Specification tab in NORSDirect. If variables are in the same grouping, that indicates they are a part of the same relational table. A variable that is required for that grouping must have a value to upload any other data within that grouping.

For example, in the screenshot below, variables within the “Etiology” grouping are displayed, and the variable “GenusName#” is listed as required for the grouping. Therefore, to upload any data for the SpeciesName#, SubTypeName#, Polymerase# or Capsid# variables, you must also include a value for GenusName#.

For variables typically stored in relational tables, the # symbol in the variable name signifies all iterations of that variable. For example, to upload three different State# values, the file should contain variables State1, State2, and State3. The data specification information applies to all three State# variables uploaded. In another example, to upload a single value for GenusName#, the file would contain the variable name GenusName1. Other etiology variables with "1" at the end, such as Subtype1, Species1, Capsid1, etc., will correspond to GenusName1. For variables formatted with two # symbols, such as IngredientName#_#, this indicates IngredientName{value#}_{set#}. The value# indicates which ingredient this variable corresponds to, while the set# indicates the food this ingredient corresponds to. For example, IngredientName3_1, indicates the value for the third ingredient for FoodName1.

Import History Correction Needed Data Specification List Value Mapping Help

View a list of fields currently supported by NORSDirect along with their values and descriptions. [More](#)

Search...

Worksheet	Field	Import	DataType	Grouping	Modes	Required for	Values	Description
Etiology	GenusName#	Yes	string	Etiology	All	Grouping	List - Genus	Genus of the identified etiology.
Etiology	SpeciesName#	Yes	string	Etiology	All		List - Species	Species of the identified etiology.
Etiology	SubtypeName#	Yes	string	Etiology	All		List - Serotype	Subtype (e.g., serotype, genotype).
Etiology	Polymerase#	Yes	string	Etiology	All		List - Polymerase	Polymerase of the norovirus etiology indicated in the corresponding 'GenusName' field.
Etiology	Capsid#	Yes	string	Etiology	All		List - Capsid	Capsid of the norovirus etiology indicated in the corresponding 'GenusName' field.
Etiology	OtherCharacteristics#	Yes	string	Etiology	All			Other characteristics of the identified etiology specified in the corresponding 'GenusName' field.
Etiology	NumPosTotal#	Yes	int	Etiology	All			Total number of primary cases testing positive by culture, CIDT, or any other test.
Etiology	NumPosCulture#	Yes	int	Etiology	All			Number of culture confirmed primary cases.
Etiology	NumPosCIDT#	Yes	int	Etiology	All			Number of CIDT positive only primary cases.
Etiology	Confirmed#	Yes	string	Etiology	All	Grouping	List - ConfirmedSuspected	Indicates whether the etiology listed in the corresponding 'GenusName' field is confirmed or suspected.

15 20 50 100 Page 1 of 1 (17 items) 1

Some variables are also required for a specific worksheet. This is only relevant if you upload a report via multiple worksheets in a single Excel file. If a report is uploaded via a single worksheet, it is only required to include the 6 required variables. For every worksheet in a multiple-worksheet file, StateID and AgencyName are required.

Some worksheets may have additional variables required for upload. In the example in the screenshot below, the SettingWater worksheet requires multiple additional variables. In the example in the screenshot below, you can see that for the SettingWater worksheet, there are multiple additional variables that are required for this worksheet to upload.

Worksheet ▼	Field ↑ ▼	Import ▼	DataType ▼	Modes ▼	Required for ▼
🔍	🔍	🔍	🔍	🔍	🔍
SettingWater	AgencyName	Yes	string	Water	Worksheet
SettingWater	DrinkingExposure	Yes	Boolean	Water	Worksheet
SettingWater	OtherExposure	Yes	Boolean	Water	Worksheet
SettingWater	StateID	Yes	string	Water	Worksheet
SettingWater	TreatedRecExposure	Yes	Boolean	Water	Worksheet
SettingWater	UndeterminedExposure	Yes	Boolean	Water	Worksheet
SettingWater	UntreatedRecExposure	Yes	Boolean	Water	Worksheet
SettingWater	WaterSettingExposureRemarks	Yes	string	Water	

15 20 50 100

List Value Mapping

List Value Mapping

For fields that use a set list of values, values can be downloaded from the Data Specification page and mapped on the List Value Mapping page within NORSDirect. Users can map picklist values from their agency-specific lists to accepted NORS values on the List Value Mapping page. To view which variable the picklist corresponds to, please refer to the Values column on the Data Specification page. The screenshot below is an example of the SettingExposure picklist on the List Value Mapping page.

