

MICHIGAN SYNDROMIC SURVEILLANCE SYSTEM (MSSS) USER MANUAL

VERSION 3.0

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Amendment Record

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1.2	Updated to reflect new functionality added		4-13-2006
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Overview

General

The Michigan Syndromic Surveillance System (MSSS) is a real-time surveillance system that tracks the chief presenting complaints from healthcare providers allowing public health officials and providers to monitor trends and investigate unusual increases in symptom presentations. MSSS receives syndromic data from hospital emergency departments and urgent care centers (i.e., emergent care). MSSS currently does not accept data from non-urgent care settings and has no plans to accept messages for inpatient data.

MSSS provides real-time situational awareness of potential public health threats and emergencies. The system sends alerts to Michigan public health officials when unusual increases in symptom presentations are detected, and Michigan Department of Health and Human Services (MDHHS) epidemiologists can analyze findings, investigate further, and contact local public health agencies and providers.

The HL7 messages received by MSSS are in an industry-standard electronic data format used to transmit healthcare data. Messages consist of patient information, visit information, and chief complaint. The chief complaint is categorized currently into one of ten syndromes using an algorithm based on keywords. CoCo, the Bayesian chief complaint classifier used in MSSS, applies an algorithm that categorizes the data, matches key phrases (e.g., chest pain, nausea) into one (and only one) of the categories. The syndrome category of “Default” receives those that are unassigned.

Chief Complaint. Chief complaint values are stored in the database exactly as they are received by MSSS. However, the following changes are made—in the order shown below—prior to being sent to the Syndromic Classifier:

1. The string is converted to lowercase;
2. All non-word characters (i.e., those **not** in the set [a-zA-Z_0-9]) are replaced with a single space;
3. All groupings of more than one space are replaced with a single space; and

Chief complaint data is concatenated (i.e., merged) when a single syndromic message contains two or more OBX segments with Chief Complaint values. The chief complaint values are concatenated with a tilde ("~") separating them (with no attempt made to remove any tilde that may exist in any of the values). Currently, the only source for chief complaint is an OBX segment with the following characteristics, but there can be more than one of these of either style within a single message:

1. OBX.2 = TX and OBX.3 = 8661-1 loads OBX.5.1

2. OBX.2 = CWE and OBX.3 = 8661-1 loads OBX.5.9
3. All whitespace at the front and rear of the string is removed.

Syndromic categories. The ten syndromic categories currently in MSSS include: Gastrointestinal, Constitutional, Respiratory, Rash, Hemorrhagic, Botulinic, Neurological, Heat, Other, and Default. The list below provides a sample of the key words (including common misspellings) used to categorize symptoms into the nine (plus default) syndromes.

Syndrome	Keywords
Gastrointestinal	Abdominal, stomach, epigastric, gastric, gastritis, enteritis, appendicitis, diarrhea, vomiting, vomitting, nausea, n, v, rlq, abdomen, abd, crohns, gerd, diverticulitis, gastroenteritis, emesis, hyperemesis, poisoning, pud, peptic, ruq, llq, luq, nv, nvd, gastrointestinal, ab, abdmnal, abdominalpain, diaherra, gastrointest, vom, vomitinghyperemesis, vomitng
Constitutional	Fever, weakness, dizziness, dizzy, temp, flu, influenza, flulike, lightheaded, chills, lethargy, fatigue, weak, sweating, lethargic, febrile, constitutional
Respiratory	Cough, ribs, breath, wheezing, croup, pharyngitis, respiratory, thrt, st, congestion, shortness, rib, strep, throat, cold, bronchitis, pneumonia, copd, asthma, sob, tonsillitis, breathing, sinus, sinusitis, uri, dyspnea, resp, dib, pneumonitis, pleural, pleurisy, airway, sorethroat, coughing, congested, breathe, breather, db, nasopharyngitis, shortnessofbreath, whez
Rash	Rash, urticaria, hives, bumps, petechiae, purpura, ivy, dermatitis, pox, scabies, spots, shingles, boils , erupt
Hemorrhagic	Epistaxis, bleeding, hemoptysis, hematuria, hematemesis, blood, bleed, hematochesia, hemorrhagic, hemorrhaging, bleeds, bloody, epitaxis, hemorr, nosebleed
Botulinic	Slurred, diplopia, dysphagia, photophobia, dysarthria, speaking, swallowing, blurred, blurry, swallow, botulinic
Neurological	Migraines, memory, headpain, migrane, migraine, disoriented, disorientation, passed, syncopal, palsy, fainting, paralysis, tingling, seizures, headaches, cephalgia, stroke, tia, cva, ha, headache, migraine, seizure, convulsion, syncope, fainted, loc, mental, vertigo, meningitis, numbness, numb, h, confused, confusion, dementia, unresponsive, dizziness, dizzyness, unconscious, dizzy, sz, blacked, consciounes, consciousness, convulsions, migrne, szr, neurologicaldeficit, siezure, syncope, neurological
Heat	Dehydration, dehydrated, dehydrate, dehydrat, dehydraton, heat, heatstroke, overheating, overheated, heating, heated, sun, sunburn, sunburnt, sunburned, hyperthermia, sunstroke, heat rash, heat exhaustion, heat stroke, over heated, heat exposure, heat related, heat exhaust, over heating, heat cramps, heat illness, heat issues, heat bumps, sun burn, sun poisoning, sun burned, sun blisters, sun reaction, heat syncope, heat fatigue
Other	Lac, mva, laceration, cnt, contusion, contusions, fx, broken, sprain, bee, injury, inj, mvc, bite, fb, abrasion, wound, suture, crisis, injured, doi, concussion, physical, pe, pressure, fall, sugar, gsw, fell, monoxide, attack, flash, palpitations, rate, racing, flashes, pad, pack, vent
Default	<i>Everything else (default category)</i>

MSSS Syndromes and Keywords

Getting Started

Text Conventions

Text throughout this manual is marked with specific styles for clarity. The Text Conventions Table describes these different styles.

Text Conventions Table

Element	Text Style	Example
File names and directories	Courier	Run the <code>setup.exe</code> file.
Menu names and buttons	Bold	Click Save .
Screen/Page names	<i>Italics</i>	The <i>EpiPlot</i> screen
Names of Edit Fields, Check Boxes, and List Boxes	Initial caps	In the Name field, type the new value.
Links	<u>Underline</u>	Select the <u>Next</u> link.
Names of keyboard keys	Small caps	Press ENTER to activate the screen.

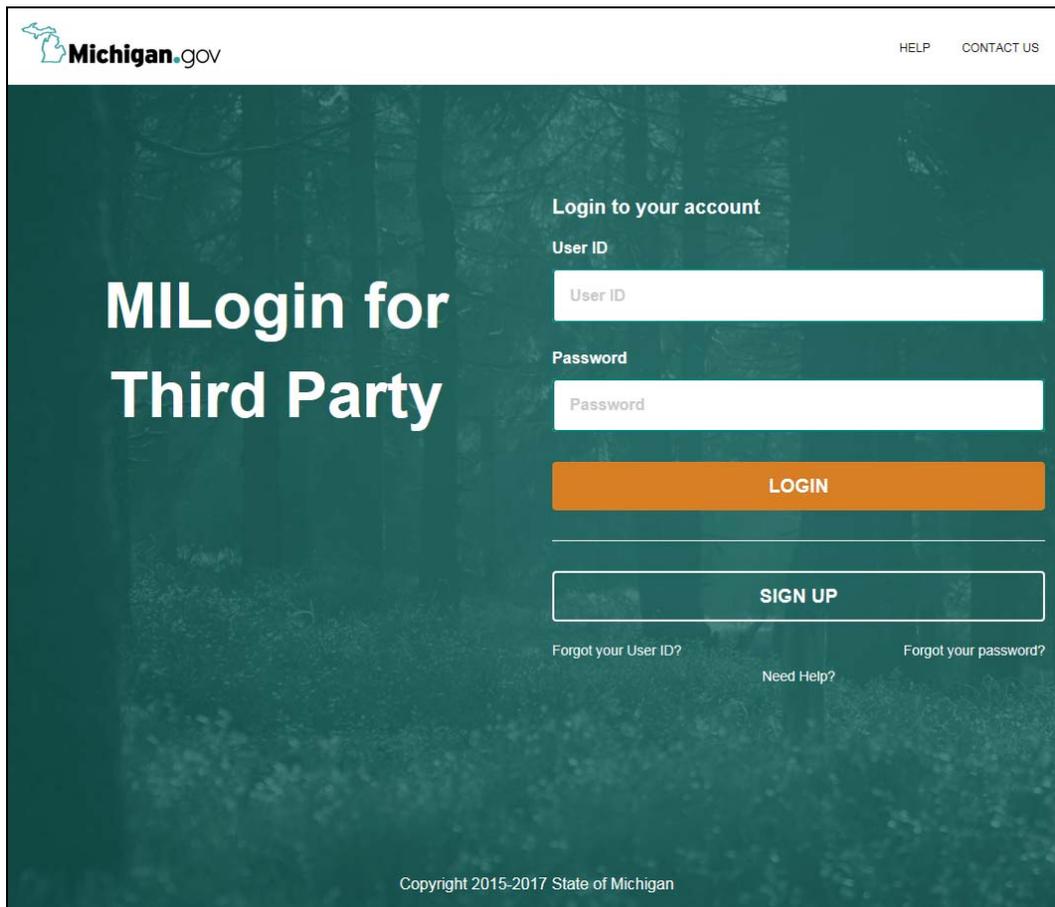
Accessing the Syndromic Surveillance System

The Michigan Syndromic Surveillance System is a Web-based application. In order to access it, you must

1. Have access to the State of Michigan (SOM) MILogin.
2. Request access to the Michigan Syndromic Surveillance System application.
3. The Michigan Syndromic Surveillance System Administrator must approve your access.
4. Once approved, click the Michigan Syndromic Surveillance System application link.

