

Occupational Health Safety Network (OHSN)

Healthcare Traumatic Injury Modules

## Using the OHSN Conversion and Mapping Tool

[www.cdc.gov/niosh/topics/ohsn](http://www.cdc.gov/niosh/topics/ohsn)

[nioshohsn@cdc.gov](mailto:nioshohsn@cdc.gov)



## What is OHSN?

An Internet system for healthcare facilities to

⇒ Confidentially benchmark occupational injury & illness rates against other facilities

⇒ Find resources to decrease those rates

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## Objective

This document is for facilities using an electronic method *other than* the OHSN Excel template to track their occupational injuries. It will demonstrate how to use the OHSN Tool to “map” your terms and values to required OHSN terms and values.

(For information on using the OHSN Excel Template see the OHSN User Manual:  
<http://www.cdc.gov/niosh/topics/ohsn/documentation.html>)

## Overview

There are 10 “required” data elements. We ask that you report these 10 at a minimum for each occupational injury event. If you do not track one of these items, you can choose “unknown” for that category; however, we encourage you to consider tracking this information in the future. The more specific the information you enter, the greater your ability to understand and prevent injury events.

These data elements are for the OHSN Traumatic Injury Modules which address injuries from Patient Handling and Movement (PHM); Slips, Trips, and Falls (STF); and Workplace Violence (WPV).

## Required Data Elements

*see [www.cdc.gov/niosh/topics/ohsn/documentation.html](http://www.cdc.gov/niosh/topics/ohsn/documentation.html) for details.*

### About the Event

1. Event ID
2. Event Date
3. Event Severity
4. Event Location
5. Event Type

(STF, PHM, WPV)

### About the Worker

6. Age
7. Occupation

### Event Cause

8. Injury Nature (STF)
9. Contributing Factor (WPV)
10. Activity (PHM)

## Optional Data Elements

see [www.cdc.gov/niosh/topics/ohsn/documentation.html](http://www.cdc.gov/niosh/topics/ohsn/documentation.html) for details

- Event Time
- Event Reported Date
- Event Hours on Duty
- Event Description
- Event Medical Treatment
- Event Area
- Worker ID (non-identifiable)
- Worker Start Date
- Worker Usual Location
- Worker Gender
- Worker Race
- Worker Ethnicity
- Worker Type
- Injury Nature
- Body Part
- Prevention Recommendation

## Mapping & Conversion Summary

- Step 1: Move data into an Excel file.
- Step 2: Match your terms and values to the OHSN terms and values, using the OHSN Conversion Tool (“mapping”).
- Step 3: Convert your Excel file to an XML file using the OHSN Conversion Tool.
- Step 4: Upload your XML file to OHSN.

## Step 1: Move data into Excel

- ◆ Example 1: You already track your data in an Excel spreadsheet.

Done!

## Step 1: Move data into Excel

- ◆ Example 2: You track your data using commercial or internally-developed software.
  - ⇒ Most commercial and internal software will provide an option to export to Microsoft Excel. If you are not sure how to do this contact your IT department or the commercial software company.
  - ⇒ Please note: The OHSN Tool requires that the column headings be in Excel Row 1. You may need to delete an empty row to fulfill this requirement.

## Step 2: Map your Values to OHSN Data Elements

**Problem:** Every facility uses different terms for its locations, workers, and injuries.

**Solution:** Create a “common language” to allow facilities to keep their own terms, but still benchmark their injury events: the OHSN Data Elements.

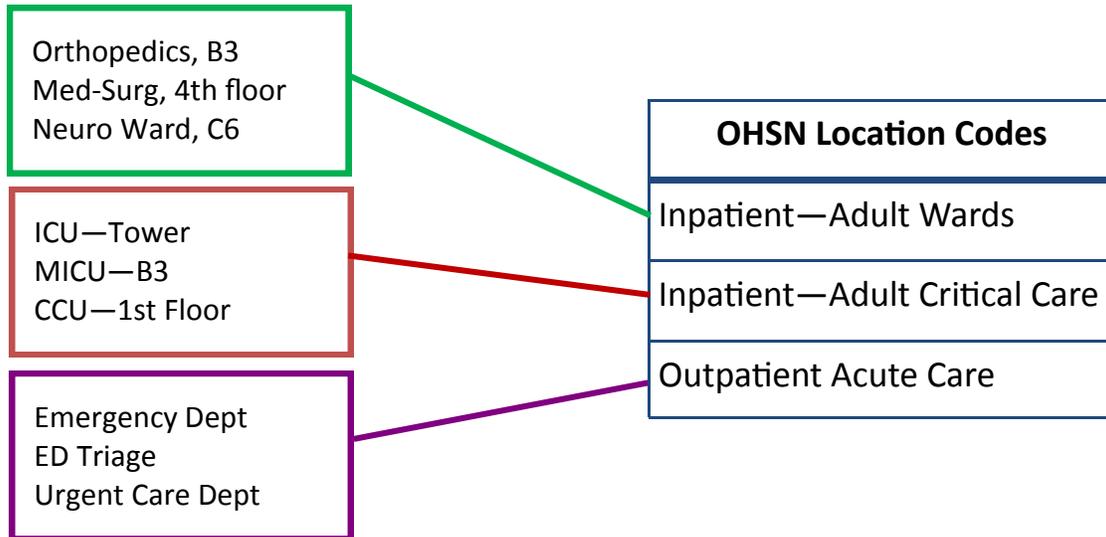
## Step 2: Map your Values to OHSN Data Elements

**Problem:** Most facilities have hundreds of job titles, locations, etc. - too many to effectively analyze.

**Solution:** Use the “common language” of the OHSN Data Elements to group these hundreds of categories into a manageable number of categories with similar characteristics.

## Mapping Overview

- Facilities enter incident data into their existing system.
- Facilities map their value lists to OHSN values lists with OHSN Conversion Tool.



## Mapping Details

The following pages will describe in detail the steps for using the OHSN Tool.

If you have any questions about any of these steps, please contact us at [NIOSHOHSN@cdc.gov](mailto:NIOSHOHSN@cdc.gov) or 513-841-4337.

## Mapping/Conversion

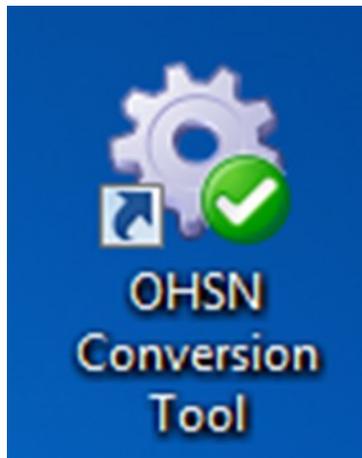
The first step is to download the *OHSN Data Conversion and Mapping Tool*, or “OHSN Tool,” to your computer. You can access this tool on the OHSN topic page at <http://www.cdc.gov/niosh/topics/ohsn/documentation.html>. It is listed under Facility Tools.