The screenshot shows the 'List Value Mapping' page for 'SettingExposure'. At the top, there are navigation tabs: 'Import', 'History', 'Correction Needed', 'Data Specification', 'List Value Mapping' (selected), and 'Help'. Below the tabs is a description: 'Map picklist values from your lists to accepted NORS values. [More](#)'. On the left, a 'Select a list' dropdown menu is open, showing a search bar and a list of options: 'Serotype', 'SettingExposure (1)' (highlighted), 'SettingPreparation (3)', 'SignSymptom', 'Species', and 'State'. The main area is titled 'SettingExposure' and contains two input fields: 'NORS Value' with a dropdown menu showing 'Zoo or animal exhibit' and a downward arrow, and 'Mapped Value' with a text input field containing 'Horse Show'. To the right of these fields is a blue 'Add mapping' button. Below these fields is a 'Mapped Values' table with two columns: 'NORS Value' (with a downward arrow) and 'Mapped Value' (with an upward arrow). The table contains one row: 'Veterinary clinic' mapped to 'Veterinarian', with a trash icon to the right of the mapped value.

NORS Value	Mapped Value
Veterinary clinic	Veterinarian

The list values used by reporting sites in their own databases or datasets may not always match NORS list values. Values that do not match can be mapped to NORS list values on the List Value Mapping page before uploading files.

1. To view the accepted NORS values, select the picklist from the left-hand side of the List Value Mappings page.
 - a. Picklist names are specified in the Values column on the Data Specification page.
 - b. You can search for a specific picklist by name on the List Value Mappings page by typing in the box at the top.
2. From the dropdown under “NORS Value”, select the NORS value to which your value corresponds.
3. Under “Mapped Value”, enter the site-specific value. Then click the button labeled “Add Mapping”.
4. The mapped values for that picklist will appear below.

In the screenshot above, a user is mapping the value “Horse Show” to the NORS SettingExposure value “Zoo or animal exhibit.” Below that, a user has already mapped the value “Veterinarian” to the NORS value “Veterinary Clinic.”

The number of mappings for a picklist is listed in parentheses next to the picklist name. In the screenshot below, the SettingPreparation picklist has three mapped values. To view existing mappings, click on the name of the list you’d like to view. Existing mappings can be deleted by clicking on the trashcan icon in the row of the mapped value.

The screenshot shows the 'List Value Mapping' page with a navigation bar containing 'Import', 'History', 'Correction Needed', 'Data Specification', 'List Value Mapping', and 'Help'. Below the navigation bar is a heading 'Map picklist values from your lists to accepted NORS values. [More](#)'. On the left, a 'Select a list' dropdown menu is open, showing a search box and a list of picklists: 'Serotype', 'SettingExposure (1)', 'SettingPreparation (3)', 'SignSymptom', 'Species', 'State', 'TracebackFederalAgency', and 'TransmissionMode'. The 'SettingPreparation (3)' option is highlighted with a red box. The main content area is titled 'SettingPreparation' and features a 'NORS Value' dropdown menu with 'Backcountry/wilderness area' selected, a 'Mapped Value' input field, and an 'Add mapping' button. Below this is a 'Mapped Values:' table with three rows, each containing a 'NORS Value', a 'Mapped Value', and a trashcan icon. The table is also highlighted with a red box.

NORS Value ▼	Mapped Value ↑ ▼	
Grocery store/bakery/deli/convenience store	Grocery Store	
Correctional/detention facility	Jail/Prison	
Backcountry/wilderness area	Wilderness	

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 imported into NORS.

Import

To upload a file through the NORSDirect Import page, follow the instructions below.

1. Within NORSDirect, click the Import tab.

NORS Direct – Data Import

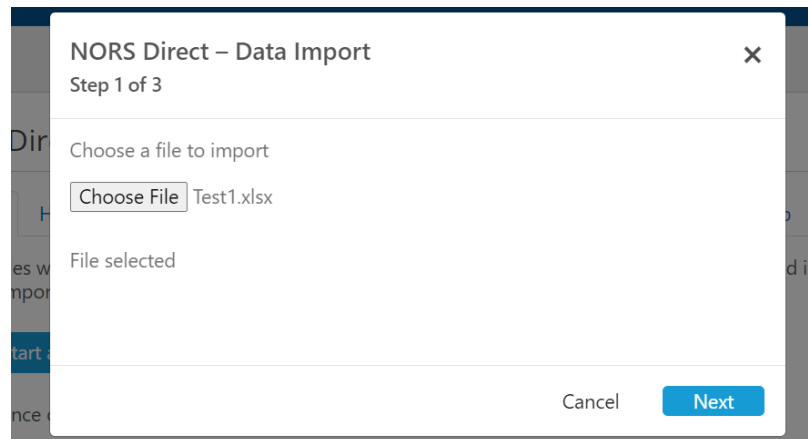
Import History Correction Needed Data Specification List Value Mapping Help

Upload files with reports to be processed and imported into the NORS database. File processing and import occurs in real time and the import status and results can be viewed on the History page.