State of Michigan (SOM) MILogin

The MILogin interface provides safe access to SOM applications, including MSSS. Your access links and home page will differ depending on if you are a SOM employee or contractor (i.e., third party). Get your appropriate MILogin link from your supervisor or work team.

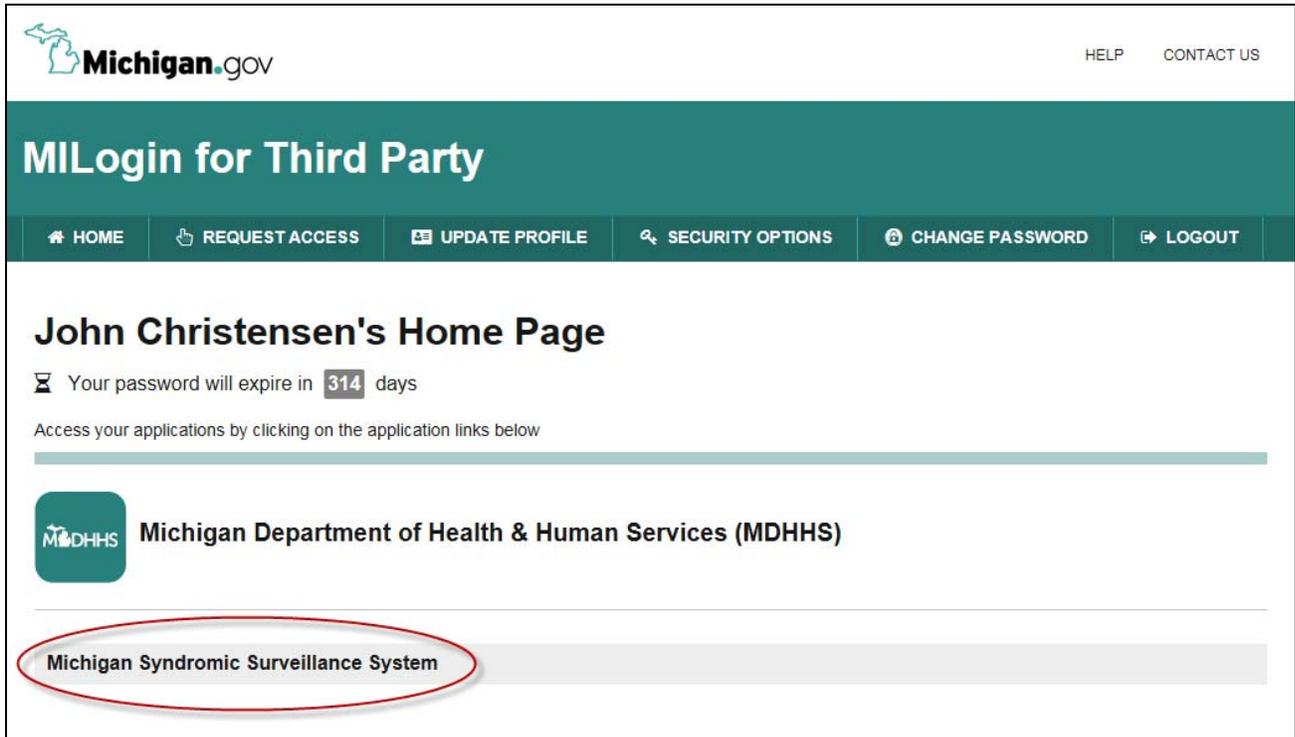


The screenshot shows the Michigan MILogin interface for third parties. At the top left is the Michigan.gov logo, and at the top right are links for HELP and CONTACT US. The main heading is "MILogin for Third Party". Below this, the "Login to your account" section includes a "User ID" label and a text input field, a "Password" label and a text input field, an orange "LOGIN" button, and a "SIGN UP" button. At the bottom of the login section are links for "Forgot your User ID?", "Need Help?", and "Forgot your password?". The footer contains the text "Copyright 2015-2017 State of Michigan".

MILogin page

All users who have access to MSSS will access the system through this login screen. Enter your User ID and password and then click the **LOGIN** button. If you are not a registered user for MILogin, Click the **SIGN UP** button.

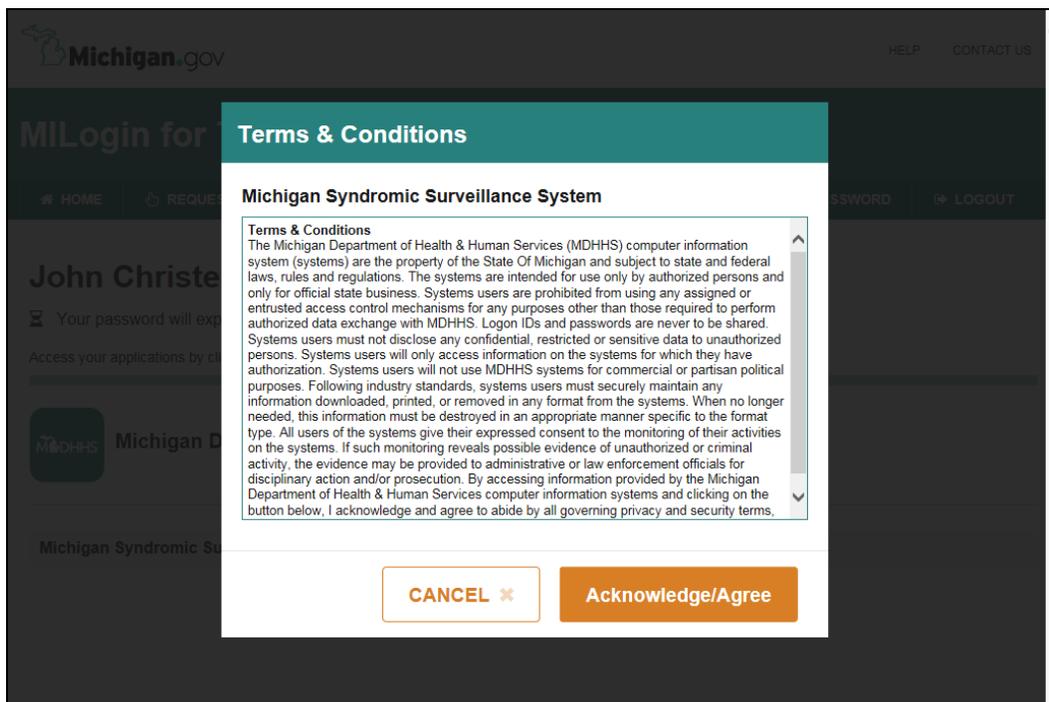
Once logged in, you will see the SOM applications you can access. If the Michigan Syndromic Surveillance System application is not listed, click the **REQUEST ACCESS** menu item.



MILogin Home showing the MSSS application link

Click the Michigan Syndromic Surveillance System application link to access MSSS.

You will first need to agree to the terms and conditions before using MSSS. Read the usage requirements and then click **Acknowledge/Agree**.