<p>Healthcare Personnel Traumatic Injury Modules</p> <p>Project Updates and Contact Information</p> <p>Chemicals</p> <p>Emergency Preparedness &amp; Response</p> <p><b>Related Topics</b></p> <p>Healthcare</p>	<h3>OHSN Facility Tools</h3> <p>The links below provide tools for healthcare facilities to use when participating in OHSN. The spreadsheet templates allow facilities to directly enter the event data using drop-down menus with the OHSN standard data elements. The OHSN Data Conversion and Mapping Tool enables mapping of facility specific values to OHSN standard values. Contact us at <a href="mailto:NIOSH_OHSN@cdc.gov">NIOSH_OHSN@cdc.gov</a> or 513-841-4335 with questions on these items.</p> <ul style="list-style-type: none"><li>• <a href="#">Import Template - All Fields</a></li><li>• <a href="#">Import Template - Required only fields</a></li><li>• <a href="#">OHSN Data Conversion and Mapping Tool</a> </li></ul>
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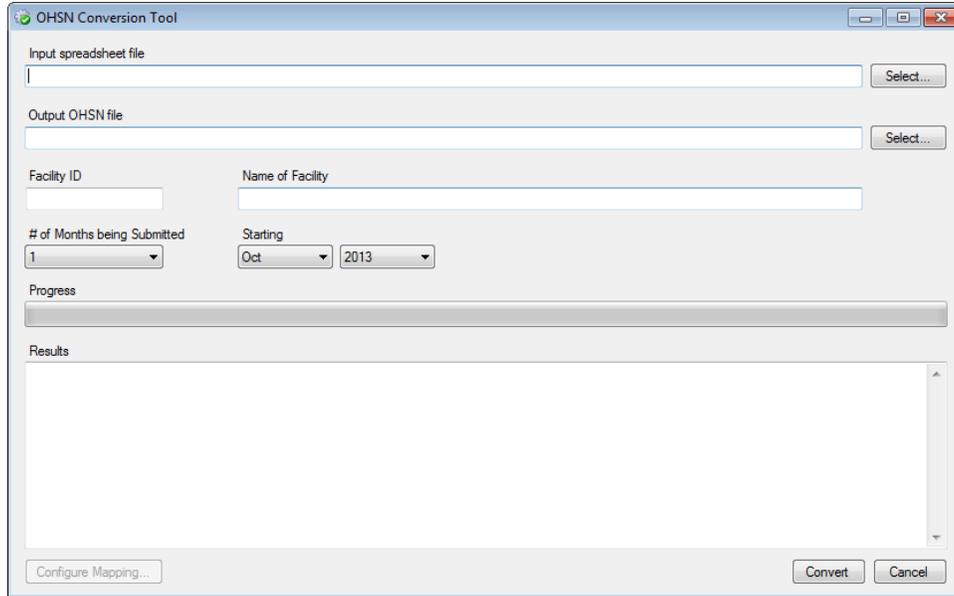
## Mapping/Conversion

Once the OHSN Tool is downloaded, it will place a shortcut on your desktop (see below). Double click on this icon to open the tool.



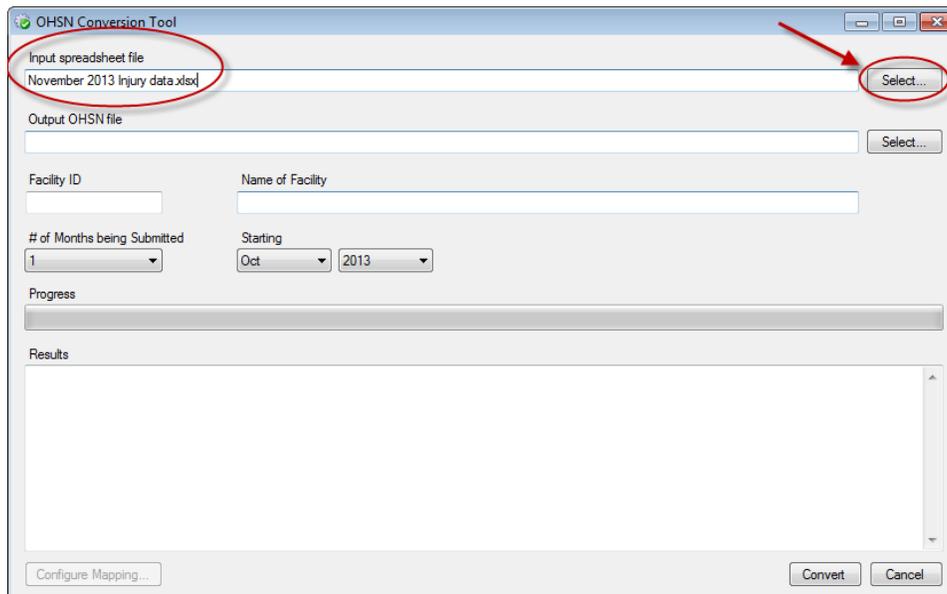
*Mapping/Conversion*

# The OHSN Conversion Tool



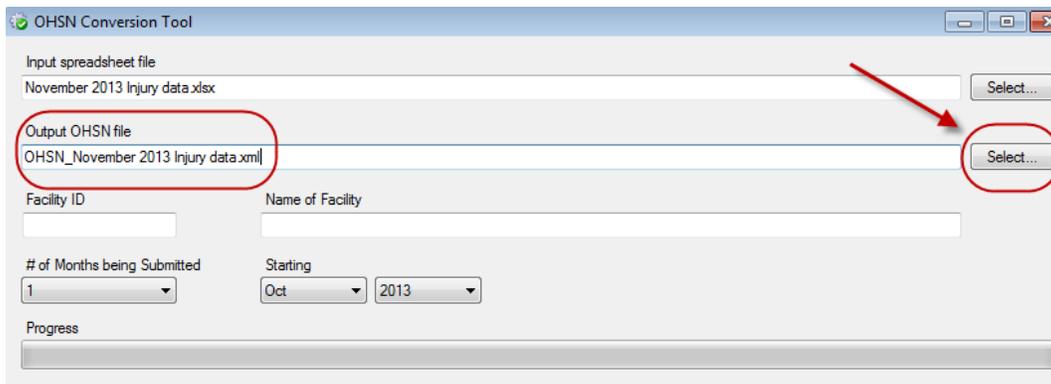
*Mapping/Conversion*

Click the *Select* button next to *Input Spreadsheet File*. Select the Excel file that you created in Step 1.



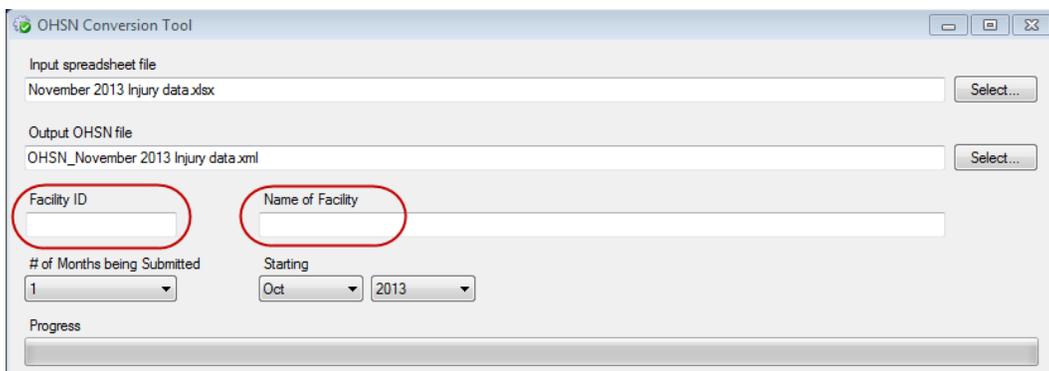
### Mapping/Conversion

Click the *Select* button next to *Output OHSN file*. The Tool will automatically suggest that the output file go in the same folder as the Input spreadsheet file, and add the word *OHSN\_* to the name: “OHSN\_*name of input file*.” Click *Select* to agree.



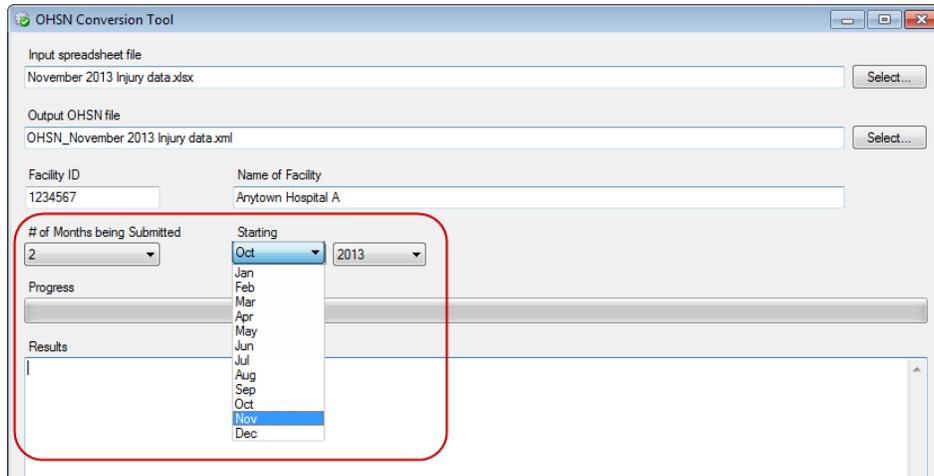
### Mapping/Conversion

Enter your Facility ID and Facility Name. For most Facilities, the ID number will be your American Hospital Association (AHA) Number. *If you are a healthcare system and are converting multiple facilities in the same file, skip this step and see page 23.*