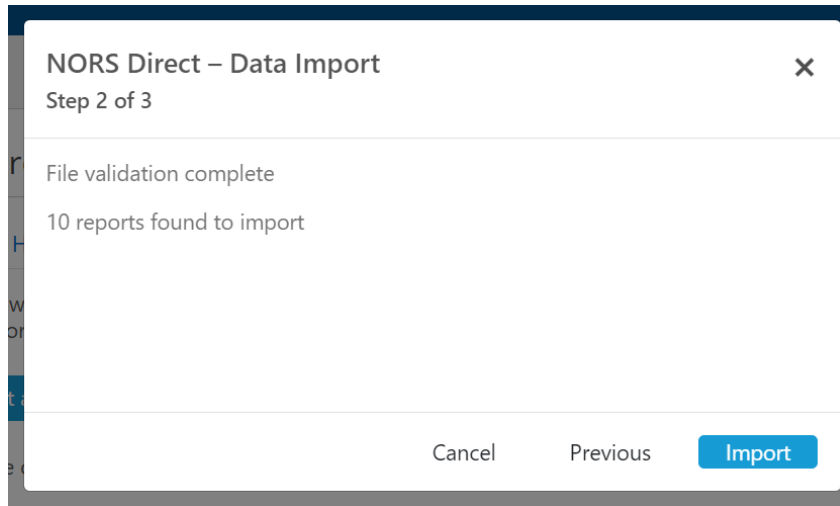
[Start an Import](#)

For guidance on using NORSDirect visit the [NORSDirect Help page](#)

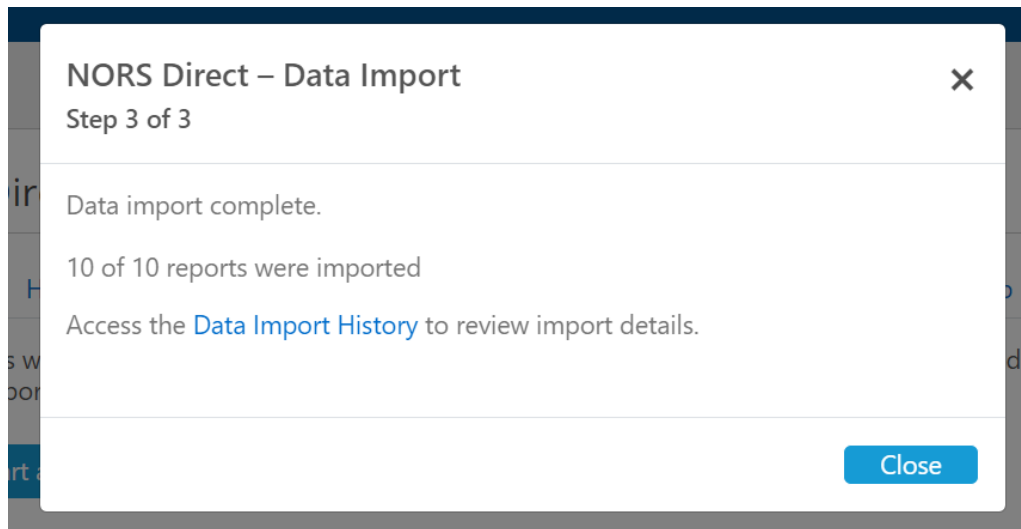
2. Select “Start an Import” and then “Choose File” to search for the file you’d like to import. Select the file, then click “Next”.



3. The file will then be validated for import. If the file is valid, e.g., is the right file type, the screen will display the number of individual outbreak reports found in the file. Click “Import” to import the reports into NORS.



4. Once the file uploads, the dialog box will display that the reports have been uploaded. You can close the dialog when reports are uploading and check the progress on the History page.



5. If a file fails during validation or upload, a message will appear on the Import explaining why. These files will appear as "failed" on the History page.