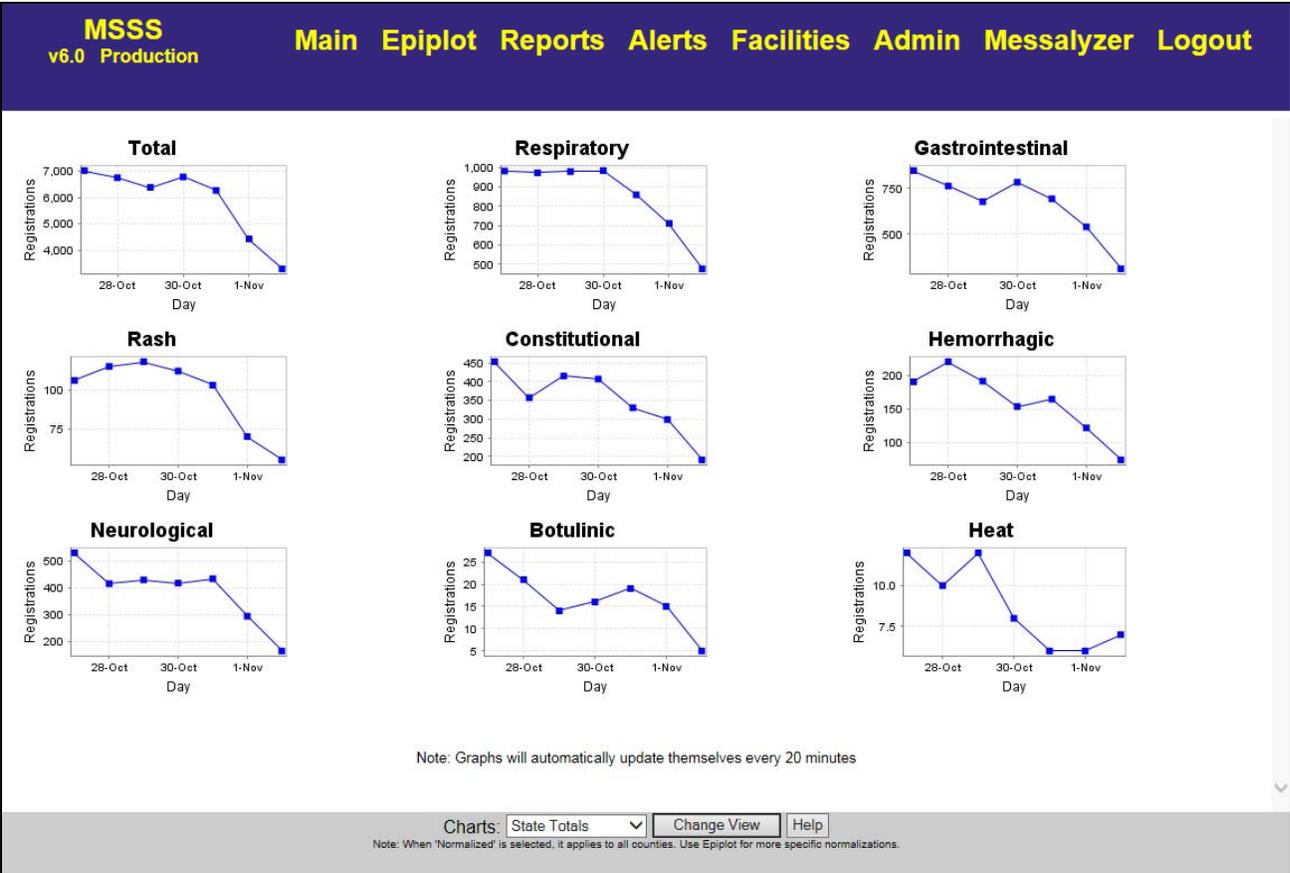
MSSS Terms & Conditions for usage

The Michigan Syndromic Surveillance System opens in a separate window. As described in the Logout section, you must log out of both MSSS and MILogin separately.

Main

Main Screen

The *Main* screen is the default page in MSSS. This page appears after you click the application link and agree to the terms and conditions of usage. You can also return to this page by clicking **Main** in the top menu.



Syndromic Surveillance Main Screen

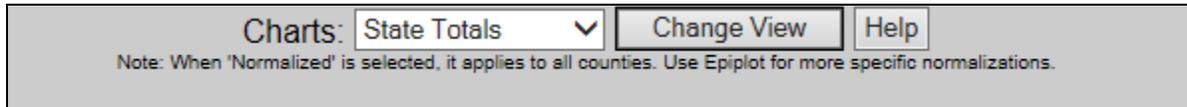
The page shows the total number of registrations in the past week and charts for each primary syndrome (syndromes “Other” and “Default” are not shown) over the same time period.

- The graphs are populated with emergent data totaled at the State level by default, but the view can be changed using drop-downs at the page bottom.
- The y-axis of each graph shows the number of registrations and the x-axis shows the date.

- Each graph represents activity for the past week (i.e., preceding seven days).

Changing Views

By default, the *Main* page is loaded with data at the State level, but you can change to individual counties or a state normalized view.



Bottom Frame of the Main page

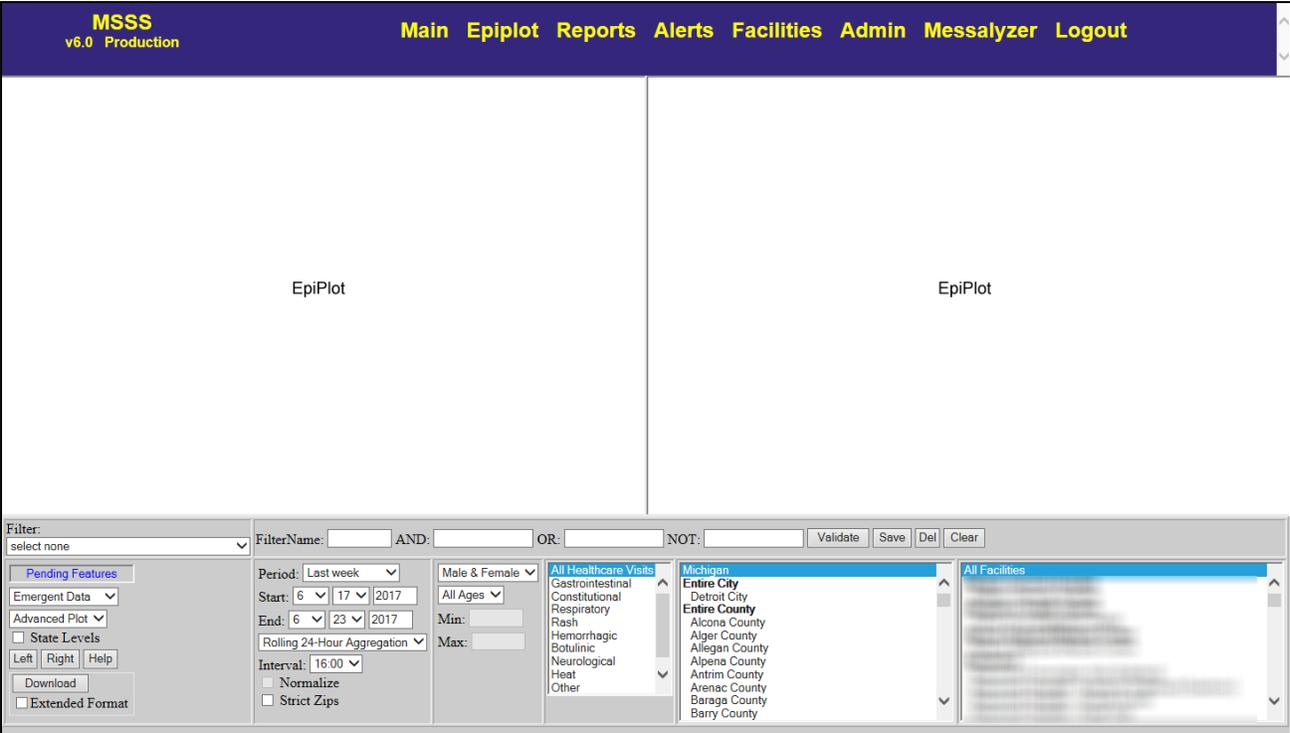
To Change Views:

1. Charts. Select the desired chart aggregation from the drop-down list.
 - a. State Totals – Data totaled at the State level.
 - b. State Normalized – Data normalized at the State level. Note: When “State Normalized” is selected, it applies to all counties. Use Epiplot for more specific normalizations.
 - c. Individual Michigan County – Data displayed represents just the selected county.
2. Click the **Change View** button.

Epiplot

Epiplot Screen

Click the **Epiplot** menu item from any page to access the Epiplot functionality. The following screen appears.



Epiplot Screen

The *Epiplot* screen lets you filter, plot, and download syndromic data on a graph, given a variety of user defined parameters. Two graphing areas are available to allow side-by-side graph comparisons. Initially, the screen appears without graphs displayed.

Epiplot View Controls:

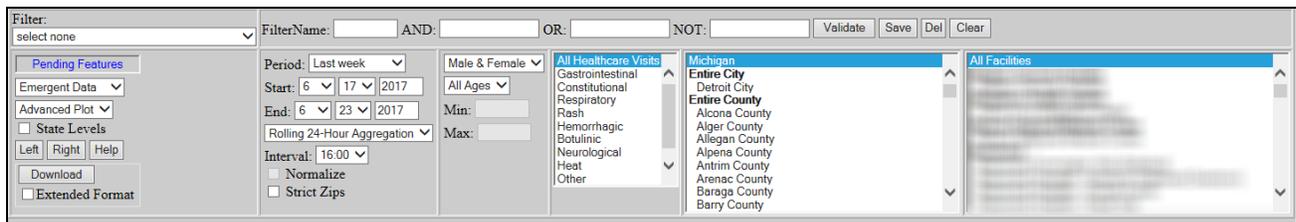
- Filter – Filter controls are available to allow additional criteria to filter the data being plotted or downloaded.
 - Filter – This drop-down list contains all the saved filters regardless of user.
 - FilterName – This text box lets you assign a name when saving a filter.

- AND – This provides the AND criteria for the filter query.
- OR – This provides the OR criteria for the filter query.
- NOT – This provides the NOT criteria for the filter query.
- Pending Features – This is a status box indicating whether the specified parameters have been applied and to which graph area or download. The following is a list of the status box values and their meanings:
 - Pending Features means the parameters have not been applied yet.
 - Left Plot Features means that the currently displayed parameters have been applied to the left graph.
 - Right Plot Features means that the currently displayed parameters have been applied to the right graph.
 - Download Plot Features means that the currently displayed parameters have been applied to the downloaded data.
- Data Source – Enables you to select Emergent Data (initially selected), Poison Data, or Health Information Exchange (HIE) Data (i.e., more robust Meaningful Use Stage 2 [MU2] data format arriving through local HIEs and the Michigan Health Information Network [MiHIN]).
- Plotting Preference – Lets you use Advanced Plot (initially selected) or Basic Plot. Advanced plotting provides additional plot features such as moving averages, tool tips, and alert plotting. Select the State Levels checkbox when plotting county data to graph statewide data also on your chart.
- Period – Pre-defined time periods (i.e., Last week, Last month, etc.) or a custom time period.
- Start – Date to start plotting from.
- End – Date to stop plotting from.
- Aggregation Level – Lets you select the aggregation level of the graph. Rolling 24-Hour Aggregation uses the current user time as the basis for 24 hour aggregates, whereas Daily Aggregation uses calendar dates. Weekly Aggregation aggregates the data on a weekly basis—creating a rolling seven-day aggregation without respect to time. It is based on the selected end date, moving backward
- Interval – Only applies to the Rolling 24-Hour Aggregation selection and lets you define the ending point of the 24-hour window.
- Normalize – Normalization is the number of visits assigned to a particular syndrome divided by the total number of visits. Selecting this check box lets you normalize the data before plotting it. In order to enable the Normalize check box, one or more syndromes must be selected (but not All Healthcare Visits). Note: When a county and a syndrome are selected, the normalization is with respect to the county. When only a syndrome is selected (i.e., Michigan is selected instead of one or more counties), the normalization is with respect to the entire state.