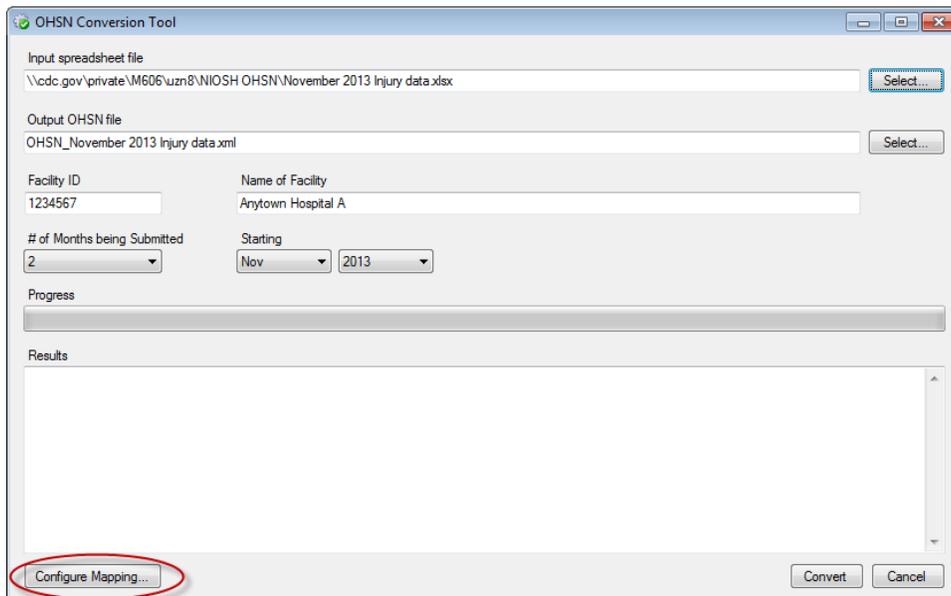
### Mapping/Conversion

Use the drop-down menus to select the number of months being submitted and the start date of the events.



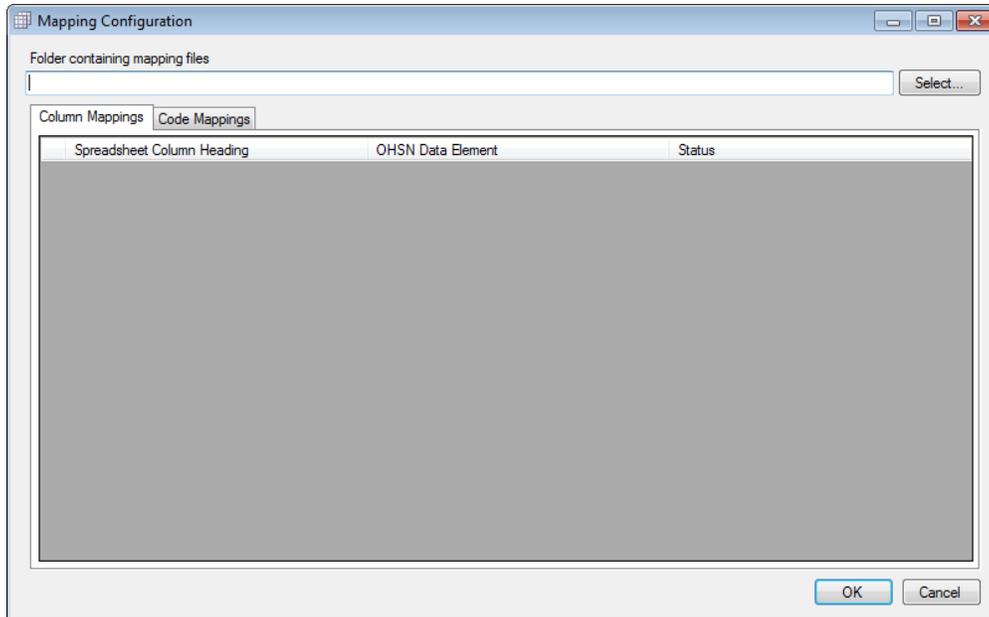
### Mapping/Conversion

Select *Configure Mapping* on the bottom left.



### *Mapping/Conversion*

This will take you to the Mapping Window.



### *Mapping/Conversion*

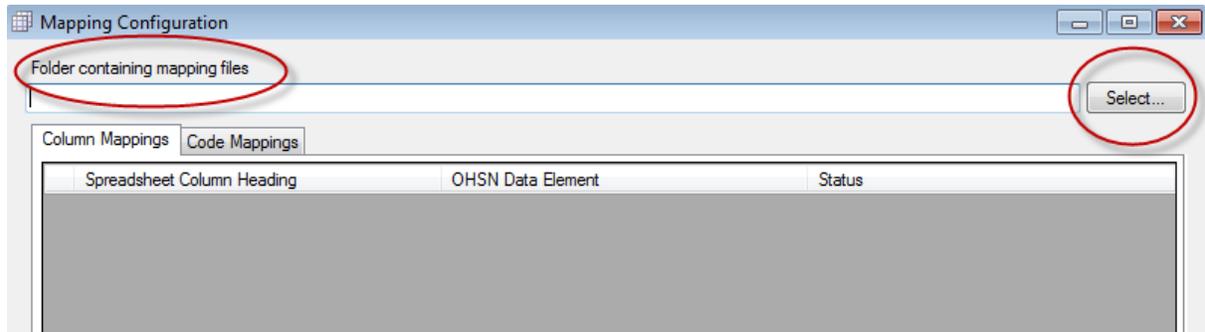
The Data Element “maps” for your facility will be stored on your computer. The first step is to tell the OHSN Tool where to find your maps.

- If you have mapped before, it will automatically look in the same place they were last time.
- If this is your first time, you will want to create a new folder to save your “maps” (see next page).

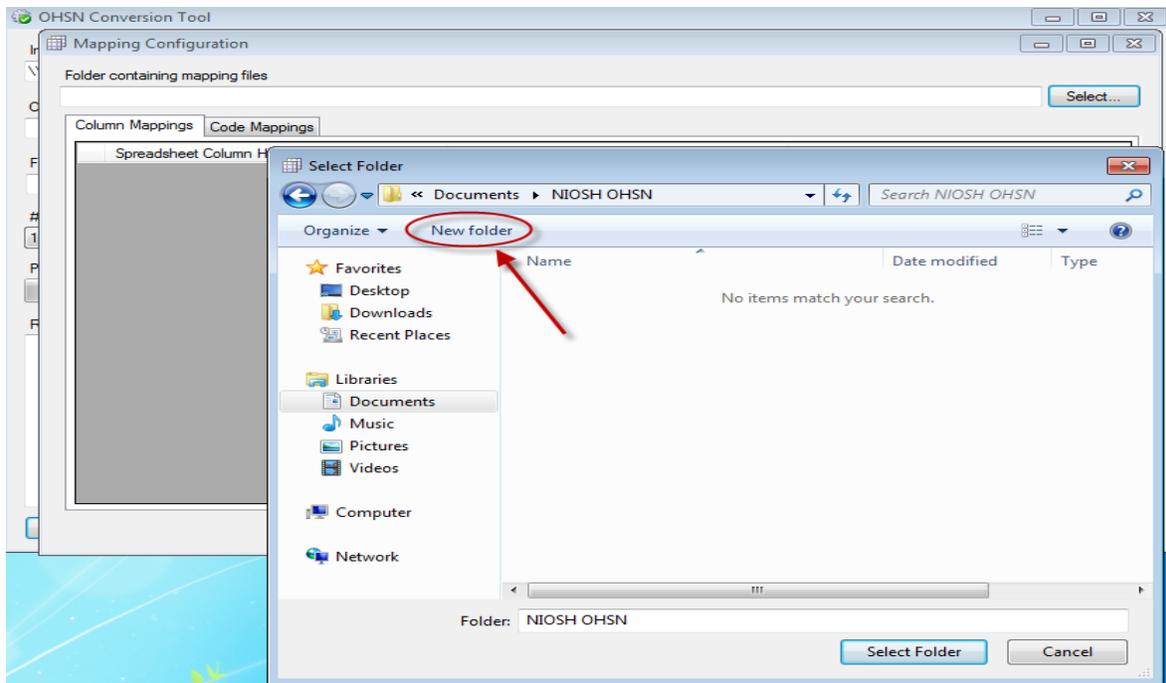
⇒ Note: there is a separate “map” for each data element. These are saved as .csv files in the folder you choose/create.