Reasons files can be rejected or fail include:

- The file is the wrong format; only Excel files (.xlsx) are accepted
- The file is empty/does not contain data
- The file is too large (≥4 MB)
- The file cannot be read by the server – it may be encrypted, corrupted, or an invalid file type
- Any of the required variables (StateID, AgencyName, ExposureState, PrimaryMode, DateFirstIll, EstimatedPrimary) are missing
- There are multiple worksheets in the file, but variables appear on incorrect worksheets or StateIDs are not able to map to the Reports worksheet
- Data appears in rows not linked to a report
- Variable names are repeated

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). Excel is now the only file format accepted. CSV and PDF formats are no longer supported. NORSDirect no longer supports upload of reports via PHIN MS.

History

Files successfully uploaded through the NORSDirect Data Import feature undergo a process in which individual reports are extracted and imported into the NORS database. Individual reports are then validated by NORSDirect. During the data validation process, NORSDirect will check for any data conflicts. For example, there is a validation check to ensure that the date entered in DateFirstIll is before the date entered in DateLastIll.

The results of the NORSDirect import and validation process are displayed on the History page. This page displays all files that have been uploaded to the Import and contains information about the reports included in those files, if those reports were successfully imported in NORS, and any errors that those reports contained.


The History page contains certain information for each file:



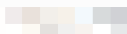





- **Start:** Timestamp for Date/time file was uploaded.
- **Reports Imported:** The number of reports imported from the file.
- **Skipped Reports:** The number of reports from the file that were skipped (not imported).
- **Correction Needed:** The number of reports that were imported but require correction.
- **Warnings:** The number of reports with warnings.
- **Status:** The status of the file upload. This will be either failed, processing, or completed.
- **User:** The user who uploaded the report.
- **Agency:** The agency of the user who uploaded the file.
- **File:** The file name of the uploaded file.

NORS Direct – Data Import

[Import](#) [History](#) [Correction Needed](#) [Data Specification](#) [List Value Mapping](#) [Help](#)

View the status and processing details of uploaded files. [More](#)



Start ↓	Reports imported	Skipped reports	Correction needed	Warnings	Status	User	Agency	File
▶ 2/22/2023, 5:02 PM	10	0	0	0	Completed		CDC	
▶ 2/22/2023, 4:07 PM	6	0	2	3	Completed		Wisconsin Division of Public Health	
▶ 2/22/2023, 1:04 PM	1	0	0	0	Completed		CDC	
▶ 2/22/2023, 1:03 PM	1	0	0	1	Completed		CDC	

File Status

The file status on the History page will be one of the following: failed, processing, or completed.

- **Failed:** Uploaded files containing critical errors will be rejected during processing. These files will display during Import as rejected. They will appear on the History page as “Failed”.
- **Processing:** Files that have been uploaded but have not yet been processed will appear in the History page with the “Processing File” status. File processing and import occurs in real time.
- **Completed:** Files that were imported will show as “Completed” on the History page. For each file, you will be able to see the number of reports that were imported or skipped.

Viewing reports for each file

On the History page, information on each file uploaded can be expanded to view each report that was included in the file by clicking the small arrow on the left-hand side to expand the row.

For each individual report, the History page displays the CDC ID, State ID, Reporting Agency, the import result (imported or skipped), and the number of warnings (if any).

NORS Direct – Data Import

[Import](#) [History](#) [Correction Needed](#) [Data Specification](#) [List Value Mapping](#) [Help](#)

View the status and processing details of uploaded files. [More](#)

Start ↓	Reports imported	Skipped reports	Correction needed	Warnings	Status	User	Agency	File
2/22/2023, 5:02 PM	10	0	0	0	Completed		CDC	Test1.xlsx

Reports:

CDC ID	State ID	Agency	Result
▶ 505332	Test1	CDC	Imported
▶ 505333	Test2	CDC	Imported
▶ 505334	Test3	CDC	Imported

Imported with Warnings

A report can be imported into NORS with warnings. Warnings may cause a section or variable to not import into NORS or may prevent a NORS report from being finalized until the error is fixed.

You can expand each individual report by clicking on the small arrow on the left side to see any warnings generated for that report. The warnings appear under the specific report and display the section, field (or variable name), if the variable is required, the value specified, and the error message.

