



Clinical Document Architecture (CDA) Import Function

Division of Healthcare Quality Promotion

Target Audience

- This training is intended for:
 - CDA software vendors
 - Facility Users submitting CDAs into the NHSN application with application ‘Admin’ user rights

Objectives

- Identify the steps in submitting records to NHSN via the NHSN Import Data function. Demonstrate import for the following events:
 - Bloodstream infection (CLABSI)
 - ICU denominator
 - Surgical Site infection
 - Procedure

Information about the CDA ZIP File

- Before using the Import Data function, you must generate CDA zip files that contain the event and/or denominator records to be imported.
- CDA files are exported from the facility's available electronic sources of medical information (e.g., electronic medical record software, laboratory information, admission, discharge, and transfer data).
 - For details on generating your CDA zip files, consult your Infection Control software vendor representative.
- To report to NHSN, CDA files are created, zipped, and then imported into the NHSN application.
 - Monthly reporting plans and locations must be added manually before data can be imported.

NHSN User Rights

- Users need “Administrator” rights in order to upload all CDA types.
- There is only one facility administrator for a facility in NHSN, but there can be multiple users with “Administrator” rights.

The screenshot shows the 'Edit User Rights' page in the NHSN system. The left sidebar lists various navigation options: NHSN Home, Alerts, Reporting Plan, Patient, Event, Procedure, Summary Data, Import/Export, Analysis, Surveys, Users (with Add and Find links), Facility, Group, and Log Out. The main content area displays a message about logging into XYZ Liquors (ID 10009) as MINDYD, and the facility XYZ Liquors (ID 10009) following the PS component. The title 'Edit User Rights' is centered above a table. The table has a header row with columns: Rights, Patient Safety, Healthcare Personnel Safety, and Biovigilance. Below this are five rows of checkboxes corresponding to the rights: Administrator, All Rights, Analyze Data, Add, Edit, Delete, and View Data. A red arrow points to the 'Administrator' checkbox in the first row. At the bottom of the table is a 'Customize Rights' row with three checkboxes and an 'Advanced' button. The User ID is listed as MINDYD (ID 4270) and the Facility List includes XYZ Liquors (10009).

Rights	Patient Safety	Healthcare Personnel Safety	Biovigilance
Administrator	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
All Rights	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Analyze Data	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Add, Edit, Delete	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
View Data	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Customize Rights	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>

NHSN User Rights

- ❑ If a user does not have administrative rights, the facility administrator should follow the steps below to edit the user's profile:
 - Click 'Users' and then 'Find' in the navigation menu.
 - Enter a search criteria (i.e. User ID) and Click the 'Find' button.
 - Click the 'Edit' button.
 - Click the 'Edit Rights' button on the user profile and click the checkbox to provide administrative rights.
 - Click the 'Save' button.

The screenshot shows the NHSN - National Healthcare Safety Network interface. The title bar reads "NHSN - National Healthcare Safety Network (U047-SDC-BETA:443)". The left sidebar has a red border and contains the following links: NHSN Home, Alerts, Reporting Plan, Patient, Event, Procedure, Summary Data, Import/Export, Analysis, Surveys, Users (with "Find" highlighted by a red arrow), Facility, Group, Tools, and Log Out. The main content area is titled "Find User". It displays a message: "Enter search criteria and click Find". Below this is a "User Information" section with fields for User ID, First Name, Middle Name, Last Name, Phone Number, and E-mail Address. At the bottom are "Find", "Clear", and "Back" buttons. The status bar at the top right says "Logged into XYZ Medical Center (ID 10009) as MINDYD. Facility XYZ Medical Center (ID 10009) is following the PS component."

Access the Import Function

NHSN - National Healthcare Safety Network (apt-v-nhsn-test:8001)

Logged into CDA-XYZ Test Facility (ID 13860) as MDQ1.
Facility CDA-XYZ Test Facility (ID 13860) is following the PS component.

NHSN Patient Safety Component Home Page

Use the Navigation bar on the left to access the features of the application.

Action items

You must complete these items.