- **Strict Zips** – Select this check box to alter the selection criteria for EpiPlot and downloads as follows:
 - Match records using the first 5 characters (zip5) of the reported zip (instead of using the calculated Assigned Zip).
 - Eliminate records whose reported zip5 are not known Michigan Zips.
 - Populate the “Valid” column in the download correctly.
- **Gender** – Allows you to select one or both genders.
- **Age Group** – Lets you select all ages or a particular age grouping. If you select Custom, the Min and Max fields are available for user definition.
 - Min – Minimum age to include in the data set.
 - Max – Maximum age to include in the data set.
- **Syndrome** – Lets you plot all Healthcare visits or a variety of syndromes.
- **County** – Enables you to plot all Michigan counties or a variety of counties.
- **Facility** – Allows you to select to plot all facilities or a variety of facilities.
- **Left / Right** – Lets you generate a chart in the left or right screen area based on your selected parameters. While the chart is being generated, the button you clicked is replaced with a Cancel button in case you want to end the charting process. Hovering your cursor over the Cancel button reveals a stopwatch count, showing the elapsed time since the command was initiated.
- **Download** – Generates a data set (the same used for charting with the Left/Right buttons) download based on your selected parameters that you can view or save. Selecting the Extended Format checkbox downloads a larger data set with additional fields, which will cause it to take longer than the “normal” download.
- **Help** – Shows this User Manual in an online Help format.

Filtering Data

Filtering allows the user to limit the registrations included in the plot or data downloaded by the words and or phrases specified as filter criteria. By default, the Epiplot screen does not have any filters applied. The Pending Features status box will indicate to which area the currently selected parameters have been applied. “Pending Features” means the current selections have not yet been applied.



Bottom Frame of the Epiplot Screen

To Filter Data:

1. Select a saved filter from the Filter drop-down list or create a new one by typing criteria in one or more of the criteria text boxes.
 - a. FilterName – Type a unique name for your filter. Note: You cannot overwrite a filter created by another user and filter names must be unique.
 - b. AND – Type a combination of one or more words or phrases that must all be included in the chief complaint text of the registration. See the important rules below.
 - c. OR – Type additional words or phrases that appear as part of the chief complaint text of the registration. See the important rules below.
 - d. NOT – Type a combination of one or more words or phrases that cannot appear in the chief complaint text of the registration. See the important rules below.
2. Click the **Validate** button. This will validate that the filter criteria has been properly specified for plotting or downloading.

Important Rules for Entering Filter Text:

- When typing in words or phrases in the filter criteria text boxes (AND, OR, or NOT), enter words without double quotes.
- Use double quotation marks when adding multiple words (i.e., phrases) to indicate the beginning and end the whole phrase—note that to find it, the full phrase must appear in the chief complaint text exactly as typed.
- Separate words and phrases with a space.

- If the query is not valid, an error message will appear. For example, the use of single quotes is prohibited.

To Save Filters:

1. Select a saved filter from the Filter drop-down list or create a new one by typing criteria in one or more of the criteria text boxes.
2. Enter a unique name for the filter.
3. Click the **Save** button. Note: You cannot overwrite a filter created by another user.

To Delete Filters:

1. Select a saved filter from the Filter drop-down list.
2. Click the **Del** button. Note: You cannot delete a filter created by another user.

To Clear Filter Criteria:

1. Click the **Clear** button. This will clear all the filter text boxes.

Plotting Filtered Data

Filtering—using words and or phrases specified as filter criteria—allows you to limit the registrations included in the plot or data downloaded.

To Plot Filtered Data:

1. Select a saved filter from the Filter drop-down list or create a new one.
2. Validate the filter if a new filter was created. If the filter was valid, a window will pop-up displaying the first 10 records of the resulting query (if any).
3. Click the **Left** or **Right** button. The filter criteria text is used to limit the registrations included in the graph.

Simple Example Plotting Filtered Data: Type sore throat in the AND filter criteria text box.

1. Click the **Validate** button. The following screen appears (though it will be blank until the validation processing is complete). Close the window when done.

Query tested successfully, total record returned: 1770

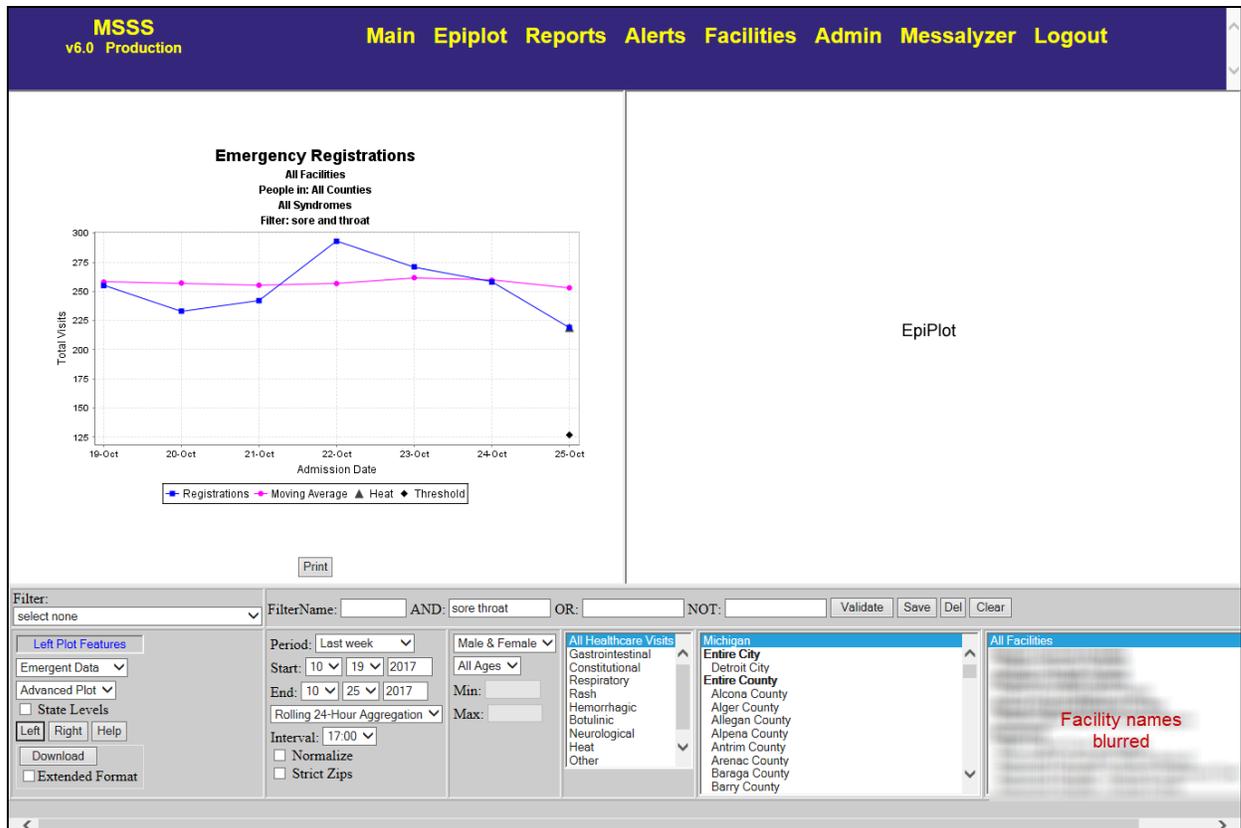
First 10 records printed below:

Record#	Time	Facility	Zip	Gender	Age	Facility Description	Facility OID	Organization	Org ID	Chief Complaint
1:	10/18/2017 17:11:00									"sore throat"
2:	10/18/2017 17:19:21									"cough sore throat cp"
3:	10/18/2017 17:33:12									"headache sore throat"
4:	10/18/2017 17:33:35									"cough cold sore throat sore throat"
5:	10/18/2017 17:36:17									"sore throat"
6:	10/18/2017 17:39:32									"sore throat"
7:	10/18/2017 17:40:00									"fever sore throat"
8:	10/18/2017 17:41:08									"sore throat"
9:	10/18/2017 17:42:40									"sore throat"
10:	10/18/2017 17:47:01									"sore throat"

Data masked intentionally

Validating a Simple Filter

2. Click the **Left** button. The filter criteria text will be used to limit the registrations included in the graph.



Simple Example of Plotting Sore Throat Data

Complex Example Plotting Filtered Data:

1. Type the word asthma in the AND filter criteria text box.
2. Type the words attack and cough, separated by a space, in the OR filter criteria text box.
3. Type the phrase “difficult breathing” with the double quotation marks in the NOT filter criteria text box.
4. Click the **Validate** button. The following screen appears.