Start ↓	Reports imported	Skipped reports	Correction needed	Warnings	Status	User	Agency	File
2/22/2023, 5:18 PM	9	1	0	1	Completed		CDC	Test1_error.xlsx
Reports:								
CDC ID	State ID	Agency	Result					
505332	Test1	CDC	Skipped					
505333	Test2	CDC	Imported (1 warnings)					
Report messages:								
Section	Field	Required	Value	Message				
SettingExposure	SettingExposure	Yes	Camp	The data you entered is invalid.				

To fix a warning, a user can click on the CDCID and open the report in NORS or upload a new file with the corrected data. Generally, CDC NORS Team encourages fixing any data errors first in the state database, so that future NORSDirect uploads contain the corrected data and do not overwrite any updates made in the NORS interface.

Common errors that will cause warnings in NORSDirect:

1. Invalid picklist value
2. Incorrect data format
 - a. E.g., string values entered for a date variable.
3. Missing variable for a relational table or grouping
 - a. E.g., if GenusName is missing but species or serotype data is included.
4. Missing or incorrect data required to upload another piece of data
 - a. E.g., if EtiologyKnown is not set to “yes” but etiology and isolate information are imported, or the type of water exposure does not match additional data entered.
5. Value entered conflicts with another entered value
 - a. E.g., DateFirstIll occurs after DateLastIll.
6. A finalized report is re-uploaded
 - a. Finalized reports can be updated through NORSDirect. This warning is merely to notify a user that this occurred, in case it was in error.

Skipped with warnings

Other times, a report will have errors that will prevent it from being uploaded into NORs, even if other reports from the same file have been uploaded. These reports will appear as “skipped” on the History page.

Start ↓	Reports imported	Skipped reports	Correction needed	Warnings	Status	User	Agency	File
2/22/2023, 5:18 PM	9	1	0	1	Completed		CDC	Test1_error.xlsx
Reports:								
CDC ID	State ID	Agency	Result					
505332	Test1	CDC	Skipped					
Report messages:								
Section	Field	Required	Value	Message				
LocationState	State	Yes	George	The data you entered is invalid.				

Reasons a report may be skipped include:

1. Required variable contains missing or incorrect data
2. Mode of transmission uploaded is different than the one specified for an already existing report
 - a. The mode of transmission cannot be changed during NORSDirect data import.
 - b. To change the mode of transmission for an already existing report, open the report in NORs and change the mode of transmission via the NORs interface.
 - i. Beware that changing the mode of transmission will delete any data saved in mode specific variables and may result in a loss of data.

NOTE: Previous versions of NORSDirect allowed a user to change the mode of transmission of a report via the NORSDirect interface. This capability is no longer supported. To change the mode of transmission of an existing NORs report, that change must be made within the NORs interface.

Correcting Errors

1. To correct report errors, a user can click on the CDCID and open the report in NORS, or upload a new file with the corrected data. Generally, the CDC NORS Team encourages fixing any data errors first in the state database, so that future NORSDirect uploads contain the corrected data and do not overwrite any updates made in the NORS interface.
2. The History page will display which fields in the NORS report contained errors. In the example below, the information entered for the field “SettingExposure” (“Camp”) did not match the picklist values in NORSDirect.

Start ↓	Reports imported	Skipped reports	Correction needed	Warnings	Status	User	Agency	File
2/22/2023, 5:18 PM	9	1	0	1	Completed		CDC	Test1_error.xlsx

Reports:			
CDC ID	State ID	Agency	Result
505332	Test1	CDC	Skipped
505333	Test2	CDC	Imported (1 warnings)

Report messages:				
Section	Field	Required	Value	Message
SettingExposure	SettingExposure	Yes	Camp	The data you entered is invalid.

3. To fix this problem in the NORS interface, open the report by clicking on the CDC ID, then navigate to the Settings section and update the setting to a valid picklist item. In the example below, we updated the value to “Campground”.

Settings

Setting(s) of Exposure

All settings where food was eaten

Campground x

- Alternatively, this error may be fixed by updating the data in your state or agency database to a valid NORS picklist value, or by using the List Value Mappings page to map the value “Camp” to a valid NORS picklist value and then reuploading this report into NORS.

NOTE: It is suggested to fix any errors in your state or agency database or to use the List Value Mapping page to address discrepancies between valid NORS values and your reporting site’s preferred values in order to avoid re-introducing errors in future uploads into NORS.

Correction Needed

When uploading a NORS report, it is important to note that data dependencies in NORS and NORSDirect are the same. If a report has a status of “Correction Needed,” it means that a user has submitted information for one field but there is missing or invalid information for a related field. For example, etiology information is entered but the variable “EtiologyKnown” is set to “No” or “Unknown”.