- Confer rights [not accepted](#)

Alerts

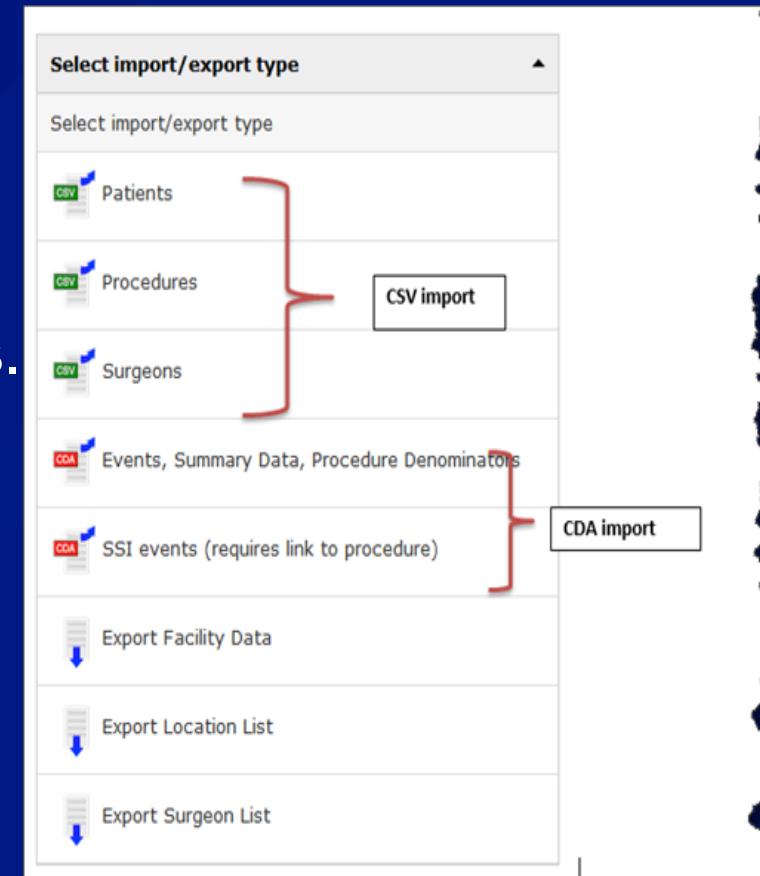
- You have [2](#) incomplete events
- You have [130](#) missing events
- You have [26](#) incomplete summary items
- You have [123](#) missing summary items
- You have [9](#) incomplete procedures
- You have [318](#) missing procedures
- You have [26](#) missing Procedure-associated events
- You have [14](#) unusual susceptibility profiles

- On the left navigation panel.
 - Select the Import/Export option.

Selecting the Import/Export Type

- In the Import/Export drop-down list, select either:
 - (CDA) Events, Summary Data, Procedure Denominators
 - (CDA) SSI events
- SSI records must be imported in a separate zip file after importing the associated Procedure event records.
- NHSN also accepts CSV file format for the following:
 - Patients
 - Procedures
 - Surgeons

(This is not addressed in these slides)



Selecting the CDA Zip file to Import

- Click the Browse button.
- Using the browsing window, select the CDA zip file to be imported into NHSN.

Logged into XYZ Medical Center (ID 10009) as MINDYD.
Facility XYZ Medical Center (ID 10009) is following the PS component.

Import/Export Data

Events, Summary Data, Procedure Denominators ▾

CDABrowse...

SubmitBack

Import Events, Summary Data, Procedure Denominators

- When the CDA zip filename displays in the Selected Data File field, click Submit.
- The import validation process begins.

Facility XYZ Medical Center (ID 10009) is following the PS component.

Import/Export Data

Events, Summary Data, Procedure Denominators ▾

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Import Events, Procedure and/or Summary Data event records

- After the initial import validation process has completed for the zip file, the system displays the validation results. At this point, the records have not been imported into the NHSN application.

- User can verify import information for each tab:

- Events
- Summary Data
- Procedures

The screenshot shows the 'Import Events, Procedures and/or Summary Data' page. The left sidebar includes links for Alerts, Reporting Plan, Patient, Event, Procedure, Summary Data, Import/Export, Analysis, Surveys, Users, Facility, Group, Tools, and Log Out. The main area displays validation results for three categories: Events, Summary Data, and Procedures. A message at the top states: 'Logged into _XYZ in PreProd (ID 10009) as MINDYD. Facility _XYZ in PreProd (ID 10009) is following the PS component.' Below this, a table titled 'Records Processed' shows counts for each record type: 16 Events, 0 Summary Data, and 6 Procedures. A note below the table says: '*CDA SetID already exists in the database; existing data will be overwritten.' Three red arrows point from the sidebar links to the corresponding tabs in the validation results section: 'Events', 'Summary Data', and 'Procedures'. The 'Events' tab is selected, showing a table with columns: Event Type, Event Date, Patient ID, Location, Set ID, and Status. Several rows are listed, with 'Error(s) present' noted for some entries.