### Mapping/Conversion

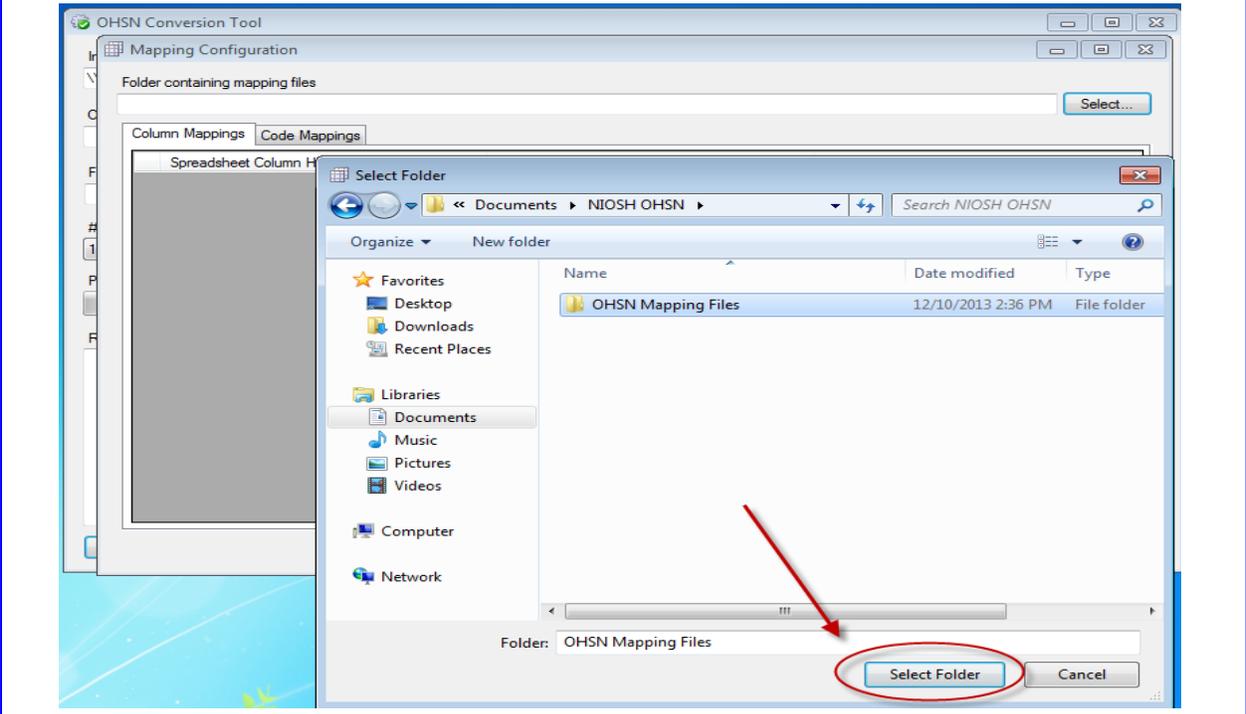
If there is nothing listed in the line titled “Folder containing mapping files,” use the *Select* button to find the correct folder on your computer. If this is your first time mapping, create a new folder to hold the mapping files (see below), and name the folder something you will remember (for example, “OHSN Mapping Files”).



### Mapping/Conversion

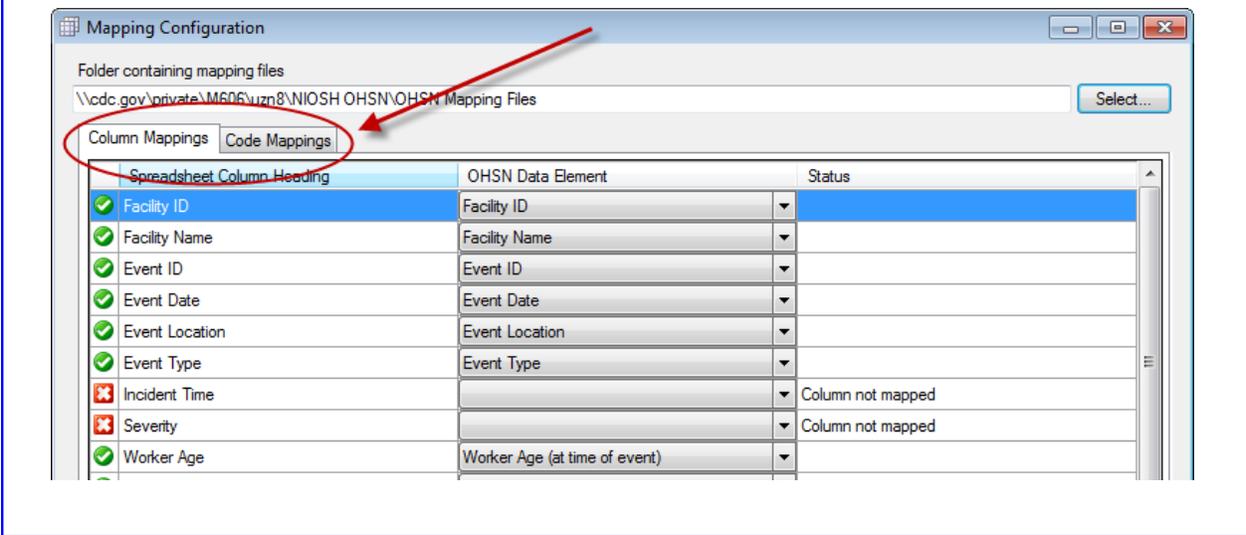


### Mapping/Conversion



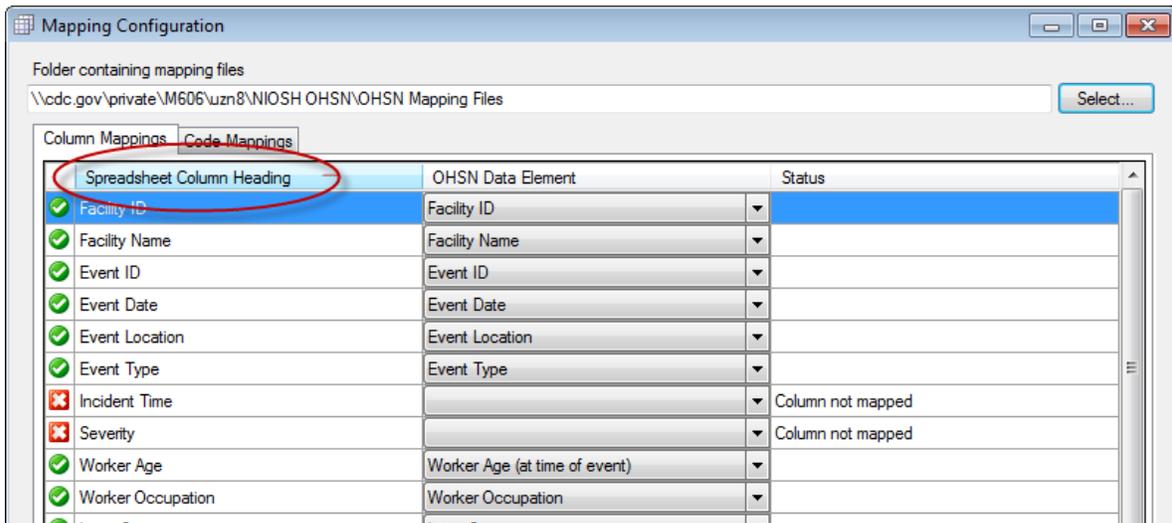
### Mapping/Conversion

Once the folder with your mapping files is selected, you are returned to the Mapping Configuration screen. There are two tabs on this screen: one for Column Mapping and one for Code Mapping.