In NORSDirect, these discrepancies do not appear as warnings but rather as a “Correction Needed” errors. Correction Needed errors will prevent a report from being finalized and can be fixed in the NORS interface or in your site’s database. On the History page, the file will show how many reports from that file have a Correction Needed. In the example below, there is one correction needed.

Start ↓	Reports imported	Skipped reports	Correction needed	Warnings	Status	User	Agency
2/23/2023, 9:34 AM	1	0	1	0	Completed		CDC

To view reports that have a correction needed error, navigate to the Correction Needed page in NORSDirect. This page displays information on all reports uploaded through NORSDirect with one of these errors. Click on the small arrow to the left of the report row to expand the report and view the errors. In this example below, you can see that the report displays the error that “Incubation data Unknown can’t be set to Yes if Incubation data exists in the report”.

[Import](#)
[History](#)
[Correction Needed](#)
[Data Specification](#)
[List Value Mapping](#)
[Help](#)

View imported reports that currently have corrections needed.

CDC ID	State ID	Issues	Imported	Agency	User				
505334	Test3	1	2/23/2023, 9:34 AM	CDC					
<div style="border: 1px solid #ccc; padding: 5px; margin-top: 5px;"> <p>Issues:</p> <table border="1" style="width: 100%; border-collapse: collapse;"> <thead> <tr> <th style="width: 30%;">Field</th> <th>Issue</th> </tr> </thead> <tbody> <tr> <td>Unknown</td> <td>Incubation data Unknown can't be set to Yes if Incubation data exists in the report.</td> </tr> </tbody> </table> </div>						Field	Issue	Unknown	Incubation data Unknown can't be set to Yes if Incubation data exists in the report.
Field	Issue								
Unknown	Incubation data Unknown can't be set to Yes if Incubation data exists in the report.								

To fix correction needed errors, either open the NORS report to edit in the NORS interface or edit the data in your site’s database and re-upload the report. To enter a NORS report, click on the CDC ID from the Correction Needed page. When you enter a report, a pop-up display will appear indicating what correction needed errors exist.

⚠ Correction needed ✕

- Incubation data Unknown can't be set to Yes if Incubation data exists in the report.

Close

Navigate to that section of the report and make any edits necessary to resolve the issue. In this example, we unchecked the box next to “Unknown Incubation period” and the error message resolved. This report no longer has any correction needed errors and can be finalized. A report containing Correction Needed errors CANNOT be finalized.

Incubation Period *Among primary cases*

✖ Incubation data Unknown can't be set to Yes if Incubation data exists in the report. ✖

Unknown incubation period

Incubation Period	Number	Increment
Shortest	1.00	Days ▾
Median	3.00	Days ▾
Longest	5.00	Days ▾



Incubation Period *Among primary cases*

Unknown incubation period

Incubation Period	Number	Increment
Shortest	1.00	Days ▾
Median	3.00	Days ▾
Longest	5.00	Days ▾

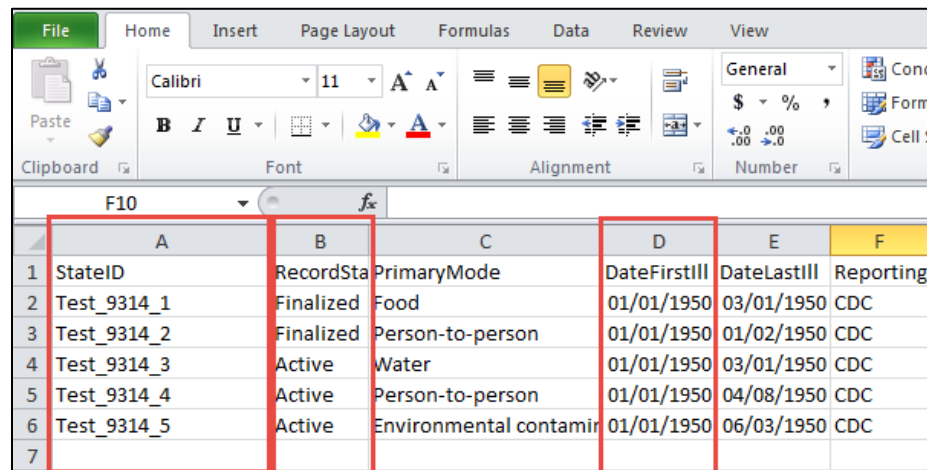
Keep in mind that additional errors may appear after the initial set of errors has been corrected. For example, if “DateFirstIll” is updated when correcting the initial set of errors, the additional validation checks may find that the “DateLastIll” now occurs before the “DateFirstIll” and also needs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