http://204.22.34.121:28888 - epiplot - Microsoft Internet Explorer

Query tested successfully, total record returned: 52

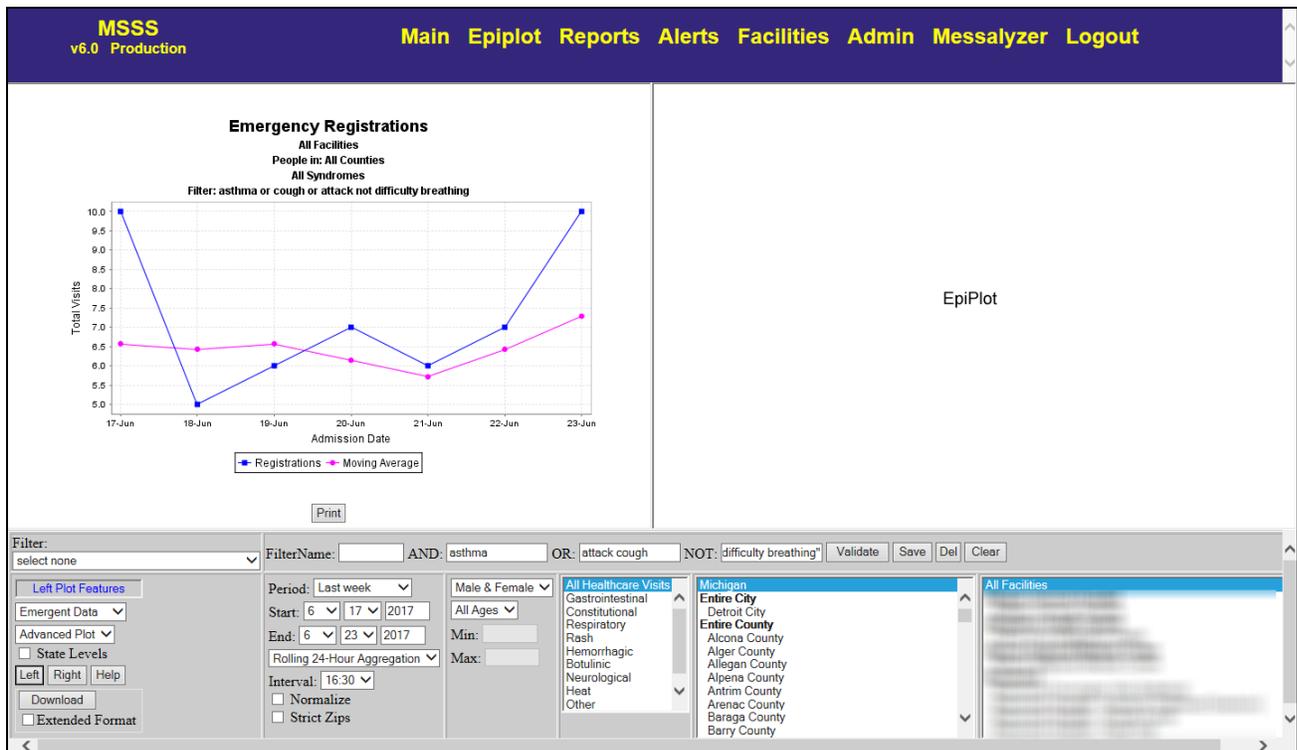
First 10 records printed below:

Record#	Time	Facility	Zip	Gender	Age	Chief Complaint
1:	05/29/2007 15:33:00	BMCC	48815	F	9	asthma cough
2:	05/29/2007 16:43:00	AAA	48103	M	12	cough asthma
3:	05/29/2007 19:45:00	BMCC	49724	M	4	asthma attack
4:	05/29/2007 21:15:00	Wall	48656	F	9	asthma attack

Done Internet

Validate Complex Filter

- Click the **Left** button. The filter criteria text will be used to limit the registrations included in the graph.

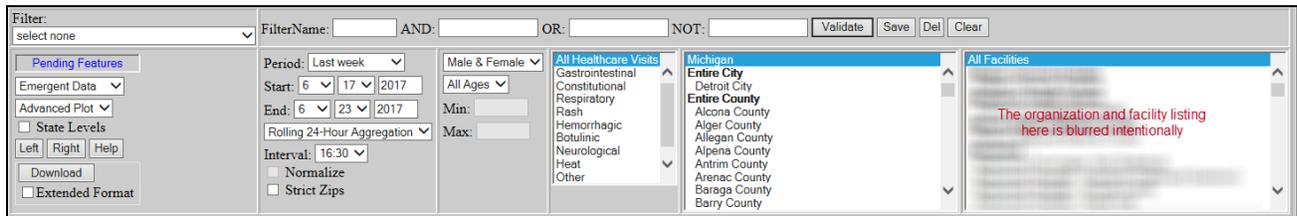


Complex Example Plotting Asthma Data

In this example, the registrations have been limited to ones with the words “asthma” and “attack” included in the chief complaint, excluding those that contain the phrase “difficult breathing.” Also included will be registrations with the words “asthma” and “cough” included in the chief complaint that do not include the phrase “difficult breathing.”

Plotting Data

By default, the *Epiplot* screen is not loaded with any data but default selections have been made. The Pending Features status box will indicate to which area the currently selected parameters have been applied. “Pending Features” means the current selections have not yet been applied.



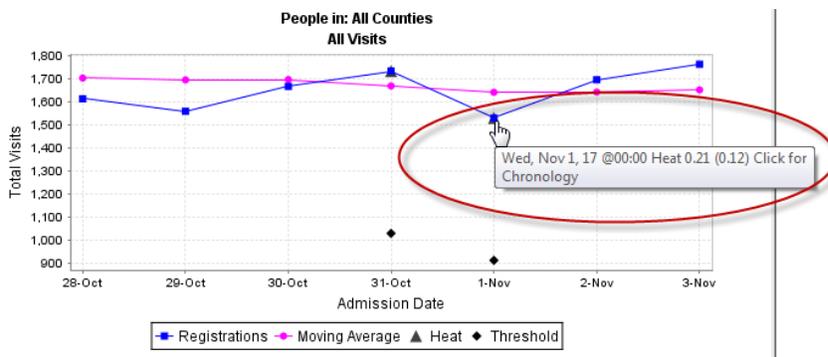
Bottom Frame of the Epiplot Screen

To Plot Data:

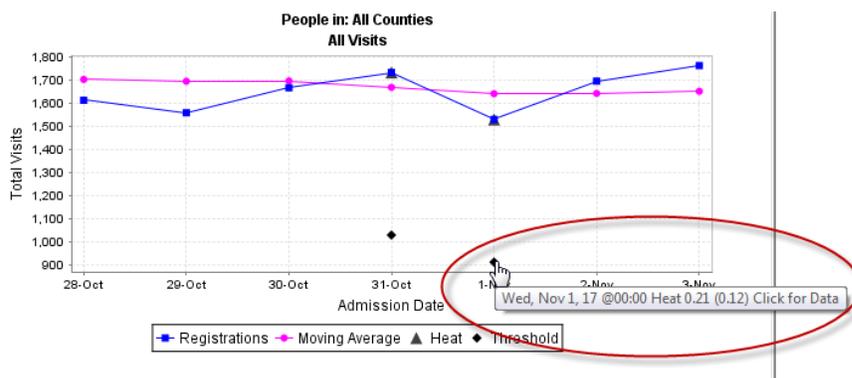
1. Select the desired chart parameters.
 - a. Filter – To apply a filter, select a saved filter from the Filter drop-down or create a new one.
 - b. Data Source:
 - i. Emergent Data – Emergency Department and Urgent Care data
 - ii. Poison Data – Poison data. Note: Poison data is not received in real-time. It has a 24-hour (+/-) reception cycle.
 - iii. HIE Feeds – Data arriving in the Meaningful Use Stage 2 format through local health information exchanges (HIEs) and MiHIN. Selecting this excludes data arriving in the “legacy” format.
 - c. Plotting Preference:
 - i. Advanced Plot – Provides additional graph features.
 1. Moving Average – This additional line on the graph provides a moving average over a seven-day period (for comparison).
 2. Tool Tips – The graph provides tool tips when you hover over areas on the graph. Points on the graph as well as any alerts will provide you detailed information about that point on the graph (such as day and amount).
 3. Alert Plotting – If an alert appears on the graph, you can hover over either of the two alert markers to get the date/time of the alert, syndrome name, the extent and threshold of the alert, and the option to click for more details. Note that the visual distance between the two

alert markers indicates the relative size of the delta but do not have any chart units associated with them. The wider apart the alert markers are, the bigger the event.

- a. Hover over the upper (bell-shaped) alert marker—which represents the alert extent—on the blue Registrations line to see alert details and a clickable link to open the associated Chronology chart in the opposite frame. The alert extent is shown in the tooltip as the number immediately following the syndrome name.



- b. Hover over the diamond-shaped alert marker—which represents the alert threshold—to see alert details and a clickable link to open the associated graph with a month's worth of data. The alert threshold is shown in the tooltip as the number in parentheses and is the value that must be exceeded for an alert to fire.



- ii. Basic Plot – Provides basic graph features.
- iii. State Levels checkbox – Lets users add state-level data to the graph when county data is charted. When selected, it adds a series to the resulting chart that shows the statewide performance with all other parameters being equal. This provides a comparison between the State-level activity and the selected county.

d. Period:

- i. Select one of the available time periods (e.g., Today, Last 2 Weeks, Last Year) or choose Custom Dates to define your own. If you select a time period

from the list, the Start and End fields fill in automatically. If you change the start or end dates, the Period selection automatically changes to Custom Dates.