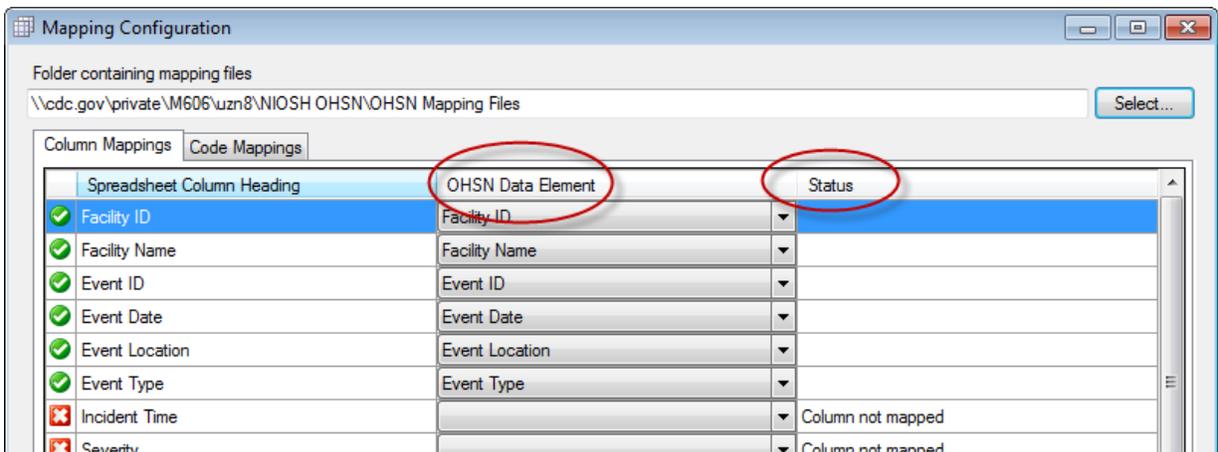
### Mapping/Conversion

On the Column Mapping screen, there are three columns. The first column lists the Column Names in YOUR FACILITY Excel Spreadsheet.



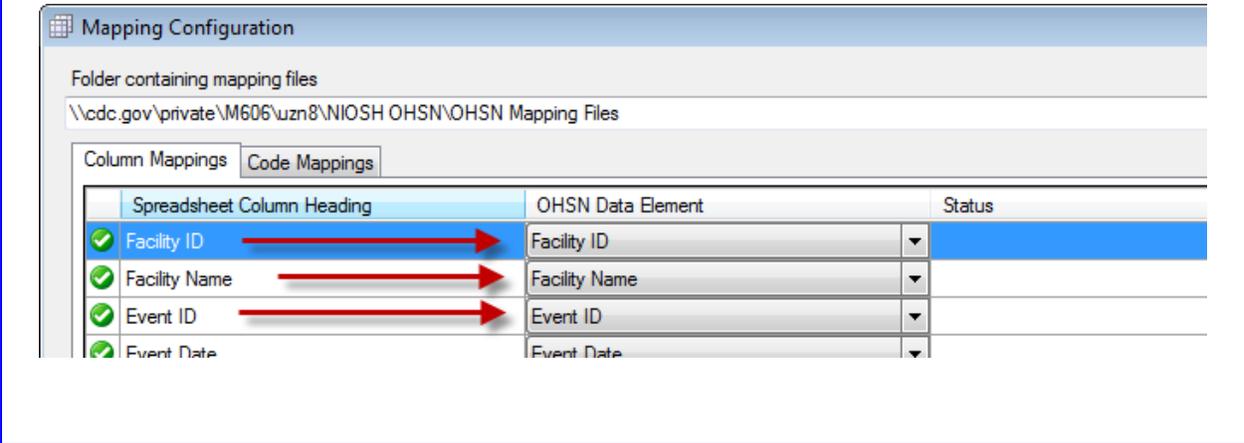
### Mapping/Conversion

The second column lists the OHSN Data Elements that will be mapped (matched) to the column headings in YOUR FACILITY spreadsheet. The third column shows the status of unmapped columns. Once you have mapped these columns the first time, you will not need to map them again unless they change.



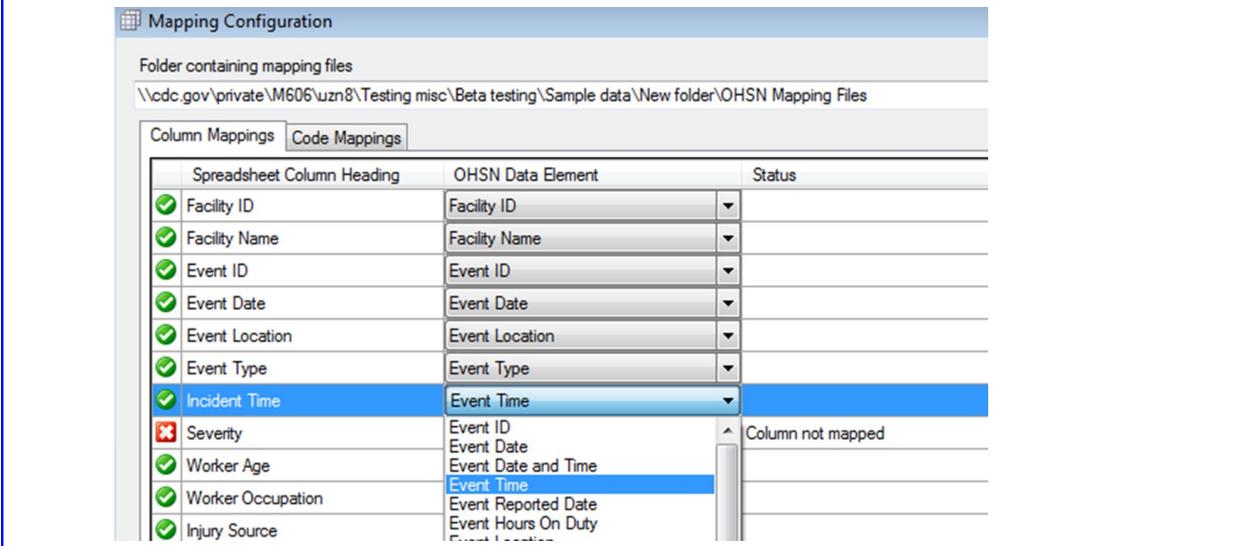
### Mapping/Conversion

If any of the columns in YOUR FACILITY spreadsheet exactly match the name of an OHSN Data Element, the OHSN tool will assume they can be matched. If this is not correct, you can change it with the drop-down menu.



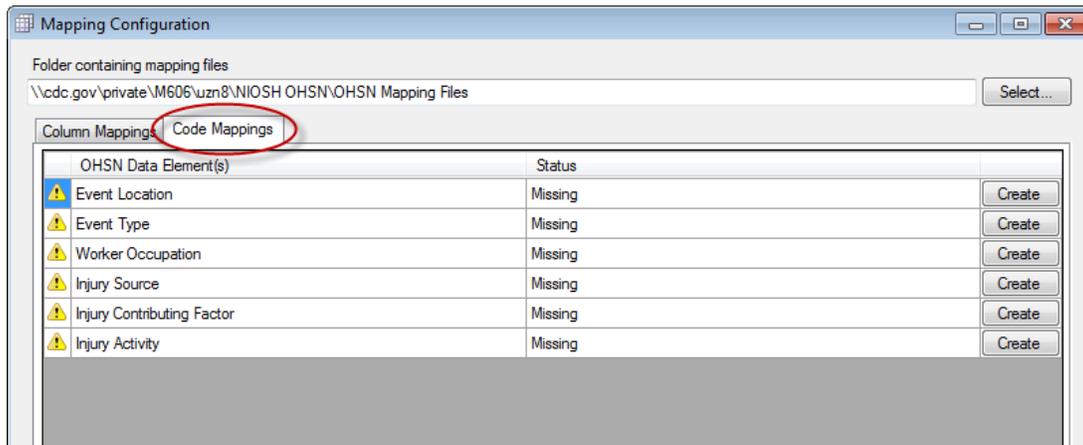
### Mapping/Conversion

You can use the menus to map unmatched columns to OHSN data elements. Some Spreadsheet Column Names may not be needed for OHSN. You can leave these unmapped (with a red "X"), or choose "ignore" from the drop-down menu.



*Mapping/Conversion*

Once all of the columns are mapped, choose the “Code Mappings” tab to map the terms and values in each row of YOUR FACILITY spreadsheet.

*Mapping/Conversion*

The “Code Mappings” tab is where you create the “dictionaries” that tell OHSN how each of your locally used values correspond to OHSN values. For example, under Occupation, you may indicate that “RN Clin Care Shift 2” is a Registered Nurse.

The OHSN Tool will save all of these dictionaries in a single folder. Each month it will look in that folder to see if it can define all the terms you are submitting. If there is one you have not previously defined, it will ask you to map the newly presented terms only.