Event Type	Event Date	Patient ID	Location	Set ID	Status
NOEVENT	NO DATE	NO PATIENTID	NO LOCATION CODE	NO SETID	Error(s) present
LABID	05/24/2014	MHD_1015e	ICU-A	2.16.840.1.113883.3.117.1.1.5.2.1.1.3678-MH	Error(s) present
UTI	01/02/2015	MHD_1015C_MDROY	MEDSURG64	2.16.840.1.113883.3.117.1.1.5.2.1.1.11474-R2	Ready for Import (Add)
UTI	01/02/2015	MHD_1015_0848	ICU-A	2.16.840.1.113883.3.117.1.1.5.2.1.1.15807-r2	Ready for Import (Add)
UTI	01/01/2015	MHD_1015_0849	ICU-A	2.16.840.1.113883.3.117.1.1.5.2.1.1.11836-r2	Ready for Import (Add)
	01/01/2015	StAur-Bld			

Import Events, Procedure and/or Summary Data event records

User can verify:

- “# of Records that Passed”: shown in top table
- “Status” of each CDA:
 - displays if Error(s) present
 - if no errors exist, then will display “Ready for Import”.

NHSN Home Logged into _XYZ in PreProd (ID 10009) as MINDYD.
Facility _XYZ in PreProd (ID 10009) is following the PS component.

Import Events, Procedures and/or Summary Data

Records Processed

Record Type	# of Recor ^d	# Passed	# of Updates*
Events	16	14	0
Summary Data	0	0	0
Procedures	6	6	0

*CDA SetID already exists in the database; existing data will be overwritten.

Validation Results

Events Summary Data Procedures

Event Type	Event Date	Patient ID	Location	Set ID	Status
NOEVENT	NO DATE	NO PATIENTID	NO LOCATION CODE	NO SETID	Error(s) present
LABID	05/24/2014	MHD_1015e	ICU-A	2.16.840.1.113883.3.117.1.1.5.2.1.1.3678-MH	Error(s) present
UTI	01/02/2015	MHD_1015C_MDROY	MEDSURG64	2.16.840.1.113883.3.117.1.1.5.2.1.1.11474-R2	Ready for Import (Add)
UTI	01/02/2015	MHD_1015_0848	ICU-A	2.16.840.1.113883.3.117.1.1.5.2.1.1.15807-r2	Ready for Import (Add)
UTI	01/01/2015	MHD_1015_0849	ICU-A	2.16.840.1.113883.3.117.1.1.5.2.1.1.11836-r2	Ready for Import (Add)

A red arrow points from the status column of the first row of the validation results table to the "Error(s) present" text.

Import Events, Procedure and/or Summary Data event records

- If at least one CDA passes the validation process for import, the 'Submit' button is enabled at the bottom of the screen.
 - When the Submit button is enabled, click it.
 - The valid CDAs are imported into the NHSN database.
 - The CDAs with an error will not import into NHSN.

Records Processed

Record Type	# of Records	# Passed	# of Updates*
Events	2	1	0
Summary Data	0	0	0
Procedures	0	0	0

*CDA SetID already exists in the database; existing data will be overwritten.

Validation Results

Events Summary Data Procedures

Event Type	Event Date	Patient ID	Location	Set ID	Status
UTI	04/13/2015		4BRN	2.16.840.1.114222.4.3.2.2.1.261.1.2.1-344	Error(s) present
UTI	04/13/2015	2-QA5307922	ICU-A	2.16.840.1.114222.4.3.2.2.1.261.1.2.1-344	Ready for Import (Add)

[Error Report](#) Submit Cancel



Import Events, Procedure and/or Summary Data event records

- If at least one CDA fails the validation process for import, the ‘Error Report’ button is enabled at the bottom of the screen.
 - Click the “Error Report” button to view a detailed error report.

Records Processed

Record Type	# of Recor	# Passed	# of Updates*
Events	2	1	0
Summary Data	0	0	0
Procedures	0	0	0

*CDA SetID already exists in the database; existing data will be overwritten.