- ii. Start – Select the month, day, and year to start pulling data. These fields fill in automatically if you select a defined period, but you can edit them manually also.
 - iii. End – Select the month, day, and year to stop pulling data (includes this day). These fields fill in automatically if you select a defined period, but you can edit them manually also.
- e. Aggregation Level:
- i. Daily Aggregation – Aggregates the data on a daily basis. This aggregates by admission date, without respect to time. It is based on the selected end date, moving backward.
 - ii. Weekly Aggregation – Aggregates the data on a weekly basis. This creates a rolling seven-day aggregation, without respect to time. It is based on the selected end date, moving backward.
 - iii. Rolling 24 Aggregation – Aggregates the data on a rolling 24-hour window. This is based on the specified interval. Intervals have a granularity of thirty minutes. The default interval is the current time when the graph is displayed or refreshed. The cardinality of each point on the graph is the total number of admissions received (with respect to all other graphing parameters) in the 24-hour period.
- f. Interval: Applies to the Rolling 24-Hour Aggregation level. The ending time of the 24-hour window.
- g. Normalize:
- i. Checked – Data will be normalized, which shows the number of visits assigned to a particular syndrome divided by the total number of visits. Note: Epiplot normalization includes out-of-state or unknown zip codes, whereas the Mapping component and Alert components do not. Unknown zip codes are assigned the zip code of the facility in which the registration occurred.
 - ii. Unchecked – Data will be raw
- h. Strict Zips:
- i. Unchecked –Data selection uses the “standard process” for assigning encounter Zips to the treatment facility’s Zip when the patient’s home Zip is missing or not a known Michigan Zip.
 - ii. Checked – Data selection matches records using the first 5 characters (zip5) of the reported Zip (instead of using the calculated Assigned Zip) and removes records whose reported zip5 are not known Michigan Zips.
- i. Gender:

- i. Male & Female – Data will contain both genders
- ii. Male – Data will contain only male
- iii. Female – Data will contain only female

j. Age Group:

- i. All Ages – Data will contain all ages
- ii. Youth – Data will contain only patients from 0 to 17
- iii. Adult – Data will contain only patients from 18 to 130
- iv. Custom – If you select Custom, the Min and Max fields are available for user definition.
 - 1. Min – Minimum age to include in the data set (0+)
 - 2. Max – Maximum age to include in the data set

k. Syndrome:

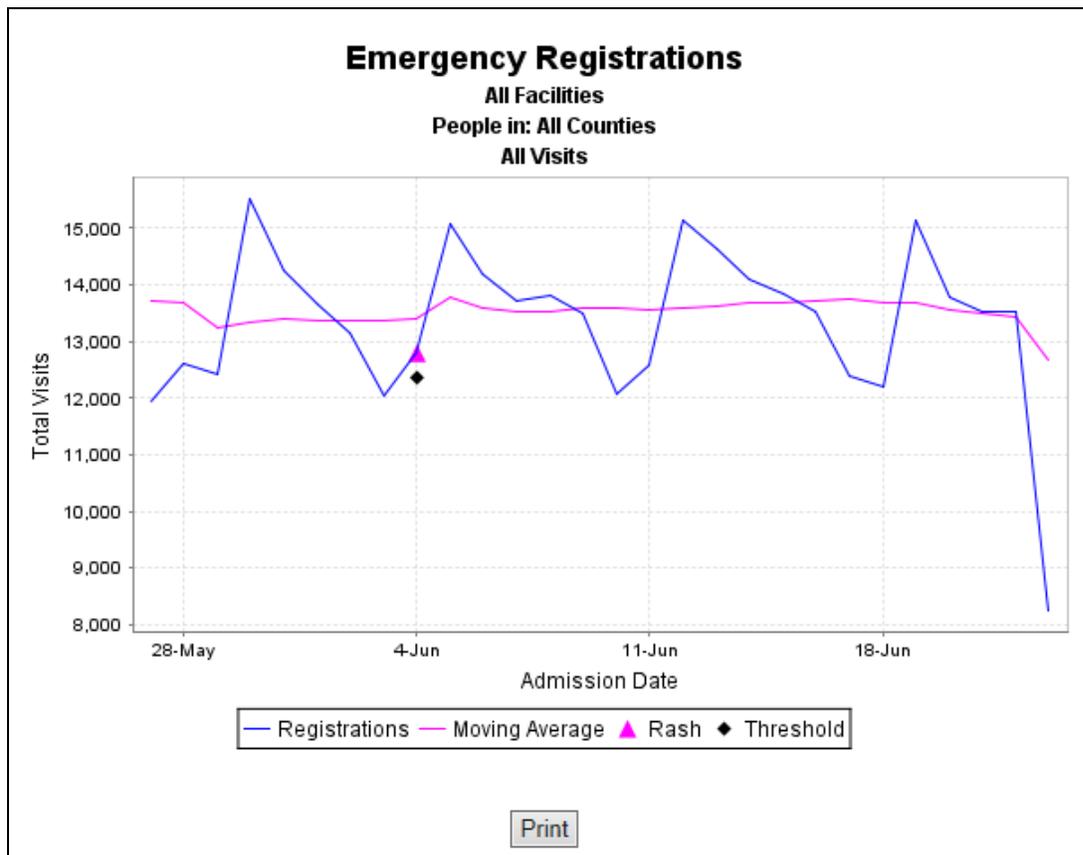
- i. All Healthcare Visits
- ii. Multiple Syndromes – Use the CTRL or SHIFT key in combination with the mouse to multi-select any combination of syndromes.
 - 1. Gastrointestinal
 - 2. Constitutional
 - 3. Respiratory
 - 4. Rash
 - 5. Hemorrhagic
 - 6. Botulinic
 - 7. Neurological
 - 8. Heat
 - 9. Other
 - 10. Default

l. County:

- i. Michigan – all Michigan counties included.
- ii. Multiple Counties – Use the CTRL or SHIFT key in combination with the mouse to multi-select any combination of counties.

- m. Facility:
 - i. All Facilities
 - ii. Multiple facilities – Use the CTRL or SHIFT key in combination with the mouse to multi-select any combination of facilities.
- 2. Click the **Left/Right** button. If the left button was selected, the graph on the left-hand side will be loaded. If the right button was selected, the graph on the right-hand side will be loaded.

Printing Graph Data



Sample Epiplot Graph

Once a graph has been plotted, you can print it.

To Print Graph Data:

1. Plot a graph.
2. Click the **Print** button on the bottom of the desired graph screen (left or right).

Downloading Data

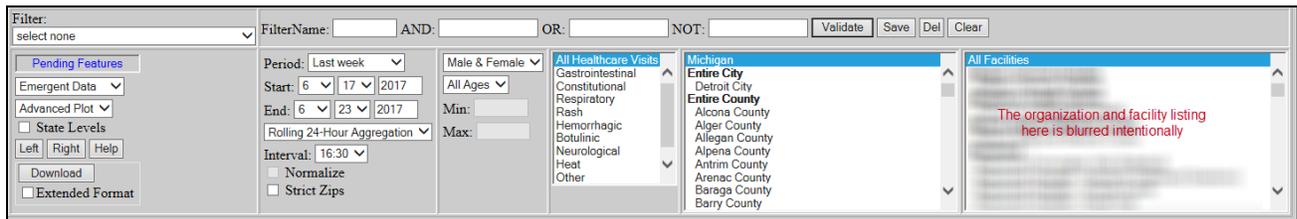
The Download button lets you save data and graphs to your hard-drive. You can download a “normal” data set, which has been available for years, or in an extended format with additional data elements. Because they contain more data per record, extended format downloads will take longer to process than the normal format downloads.

A single file, named EpiPlot.zip, is saved to the location you specify. This zip file contains three files: Cases, Points, and Chart. The `Cases.csv` files differ depending on if you select to download the extended format. Both `Cases.csv` formats are shown below:

- `Cases.csv` (normal) – This file contains the registration information the meet the selected criteria in a comma-separated file. The normal format file contains the following information:
 - a. Admitted – admitted date/time
 - b. Facility – abbreviated name of the hospital
 - c. Assigned Zip – the patient’s “perceived” zip code, which is either the patient’s reported home zip (if a valid Michigan zip code) or the treatment facility’s zip code if the patients’ reported zip is missing or a non-Michigan zip
 - d. Reported Zip – the actual patient’s home zip code submitted in message data
 - e. Valid – a Y/N indicator as to whether the zip code is a valid Michigan zip code
 - f. Assigned County – the FIPS county code associated with the Assigned (i.e., perceived) Zip, so it is either the county code of the patient’s home address (if a valid Michigan zip) or the county code of the treatment facility (in the absence of a valid Michigan Zip for the patient).
 - g. Gender – M/F/U
 - h. Age – age at the time of admission
 - i. Syndrome – the syndrome classification
 - j. Provider – the treatment facility name
 - k. Provider ID – ID of the treatment facility
 - l. Organization – the organization that the treatment facility belongs to
 - m. Org ID – ID of the organization
 - n. Complaint – chief complaint
- `Cases.csv` (extended) – This file contains the registration information the meet the selected criteria in a comma-separated file. The “extended format” file contains the following information:

- a. Admitted – admitted date/time
 - b. Facility – abbreviated name of the hospital
 - c. Assigned Zip – the patient’s “perceived” zip code, which is either the patient’s reported home zip (if a valid Michigan zip code) or the treatment facility’s zip code if the patients’ reported zip is missing or a non-Michigan zip
 - d. Reported Zip – the actual patient’s home zip code submitted in message data
 - e. Valid – a Y/N indicator as to whether the zip code is a valid Michigan zip code
 - f. Assigned County – the FIPS county code associated with the Assigned (i.e., perceived) Zip, so it is either the county code of the patient’s home address (if a valid Michigan zip) or the county code of the treatment facility (in the absence of a valid Michigan Zip for the patient).
 - g. Gender – M/F/U
 - h. Age – age at the time of admission
 - i. Syndrome – the syndrome classification
 - j. Provider – the treatment facility name
 - k. Provider ID – ID of the treatment facility
 - l. Organization – the organization that the treatment facility belongs to
 - m. Org ID – ID of the organization
 - n. Complaint – chief complaint
 - o. DOD – patient date/time of death
 - p. Discharged – patient discharge date/time
 - q. Reported County – patient county sent in message data
 - r. Disposition – patient’s discharge disposition
 - s. Class – Emergency (E) or Outpatient (O)
 - t. Encounter Reason – data sent as clinical reason for treating the patient
 - u. Ethnicity – patient’s ethnicity
 - v. Race – patient’s race
 - w. Diagnosis – diagnosis sent
- `Points.csv` – This file contains the number of registrations by admitted date (to represent the points on the graph) in a comma-separated file.