You only have to map each of your values one time.

### Mapping/Conversion

There are three possible symbols on the Code Mappings tab.



Mapping file not yet created



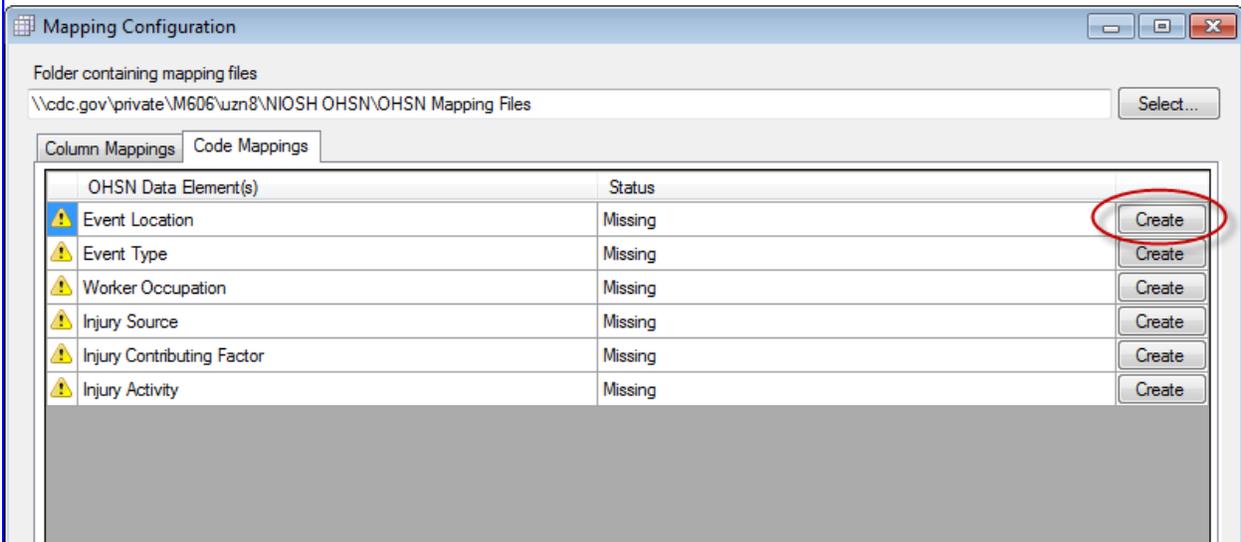
Mapping file complete



Mapping file created, but some values in the current file have not yet been mapped.

### Mapping/Conversion

To map your codes, click the “Create” or “Edit” button on the far right for each data element.



### Mapping/Conversion

When you click “Create” or “Edit” it opens a page that allows you to map YOUR FACILITY values to OHSN values. There are three columns on this page (see below).

- Facility Code: This left side column shows the values in this column of YOUR FACILITY spreadsheet.
- OHSN Mapping: This middle column provides a drop-down box of OHSN values that you can use to select the most appropriate match
- Description (optional): This right column is a place where you can make your own notes about the mapping.

The document titled “OHSN Data Elements” contains notes about how to choose the correct OHSN value for your codes.

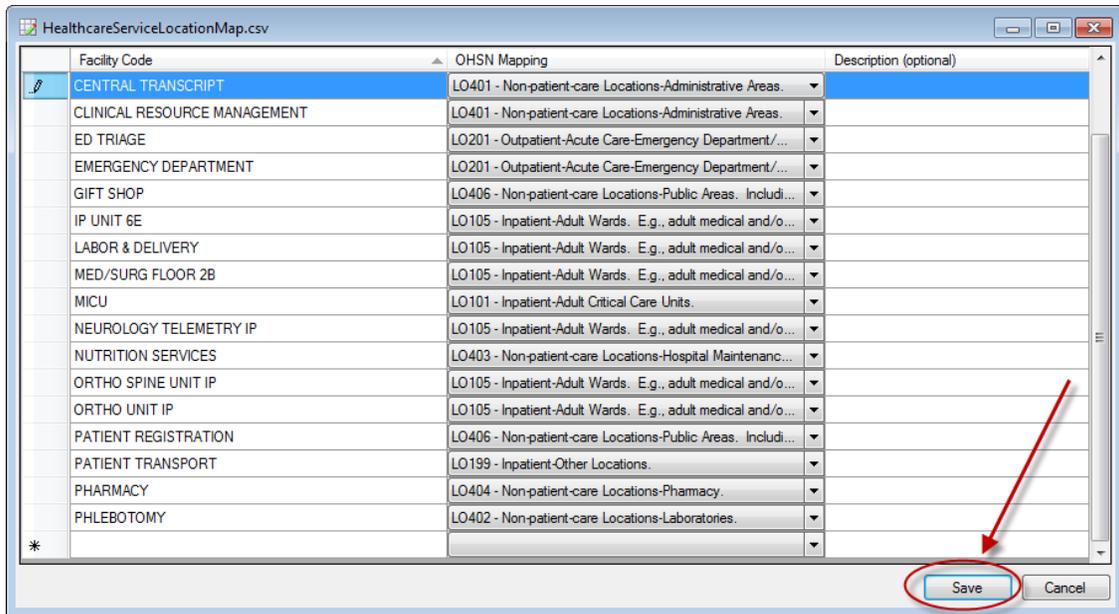
### Mapping/Conversion

For each of YOUR FACILITY values in the left column, use the drop-down menu to choose the best matching value in OHSN. (Below: Event Location)

Facility Code	OHSN Mapping	Description (optional)
ADMINISTRATIVE OFFICES	LO401 - Non-patient-care Locations-Administrative Areas.	
AMBULATORY SURGERY	LO202 - Outpatient-Acute Care-Ambulatory Surgery/Obse...	
ANGIOGRAPHY	LO202 - Outpatient-Acute Care-Ambulatory Surgery/Obseva...	
CENTRAL TRANSCRIPT	LO100 - Inpatient-Unspecified. Use if you do not know the exact	
CLINICAL RESOURCE MANAGEMENT	LO101 - Inpatient-Adult Critical Care Units.	
ED TRIAGE	LO102 - Inpatient-Neonatal Units.	
EMERGENCY DEPARTMENT	LO103 - Inpatient-Pediatric Critical Care Units.	
GIFT SHOP	LO104 - Inpatient-Specialty Care Areas. Adult or pediatric.	
IP UNIT 6E	LO105 - Inpatient-Adult Wards. E.g., adult medical and/or surgic	
LABOR & DELIVERY	LO106 - Inpatient-Pediatric Wards. E.g., pediatric medical and/c	
MED/SURG FLOOR 2B	LO107 - Inpatient-Step Down Units.	
MICU	LO108 - Inpatient-Operating Rooms.	
NEUROLOGY TELEMETRY IP	LO109 - Inpatient-Long-term Care.	
NUTRITION SERVICES	LO110 - Inpatient-Behavioral Health/ Psych Ward. Adult or pedi	
ORTHO SPINE UNIT IP	LO199 - Inpatient-Other Locations.	
ORTHO UNIT IP	LO200 - Outpatient-Unspecified. Use if you do not know the exa	
PATIENT REGISTRATION	LO201 - Outpatient-Acute Care-Emergency Department/Urgent C	
PATIENT TRANSPORT	LO202 - Outpatient-Acute Care-Ambulatory Surgery/Observation	
PHARMACY	LO203 - Outpatient-Clinic (Nonacute) Settings.	
	LO204 - Outpatient-Community Locations. E.g., home care, hom	
	LO299 - Outpatient-Other Locations.	
	LO301 - Radiology. Inpatient and/or outpatient.	
	LO400 - Non-patient-care Locations-Unspecified.	
	LO401 - Non-patient-care Locations-Administrative Areas.	
	LO402 - Non-patient-care Locations-Laboratories.	
	LO403 - Non-patient-care Locations-Hospital Maintenance. Hou	
	LO404 - Non-patient-care Locations-Pharmacy.	
	LO405 - Non-patient-care Locations-Morgue.	
	LO406 - Non-patient-care Locations-Public Areas. Including cafe	
	LO499 - Non-patient-care Locations-Other. Use if you know the	
	UNK - Unknown. A proper value is applicable, but not known.	