Sending Test Files

There is not a test site for NORSDirect. **All data uploaded and processed through NORSDirect will be saved into the live NORS database.** These reports will also be available for viewing and downloading 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_LTFCF-155.”
2. Set the RecordStatus field of each report to either “Active” or “Finalized.”
3. Set the DateFirstIll to “1/1/1950”. Other dates like DateLastIll, InitialExposure, LastExposure, CDCReportDate, and LocalReportDate, may also need to be updated accordingly in order to pass the validation checks.



	A	B	C	D	E	F
1	StateID	RecordSta	PrimaryMode	DateFirstIll	DateLastIll	Reporting
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 Data Import page.
5. Correct any errors that may have been flagged in NORSDirect and add or update mappings on the List Value Mapping page as needed.
6. Open the report in NORS to verify the data saved as expected. Then delete the report by opening it in NORS. You may search for all test files at once by searching for all reports with the year 1950 and a State ID containing “Test” on the Reports page.

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 six required variables (StateID, AgencyName, 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. See the Data Specification guide for which variables are required for each grouping.
 - 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 GeneralRemarks 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 GeneralRemarks field, but that column was not included in the NORSDirect file, then no changes would be made to GeneralRemarks.

	StateID	PrimaryMode	ExposureState	DateFirstIll	EstimatedPrimary	GeneralRemarks
Currently in NORS	Test- 3	Food	Georgia	1/6/2013	10	Test Comment 1
Sent with NORSDirect	Test- 3	Food	Georgia	1/6/2013	10	
Now in NORS	Test- 3	Food	Georgia	1/6/2013	10	

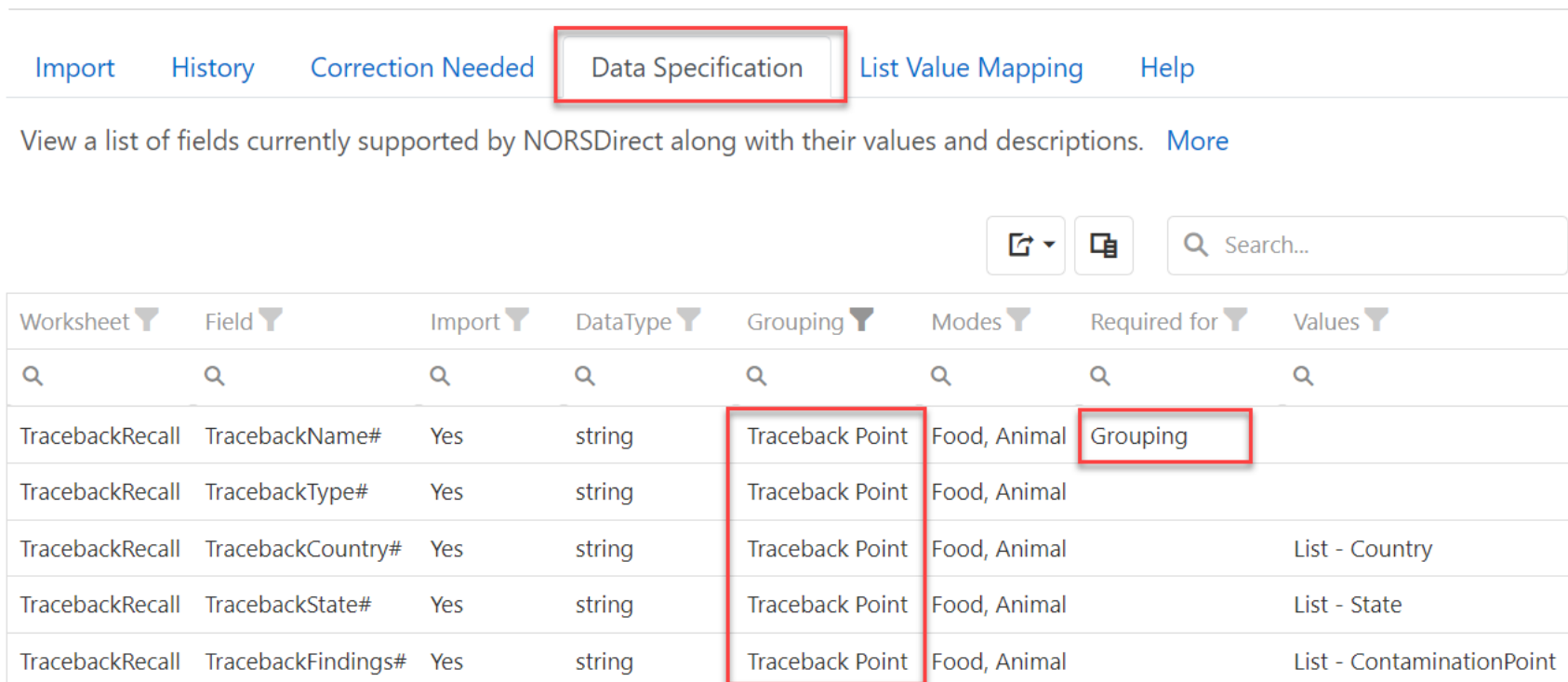
- d. For best results and to simplify the update process, include all variables and data in all NORSDirect updates, even if the data are unchanged.
2. Make sure that the StateID of the updated report exactly matches the StateID of the report already saved in NORS.
 3. Upload the file using the NORSDirect Data Import page.
 4. Correct any errors that were caught during the NORSDirect validation process. If the report being updated has a status of “Finalized” in NORS, but the import creates errors, the report will be defaulted back to a status of “Active”. The History page will note when a finalized report is updated through NORSDirect.
 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 the existing data in that table will be overwritten with the new data. To view which variables belong in a relational table, check the “Grouping” column on the Data Specification page of NORSDirect.