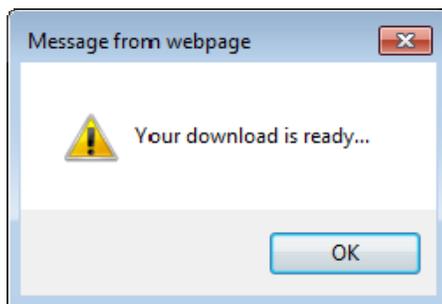
- Chart .png – This file contains an image of the downloaded graph.



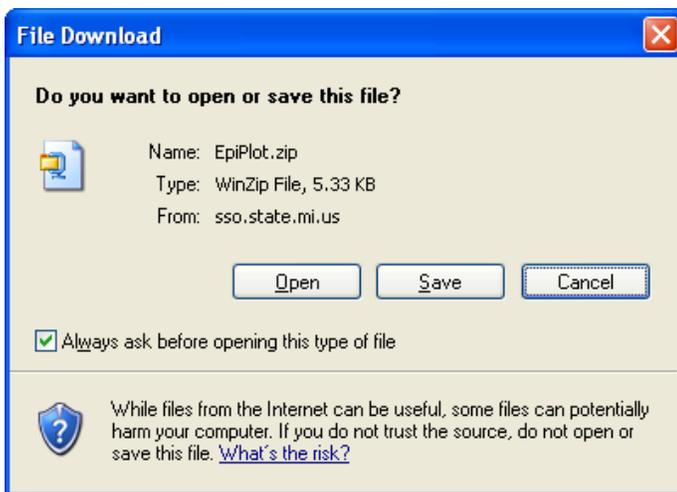
Bottom Frame of the EpiPlot Screen

To Download Data:

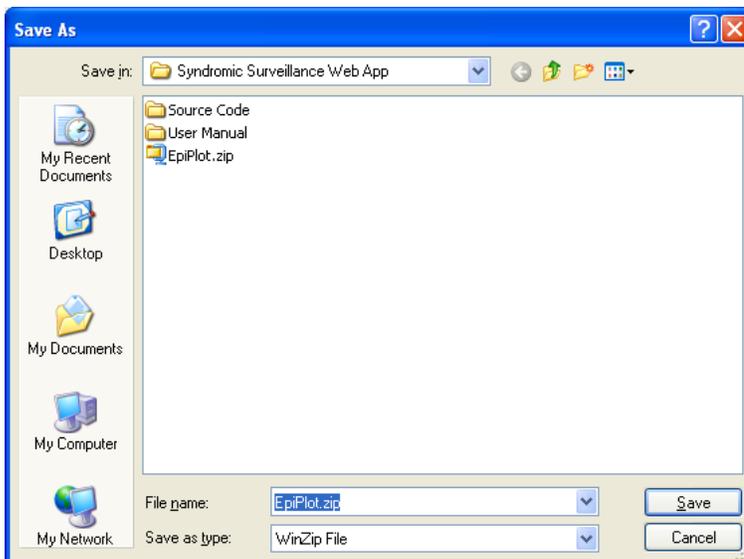
1. Select the desired graph parameters.
2. (Optional) Select the Extended Format checkbox if you want the more robust data set shown above. Remember that the processing time can be significant, especially if your data range and other parameters are wide.
3. Click the **Download** button at the bottom frame of the *Epiplot* screen. While processing completes, you can hover your cursor over the **Cancel** button (that replaces the Download button during processing) to see a running count of elapsed time.
4. (Optional) To cancel the download, click the **Cancel** button that replaces the Download button during processing. A dialog window will confirm that the download was cancelled and the **Download** button will reappear.
5. When the processing is complete, a dialog box confirms that the download is read. Click **OK**.



6. The following screen then appears. Click the **Save** button.



7. Browse to the location where you would like to save the file and click the **Save** button.



Additional Resources for Extended Downloads

Links to relevant value sets:

- Reported County
 - Value set:
<http://phinvads.cdc.gov/vads/ViewValueSet.action?oid=2.16.840.1.114222.4.11.829>
- Disposition (discharge)
 - Value set:
<http://phinvads.cdc.gov/vads/ViewValueSet.action?oid=2.16.840.1.114222.4.11.915>
- Class
 - Value set:
<http://phinvads.cdc.gov/vads/ViewValueSet.action?oid=2.16.840.1.114222.4.11.3404>

E: Emergency (all emergency department visits); **O:** Outpatient (all urgent care visits)

- Encounter Reason – may be free text or use Diagnosis value sets (see below)
- Ethnicity
 - Value set:
<http://phinvads.cdc.gov/vads/ViewValueSet.action?oid=2.16.840.1.114222.4.11.837>
- Race
 - Value set:
<http://phinvads.cdc.gov/vads/ViewValueSet.action?oid=2.16.840.1.114222.4.11.836>
- Diagnosis
 - ICD-9 CM value set (code system I9CDX):
<http://phinvads.cdc.gov/vads/ViewValueSet.action?oid=2.16.840.1.114222.4.11.856>
 - ICD-10 CM value set (code system I10C):
<http://phinvads.cdc.gov/vads/ViewValueSet.action?oid=2.16.840.1.114222.4.11.7356>
 - SNOMED value set (code system SCT):
<http://phinvads.cdc.gov/vads/ViewValueSet.action?oid=2.16.840.1.114222.4.11.909>
 - Diagnosis Type value set:
<http://phinvads.cdc.gov/vads/ViewValueSet.action?oid=2.16.840.1.114222.4.11.827>

A: Admitting; **F:** Final; **W:** Working

Coded data element examples:

- Ethnicity in coded format (Concept Code^Concept Name^Code System): **2135-2^Hispanic or Latino^CDCREC**
- Diagnosis in coded format (Concept Code^Concept Name^Code System^Type): **J11.1^Influenza due to unidentified influenza virus with other respiratory manifestations^I10C^F**
- Disposition in coded format (numerical): **01** – corresponds to “discharged to home care or self care (routine discharge),” per value set

Instructions for viewing the extended format download file:

1. Select the very upper left corner of the grid (cell adjacent to “A” and “1”), and the entire grid will be highlighted
2. From the “Home” menu, click the “Format” dropdown
3. Select “AutoFit Column Width*”
4. Select “AutoFit Row Height*”

**** It is important that the AutoFit be performed in this order***

Mapplot

The mapping functionality in MSSS is currently disabled. Instructions will be re-inserted into this User Guide when the functionality is enabled.

Alerts

Alerts Screen

Click the **Alerts** menu item from any page to access the Alerts functionality. The following screen appears.

MSSS v6.0 Production **Main Epiplot Reports Alerts Facilities Admin Messalyzer Logout**

Alerts from the Past 14 Days

Discovered ▼	Sounded	Syndrome	Location	Observed	Threshold	Map It	Plot It	Tab It	Comments
09/27/2017 15:30:00	09/27/2017 15:30:00	Constitutional	Charlevoix County	17.391	15.028	Map It	Plot It	Tab It	*
09/27/2017 11:30:00	09/27/2017 16:30:00	Neurological	Muskegon County	10.204	9.613	Map It	Plot It	Tab It	*
09/26/2017 23:30:00	09/27/2017 01:30:00	Neurological	Ottawa County	13.475	11.722	Map It	Plot It	Tab It	*
09/26/2017 21:30:00	09/26/2017 21:30:00	Constitutional	Hillsdale County	17.778	13.314	Map It	Plot It	Tab It	9/49 visits. Spike i...
09/26/2017 21:30:00	09/27/2017 02:30:00	Gastrointestinal	Ottawa County	17.73	15.492	Map It	Plot It	Tab It	*
09/26/2017 18:30:00	09/26/2017 18:30:00	Heat	Oakland County	0.41	0.186	Map It	Plot It	Tab It	5/1225 visits. Spike...
09/25/2017 19:30:00	09/25/2017 22:30:00	Constitutional	Barry County	22.727	19.646	Map It	Plot It	Tab It	5/22 visits. Spike i...
09/25/2017 10:30:00	09/25/2017 11:30:00	Hemorrhagic	Van Buren County	6.604	4.791	Map It	Plot It	Tab It	7/114 visits. Spike ...
09/24/2017 22:30:00	09/24/2017 22:30:00	Heat	Macomb County	0.545	0.144	Map It	Plot It	Tab It	5/934 visits. Spike ...
09/24/2017 21:30:00	09/24/2017 23:30:00	Hemorrhagic	Ottawa County	6.19	4.486	Map It	Plot It	Tab It	15/359 visits. Count...
09/24/2017 17:30:00	09/24/2017 17:30:00	Hemorrhagic	Isabella County	10.811	8.83	Map It	Plot It	Tab It	4/41 visits. Count a...
09/24/2017 16:30:00	09/24/2017 16:30:00	Rash	Antrim County	20	14.454	Map It	Plot It	Tab It	4/24 visits. Small s...
09/24/2017 14:30:00	09/24/2017 17:30:00	Gastrointestinal	Shiawassee County	22.973	18.753	Map It	Plot It	Tab It	14/69 visits (16 in ...
09/24/2017 13:30:00	09/24/2017 13:30:00	Heat	Kent County	0.629	0.134	Map It	Plot It	Tab It	2nd Alert in 24 hour...
09/24/2017 13:30:00	09/24/2017 23:30:00	Neurological	Lapeer County	11	8.963	Map It	Plot It	Tab It	7/251 visits on 9/23...
09/24/2017 12:30:00	09/24/2017 12:30:00	Neurological	Eaton County	14.607	7.94	Map It	Plot It	Tab It	9/97 visits. Increas...
09/24/2017 11:30:00	09/24/2017 11:30:00	Rash	Sanilac County	10.526	7.01	Map It	Plot It	Tab It	3/61 visits on 9/23 ...
09/24/2017 10:30:00	09/24/2017 10:30:00	Rash	Arenac County	13.333	10.881	Map It	Plot It	Tab It	1/47 visits on 9/23 ...
09/24/2017 10:30:00	09/24/2017 13:30:00	Rash	Alpena County	10	5.125	Map It	Plot It	Tab It	4/44 visits. Small s...
09/24/2017 10:30:00	09/24/2017 17:30:00	Gastrointestinal	Lapeer County	16.129	13.149	Map It	Plot It	Tab It	9/251 visits on 9/23...
09/24/2017 06:30:00	09/24/2017 08:30:00	Gastrointestinal	Clinton County	20.408	13.748	Map It	Plot It	Tab It	8/46 visits. Increas...
09/24/2017 04:30:00	09/24/2017 04:30:00	Heat	Ottawa County	1.689	0.122	Map It	Plot It	Tab It	5/338 visits. Count ...
09/24/2017 01:30:00	09/24/2017 04:30:00	Gastrointestinal	Eaton County	13.684	10.259	Map It	Plot It	Tab It	11/91 visits. Normal...