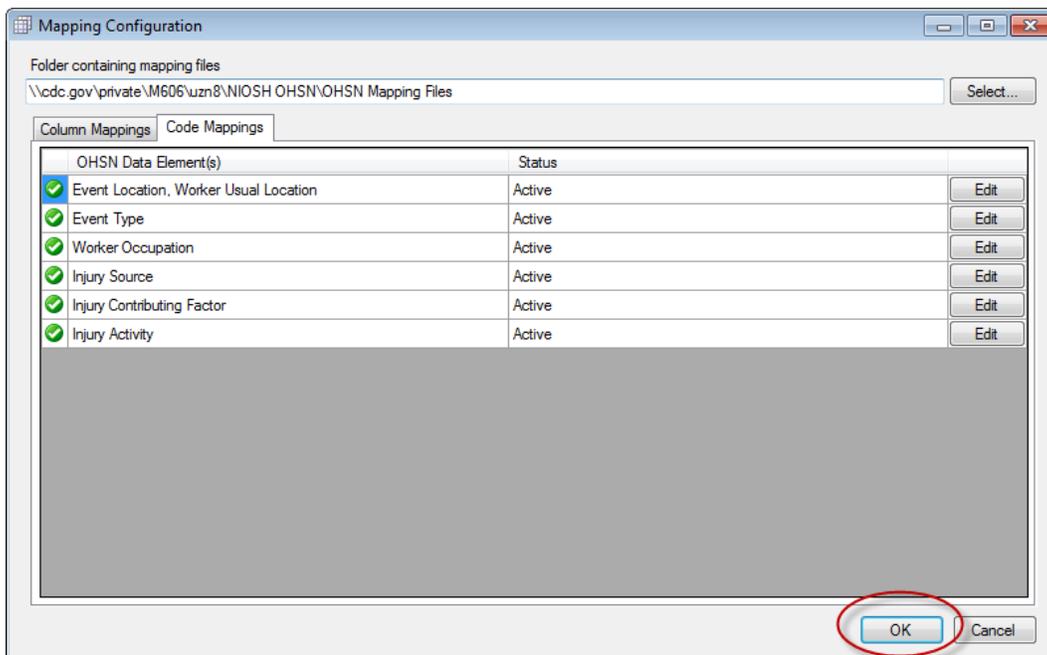
*Mapping/Conversion*

When all values are mapped, click “Save.”



*Mapping/Conversion*

Repeat this process until all data elements are mapped, then click “OK.”



### Mapping/Conversion

You are now ready to convert the file to the OHSN format (known as XML). Click “Convert.”

OHSN Conversion Tool

Input spreadsheet file  
 \\cdc.gov\private\m606\uzn8\NIOSH OHSN\November 2013 Injury data.xlsx

Output OHSN file  
 \\cdc.gov\private\m606\uzn8\NIOSH OHSN\OHSN Mapping Files\OHSN\_November 2013 Injury data.xml

Facility ID  
 1234567

Name of Facility  
 Anytown Hospital A

# of Months being Submitted  
 2

Starting  
 Nov 2013

Progress

Results

Configure Mapping... Convert Cancel

### Mapping/Conversion

The OHSN Tool will convert the file and give you a report. If the number of errors is zero, then you are ready to move onto the next step.

Data Validation Report

### OHSN Data Conversion Report

Facility Name	Anytown Hospital A
Facility ID	1234567
Starting Month	11/2013
Number of Months	2
Number of events	25
Number of errors	0
Earliest event date	11/1/2013
Latest event date	12/29/2013

Your data submission has been successfully mapped and is ready for transmission to OHSN.

*Mapping/Conversion*

If the report tells you there are errors, return to the Excel spreadsheet and correct the specified line.

**OHSN Data Conversion Report**

Facility Name	Anytown Hospital A
Facility ID	1234567
Starting Month	11/2013
Number of Months	2
Number of events	25
Number of errors	1
Earliest event date	10/22/2013
Latest event date	12/29/2013

Your input file contained a number of issues that must be corrected before the file can be successfully mapped. Please correct the following validation errors:

Row Number	Data Item	Error	Resolution
2	EventDate	Event date of 2013-10-22 is out of range.	Verify that your input file matches the data range (starting month and count) that you selected.

*Mapping/Conversion*

Your data is now saved as an XML file and ready for upload to OHSN. If you have any trouble with the previous steps, contact [NIOSHOSH@CDC.GOV](mailto:NIOSHOSH@CDC.GOV).

Please note: you should have only ONE set of mapping files for your Facility or System—otherwise you risk inconsistencies in your data conversion.

When mapping as described above, the mapping files are saved on your local computer. Therefore, it might be easier if either

- A single person is responsible for mapping, OR
- The mapping files are saved on a common share drive.

If you have any questions, please contact NIOSH.

### *Mapping/Conversion*

#### **If you are a healthcare system submitting data for multiple facilities in a single spreadsheet:**

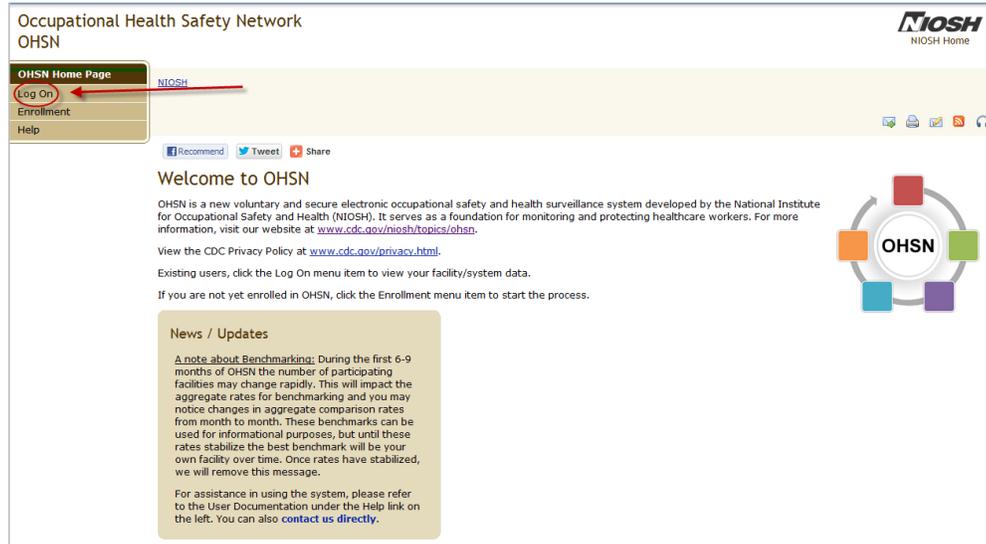
- Your Excel spreadsheet must contain two additional columns that must be filled in for each injury event:
  - Facility ID (AHA number)
  - Facility Name
- Sort your Excel spreadsheet so all of the events for a facility are grouped together (sort by Facility ID).
- On the OHSN Tool, leave the fields for Facility ID and Facility Name Blank (see page 11).

## Uploading Data

Once your data has been converted into an XML file, it is ready to be uploaded to the OHSN secure portal. The following pages describe this process.

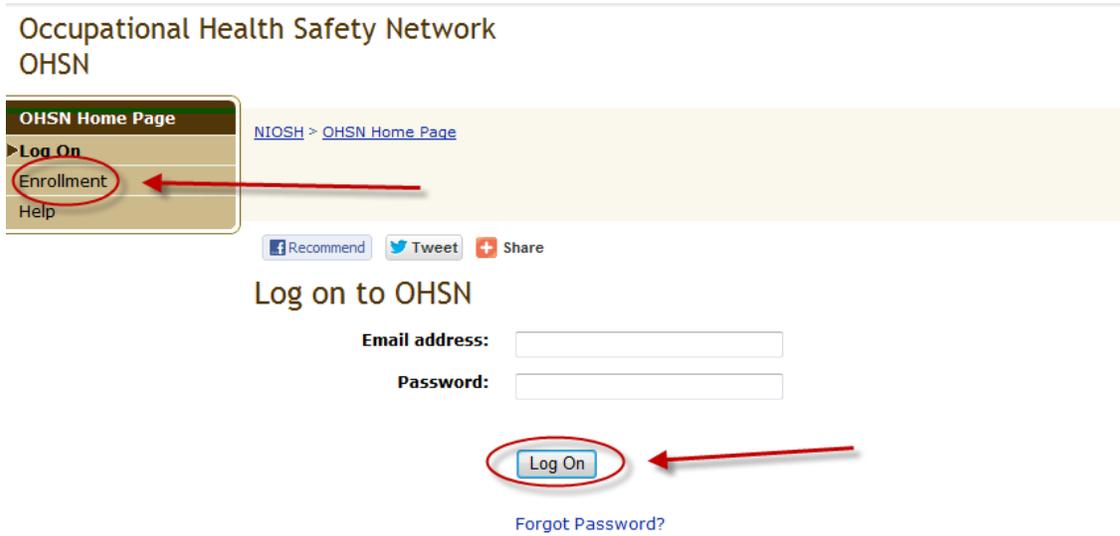
## Upload

To upload your file, go to the OHSN portal at <https://wwwn.cdc.gov/niosh-ohsn> and select *Log On*.