Validation Results

Events	Summary Data	Procedures			
Event Type	Event Date	Patient ID	Location	Set ID	Status

UTI	04/13/2015		4BRN	2.16.840.1.114222.4.3.2.2.1.261.1.2.1-344	Error(s) present
UTI	04/13/2015	2-QA5307922	ICU-A	2.16.840.1.114222.4.3.2.2.1.261.1.2.1-344	Ready for Import (Add)

 Error Report Submit Cancel

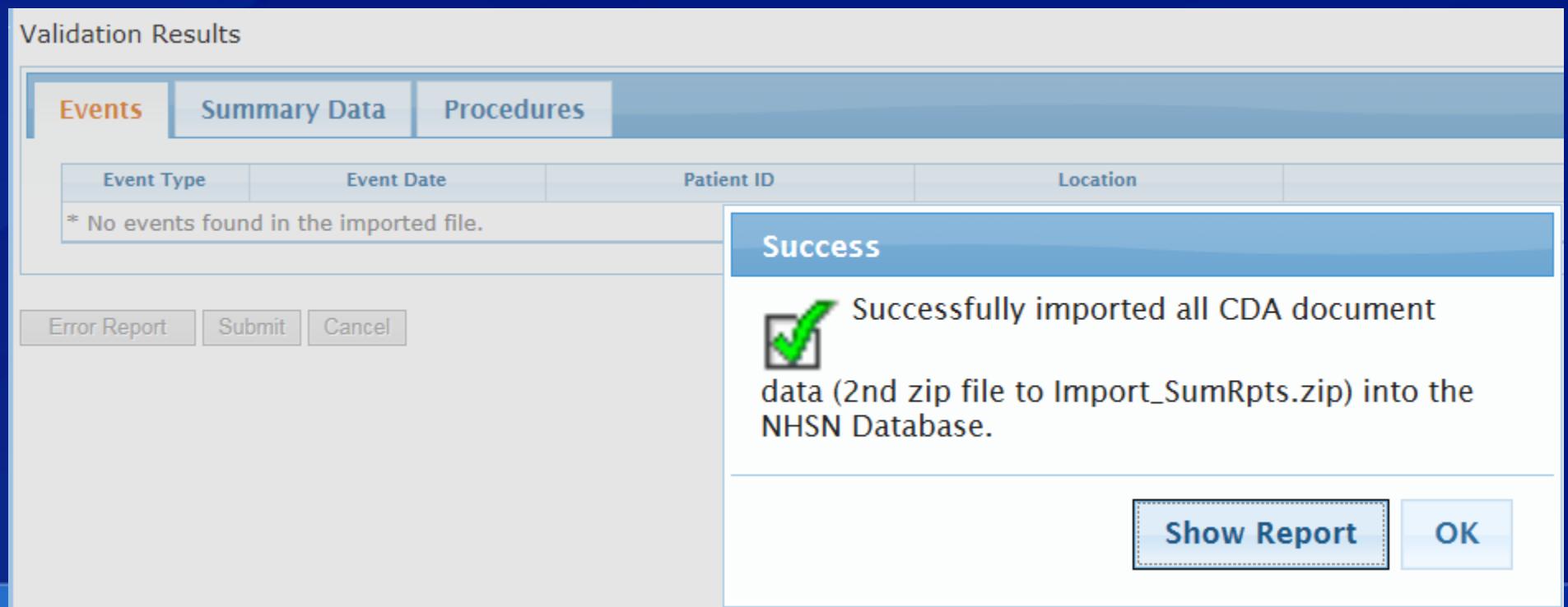
Error Report

- When you click the 'Error Report', a file in PDF format is generated and displayed showing the details of the error.
- The file can be saved or printed.

ImportDetails - CDA(s) Failed								
Line listing for each record that failed validation and did not import								
Facility ID:	Event Type	Event Date	CDA File Name	setId	*setId Already Exists in the Database	CDA Processing Date/Time Stamp		
17705	UTI	04/13/2015	UTI_344.xml	2.16.840.1.114222.4.3.2.2.1.261.1.2.1-344	No	19/Nov/2015 15:16:35 EST		
Reason for failure:								
	1.1	User cannot upload the documents for a different organization. Please correct the error and upload again.						
	1.2	Patient ID is required.						
	1.3	You have submitted a pathogen/drug susceptibility that meets criteria for in-plan MDRO infection surveillance in this location. Change MDRO Infection Surveillance to Yes or exit and revise plan.						

Import Events, Procedure and/or Summary Data event records

- When valid CDAs have been successfully imported and saved in the NHSN database, a message displays indicating the a successful import.
- A report can be generated showing details of the import process. If desired, click the ‘Show Report’ button.