The “Required for” column lists if the variable is required within its respective grouping (e.g., GenusName# is required within the 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 or grouping names do not need to appear anywhere in the uploaded file.



View a list of fields currently supported by NORSDirect along with their values and descriptions. [More](#)

Worksheet	Field	Import	DataType	Grouping	Modes	Required for	Values
TracebackRecall	TracebackName#	Yes	string	Traceback Point	Food, Animal	Grouping	
TracebackRecall	TracebackType#	Yes	string	Traceback Point	Food, Animal		
TracebackRecall	TracebackCountry#	Yes	string	Traceback Point	Food, Animal		List - Country
TracebackRecall	TracebackState#	Yes	string	Traceback Point	Food, Animal		List - State
TracebackRecall	TracebackFindings#	Yes	string	Traceback Point	Food, Animal		List - ContaminationPoint

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.

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
Currently in NORS	Test-Report-4	Norovirus	Unknown	Suspected			
Sent with NORSDirect	Test-Report-4	Norovirus	Genogroup I	Confirmed	Norovirus	Genogroup II	Confirmed
Now in NORS	Test-Report-4	Norovirus	Genogroup I	Confirmed	Norovirus	Genogroup II	Confirmed

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
Currently in NORS	Test-Report-4	Norovirus	Unknown	Suspected			
	StateID	GenusName1					
Sent with NORSDirect	Test-Report-4						
	StateID	GenusName1	SpeciesName1	Confirmed1	GenusName2	SpeciesName2	Confirmed2
Now in NORS	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
Currently in NORS	Test-Report-4	Norovirus	Unknown	Suspected	Norovirus	Genogroup II	Confirmed
Sent with NORSDirect	Test-Report-4				Norovirus	Genogroup II	Confirmed
Now in NORS	Test-Report-4	Norovirus	Genogroup II	Confirmed			

Key Things to Remember

- NORSDirect supports Excel files (.xlsx) up to 4 megabytes in size.
- Every file must have six required variables for every report: StateID, AgencyName, ExposureState, PrimaryMode, DateFirstIll, EstimatedPrimary.
Note: For multistate exposure and multistate residency outbreaks, the State# variable is also required.
- Excel files should use the variable names found on the Data Specification page. These should be in the first row. When there are multiple reports in the file, each variable has its own column, with one report per row.
- Data can be uploaded with all data on a single worksheet of an Excel file or split across multiple worksheets in a single file. If splitting data across multiple worksheets, repeat the StateID and AgencyName columns once on each worksheet. Variables must be organized in specific worksheets, as defined on the Data Specification page. Worksheet names must also match – user-defined worksheet names are no longer accepted.
- Your list values do not have to match NORS list values if you use the List Value Mapping page to map them to NORS values. Mapped values must be entered prior to upload for NORS to correctly import the data.
- When updating data, especially during data cleaning, corrections should also be made in the originating database or data file. Otherwise, any changes made in the NORS interface may be overwritten the next time a file is uploaded using NORSDirect.

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