## Upload

Enter your Email Address and Password to Log On. If you do not yet have an account, click the *Enrollment* link to start the process.



## Upload

After logging on, click the link for *Data Submissions*.

Occupational Health Safety Network  
OHSN

NIOSH Home

OHSN Home Page  
Reports  
**Data Submissions**  
Profiles  
Prevention Resources  
Switch Organizations  
Log Off  
Help

NIOSH > OHSN

My OHSN Dashboard  
Anytown Hospital A (6000010)

Alerts  
Your facility data for April 1 - November 30, 2013 is overdue. Please [submit your data](#) today.

Most Recent Submission  
Reporting Period: February 1 - March 31, 2013  
# of Events: 20

Organization Snapshot  
Data Available: January 1, 2012 - March 31, 2013  
Total # of Events: 91

News / Updates  
Welcome to the Occupational Health Safety Network! For assistance in using the system, please refer to the User Documentation under the Help link on the left. This will provide you with both a User Manual and Training PowerPoints. You can also contact us directly at [NIOSHOSHN@cdc.gov](mailto:NIOSHOSHN@cdc.gov) or 513-841-4335.

OHSN Support  
Hours of Operation  
Monday - Friday \*  
9:00 AM - 4:00 PM EST  
\* excluding Federal Holidays  
[NIOSHOSHN@cdc.gov](mailto:NIOSHOSHN@cdc.gov)  
513-841-4335

## Upload

On the page titled "Upload New Data" click the *Browse* button to locate your new XML file.

Occupational Health Safety Network  
OHSN

NIOSH Home

OHSN Home Page  
Reports  
Data Submissions  
**Upload New Data**  
Submission History  
Tools  
Profiles  
Prevention Resources  
Switch Organizations  
Log Off  
Help

NIOSH > OHSN > Anytown Hospital A (6000010) > Data Submissions

Upload New Data

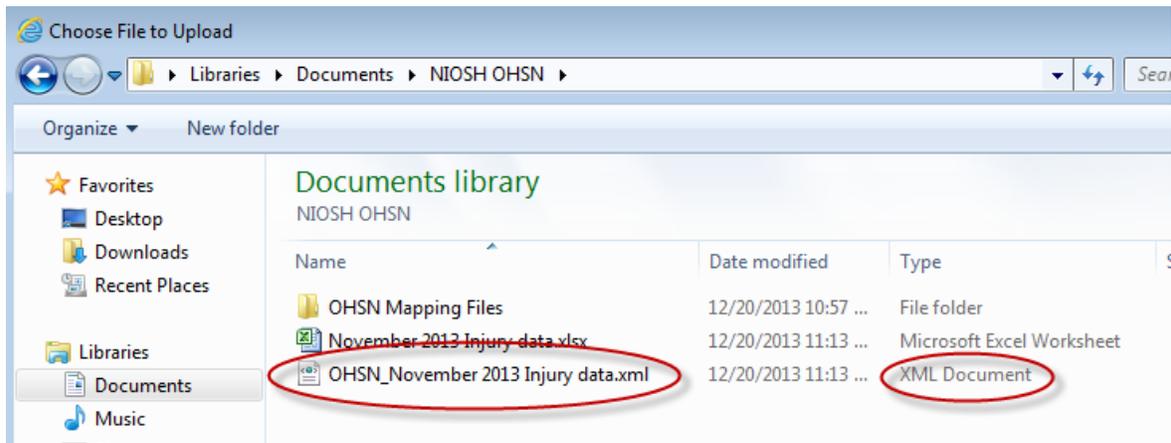
Anytown Hospital A (6000010)

Use the Browse button to select the data submission file that you want to upload. Once you have selected your file click on the Upload File button to start the upload process.

OHSN SODA XML File

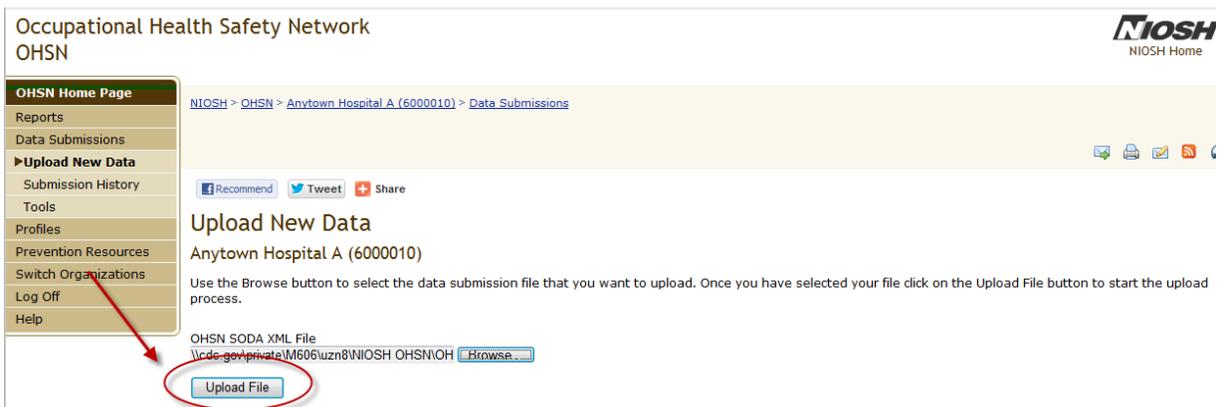
## Upload

Your file will be located in the same folder where the original Excel file was located. It will have the same name as the original Excel file, with *OHSN\_* in front of the original name, and it will be listed as an XML file.



## Upload

After selecting your file, click *Upload File*.



## Upload

Once you have uploaded your data you will get the message below.

The screenshot shows the NIOSH OHSN interface. At the top, there is a navigation bar with the CDC logo and 'Centers for Disease Control and Prevention' text. Below this is a search bar and a 'SEARCH' button. The main header identifies the 'Occupational Health Safety Network OHSN'. A left-hand menu lists various options like 'Reports', 'Data Submissions', and 'Upload New Data'. The main content area displays the title 'Upload New Data' for 'Anytown Hospital A (6000010)'. A message states: 'Your data has been successfully validated and will be added to OHSN during the next scheduled import. Visit the [Submission History](#) page to check the status of your submission.' Below the message are social media sharing options (Recommend, Tweet, Share) and utility icons (Email, Print, Updates, Subscribe, Listen).

## Upload

There will be a review period of 10 days or fewer before your new data is visible in output reports. Historical data continues to be available during this time.

### Data Submission History

Anytown Hospital A (6000010)

Reporting Period	Event Count	Submission Type	Submitted On	Submitted By	Status
2/1/2013 - 3/31/2013	20	Facility	3/19/2013	uzn8@cdc.gov	Awaiting NIOSH Review
10/1/2012 - 12/31/2012	6	Facility	1/23/2013	pks8@cdc.gov	Imported
7/1/2012 - 7/31/2012	1	System	1/23/2013	pks8@cdc.gov	Imported
4/1/2012 - 6/30/2012	25	Facility	1/23/2013	pks8@cdc.gov	Imported
1/1/2012 - 3/31/2012	25	Facility	1/23/2013	pks8@cdc.gov	Imported

## Next Steps

After uploading your data, we invite you to review output graphs and reports and review prevention resources at <http://www.cdc.gov/niosh/topics/ohsn/link.html>.

If you have any questions about the content of this training, please contact us at [NIOSHOHSN@cdc.gov](mailto:NIOSHOHSN@cdc.gov) or 513-841-4337.

Thank you!