Confirmation of CDA import – Error Report or Report

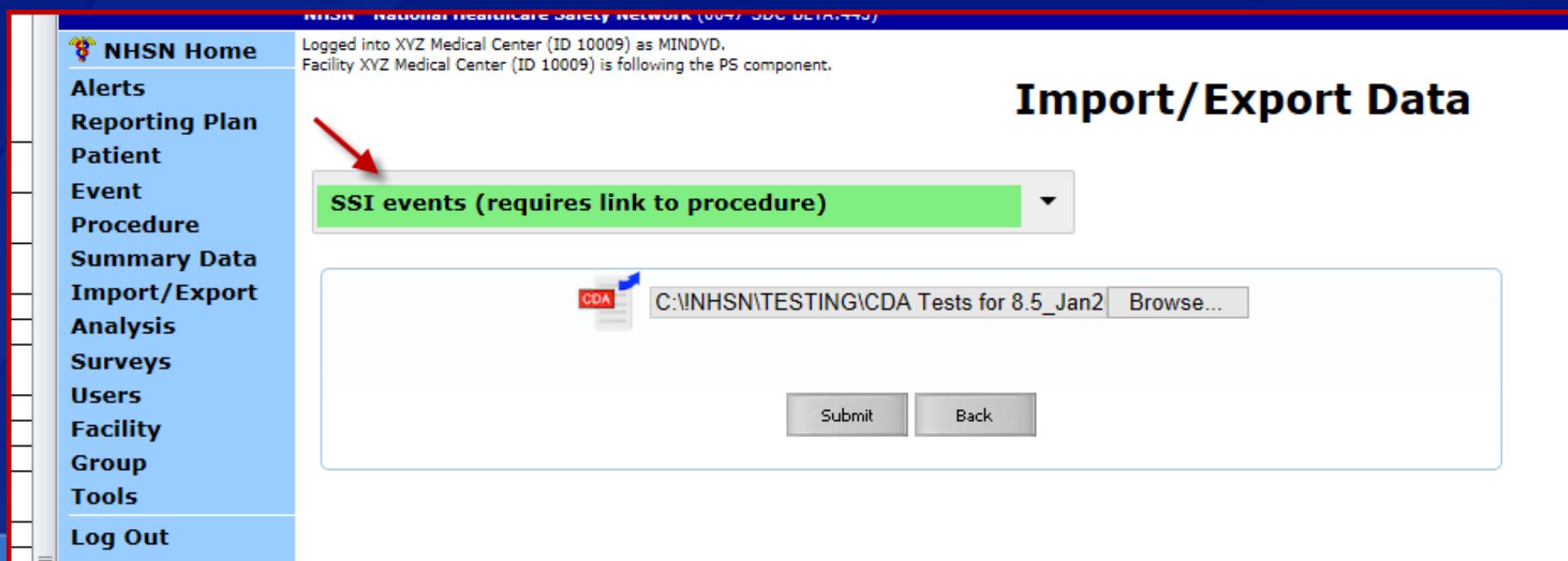
- When you click the ‘Show Report’ button, a PDF format file is generated and displayed. The file can be saved or printed. The report has summary and detailed sections.

CDA Import Report: Zip File Name: Vendor.zip											
FACILITY: XYZ in PreProd Date of Import: 19/Nov/2015 03:23:29 EST											
Summary:10009											
<table border="1"><thead><tr><th>Event ID</th><th>Total # attempted</th><th>Total # Passed Validation</th><th>Total # of Updates*</th></tr></thead><tbody><tr><td>Events</td><td>2</td><td>1</td><td>0</td></tr></tbody></table>				Event ID	Total # attempted	Total # Passed Validation	Total # of Updates*	Events	2	1	0
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Summary:17705											
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Event ID	Total # attempted	Total # Passed Validation	Total # of Updates*								
Events	2	1	0								

ImportDetails - Valid																							
Line listing for each record that passed the validation.																							
<table border="1"><thead><tr><th>Facility ID:</th><th>Event Type</th><th>Event Date</th><th>NHSN ID</th><th>CDA File Name</th><th>setId</th><th>*setId Already Exists in the Database</th><th>CDA Processing Date/Time Stamp</th></tr></thead><tbody><tr><td>10009</td><td>UTI</td><td>04/13/2015</td><td>479736</td><td>for xyz_UTI_344.xml</td><td>2.16.840.1.11422.4.3.2.2.1.261.1.2.1-344</td><td>No</td><td>19/Nov/2015 15:23:29 EST</td></tr></tbody></table>								Facility ID:	Event Type	Event Date	NHSN ID	CDA File Name	setId	*setId Already Exists in the Database	CDA Processing Date/Time Stamp	10009	UTI	04/13/2015	479736	for xyz_UTI_344.xml	2.16.840.1.11422.4.3.2.2.1.261.1.2.1-344	No	19/Nov/2015 15:23:29 EST
Facility ID:	Event Type	Event Date	NHSN ID	CDA File Name	setId	*setId Already Exists in the Database	CDA Processing Date/Time Stamp																
10009	UTI	04/13/2015	479736	for xyz_UTI_344.xml	2.16.840.1.11422.4.3.2.2.1.261.1.2.1-344	No	19/Nov/2015 15:23:29 EST																
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Reason for failure:																							
1.1				User cannot upload the documents for a different organization. Please correct the error and upload again.																			
1.2				Patient ID is required.																			
1.3				You have submitted a pathogen/drug susceptibility that meets criteria for in-plan MDRO infection surveillance in this location. Change MDRO Infection Surveillance to Yes or exit and revise plan.																			

SSI Events

- SSI must be imported after the matching Procedure exist in the NHSN database.
- Select the “SSI events” icon and Browse for the SSI CDA Zip file.
- Click the “Submit” button.



SSI Events

- The SSI- Procedure link is displayed. You may validate the correct linkage occurred by clicking the Procedure ID show in blue (Proc ID)
- Click the ‘Error(s) present’ link to view errors or click the ‘Submit’ button to import the SSI CDAs.

Records Processed

Record Type	# of Records	# Passed	# of Updates*
Surgical Site Infection:	4	4	0

*CDA SetID already exists in the database; existing data will be overwritten.

Validation Results

SSI

Event Type	Event Date	Patient ID	Proc Code	Proc Date	Set ID	Status
SSI	01/10/2015	MHD_1015Aa	AMP	01/05/2015	2.16.840.1.113883.3.117.1.1.5.2.1.1.1-MHD	Ready for Import (Add)
Link to:	<input checked="" type="radio"/> 539769 (Proc ID)					
SSI	01/28/2015	A-MHD_HPRO_1015	HPRO	01/25/2015	2.16.840.1.113883.3.117.1.1.5.2.1.1.1-SSI-i	Ready for Import (Add)
Link to:	<input checked="" type="radio"/> 539772 (Proc ID)					
SSI	01/20/2014	MHD_1015a_sp	HYST	01/01/2014	2.16.840.1.113883.3.117.1.1.5.2.1.1.1289-N	Ready for Import (Add)
Link to:	<input checked="" type="radio"/> 539773 (Proc ID)					
SSI	11/27/2013	MHD_1015p	HYST	11/01/2013	2.16.840.1.113883.3.117.1.1.5.2.1.1.9605-N	Ready for Import (Add)
Link to:	<input checked="" type="radio"/> 539774 (Proc ID)					

Error Report Submit Cancel

Viewing imported data

- Imported data may be viewed in the User Interface.
- Linked Procedure and SSI records display the record is linked

Patient Information HELP

Facility ID*: XYZ Medical Center (10009)
Patient ID*: MHD_1015P
Secondary ID:
Last Name:
Middle Name:
Gender*: F - Female
Ethnicity:
Race: American Indian/Alaska Native Asian
Black or African American Native Hawaiian/Other Pacific Islander
White

Event
Social Security
Medicare
First Name
Date of Birth*

Event Information HELP

Event Type*: SSI - Surgical Site Infection Date of Event*: 11/27/2013
NHSN Procedure Code*: HYST - Abdominal hysterectomy
ICD-9-CM Code: Outpatient Procedure*: N - No
Procedure Date*: 11/01/2013 **Event Linked** 
MDRO Infection Surveillance*: No, this infection's pathogen/location are not in-plan for Infection Surveillance in the MD
Location: ICU-A - ICU-ALBL_SURGCC
Date A Admitted

Things to remember

- Contact your infection control software vendor support staff first for error messages that appear on the Error Report produced by the import function.
- Users need “Administrator” rights in order to upload all CDA types
- All records imported must fall within a previously entered monthly reporting plan.
 - Therefore, no “out of plan” events can be imported using the CDA function.
- All location entries must be made in NHSN prior to the first CDA import
- Each SSI record must be linked to its procedure
- Reference the NHSN website for more CDA information.
- Contact NHSN CDA support at NHSNCDA@cdc.gov for any issues that relate to use of the CDA Import function.