Alert Status: Sounded ▼ Days: 14 ▼ Alert Type: All ▼ Refresh Help

Alerts Screen

Initially, the screen will be populated with alerts from the past 14 days.

In order for an alert to be fired, the following conditions must be met:

- There must be at least one day in the period being checked (currently set to 120 days) where the total registrations were greater than 20.
- There must be no more than 20 days of zero syndromic registrations in the period being checked (currently set to 120 days) for the syndrome being checked.
- The normalized value for that given day must be greater than any of the past 14 days.
- The actual normalized count for that day must be greater than 3.0 times the standard error plus the predicted normalized count.
- An alert will not be fired if an alert for the same syndrome and region has been fired in the past 24 hours.

Note that Heat is a seasonal syndrome that is different from other RODS-based syndromes and required a tailored solution for its alerting threshold. For this syndrome, there is a dual threshold of both a ratio based on historical visits (per 100) and a minimum lower boundary of 5 per county. The historical visit baseline was calculated per day, per county, and with a two-week averaging of these values around a given day when calculations are performed.

In addition to the alerting characteristics shown above, alerts (syndromic conditions) exist in one of two states: discovered or sounded. A discovered condition is being monitored but is not currently in violation of the sounding rules. When the system discovers a condition in violation of one or more of the sounding rules, it moves to the sounded state, and an EpiAlert (e-mail) is generated. Every county-syndrome pairing is evaluated each hour.

The time at which a condition is sounded is noted on the Chronology Chart, as are the rules that were in violation at any time during the monitoring interval (24 hours from discovery). Note that a violated rule will continue to be noted as violated for a given condition even if a change in calculations returns the rule to its normal state.

The delta is the result of a calculation that compares—for a given county-syndrome pairing—the anticipated value (based on historic trends) to the current value (based on recently received patient encounters). A positive delta is considered abnormal. The sounding rules are each sensitive in different ways to the delta calculations:

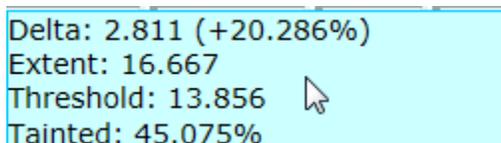
- Delta – Indicates that an abnormally large delta was discovered (> 15%).
- Contiguous – Indicates that the delta has been positive for several calculations in a row (> 4).
- Escalations – Indicates that the delta has been growing for several calculations in a row (> 2).
- Elevated – Indicates that the delta has been positive for several potentially non-contiguous calculations across the monitoring lifetime (> 6).

Each of these rules have configurable values that differ from the shown defaults, on a per-syndrome basis.

Alert Data:

- Discovered – Date and time that the alert began being monitored
- Sounded – Date and time that the alert violated conditions and generated an EpiAlert
- Syndrome – The Syndrome the alert occurred for
- Location – The county the alert occurred within (“Michigan” represents a state-wide alert)

- Observed – The Observed value is the observed normalized count for the alert. This value is the actual percentage of registrations in a region of a particular syndrome. For example, if there were 15 Rash registrations out of a total of 45 registrations, the observed normalized count would be 15/45 or 33%. This would be displayed as 33.33 in the Observed column. Hover your cursor over an Observed value to see details, as shown below.



Delta: 2.811 (+20.286%)
 Extent: 16.667
 Threshold: 13.856
 Tainted: 45.075%

- Delta – The difference between the Extent and Threshold.
- Extent* – The current ratio of syndrome-specific registrations to overall registrations within the alert's domain (county or state). Shown as a percentage.
- Threshold* – The anticipated value for Extent, calculated from historic activity. Shown as a percentage.
- Tainted – During the calculation of some alerts, their input data stream could have been deemed to be "tainted" by the tardiness of one or more historic contributors. Alerts with a non-zero tainted value will have their "observed" value shown in red to alert the analyst to this potential. In these cases, the "Tainted" value will also be shown and is the percentage calculated from the 30-day contribution of those tardy contributors, divided by the total 30-day contributions in the alert's domain (county or state).

**The Extent and Threshold values that are shown in the tooltip are the values that were calculated during the segment of the alert when the Delta was at its widest.*

- Threshold – The Threshold value is the calculated threshold above which an alert would be signaled. This value is three standard deviations above the predicted value calculated by the system for the region in question. An alert will only fire if the observed value is above the threshold value.
- Map It – The mapping functionality has been disabled.
- Plot It – A link to the Epiplot screen where the alert is automatically charted. See Chronology Chart description below.
- Tab It – A link that generates the alert chart in a separate window (rather than at the Epiplot screen).
- Comments – This is a text entry field that allows you to store text associated with this alert. Note: This field has a maximum limit of 1024 characters. The text box only display first 20 characters, the complete text will be displayed in the floating box when you mouse over the text inside text field.

Chronology Charts

Chronology Charts are a visualization of an alertable condition across its 24-hour lifespan. Each alertable condition, and thus each chart, is specific to a single Syndromic classification, and either a Michigan county or the entire state.

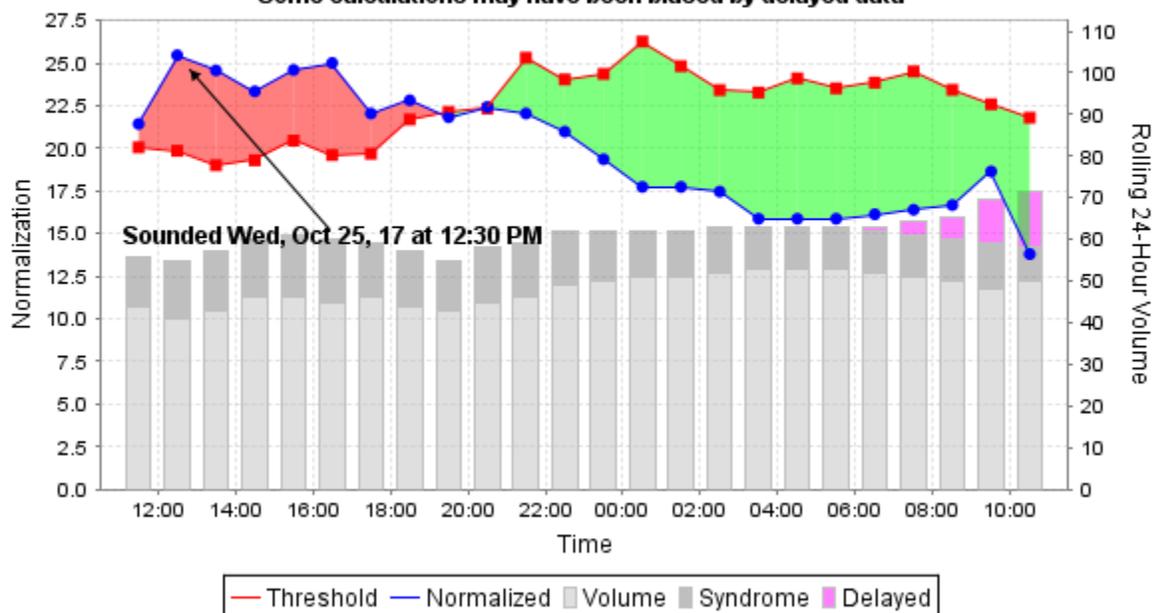
Respiratory in Branch County

Alert Chronology

Discovered Wed, Oct 25, 17 at 11:30 AM

Triggered Rules: Elevated, Contiguous, Escalations, Delta

Some calculations may have been biased by delayed data



Example Chronology Chart

The Chronology Chart's primary feature is a "difference chart" that shows the spread between the anticipated values (threshold) and the current values (normalized). In general, a green area is good, and a red area is potentially an issue. The wider a "spread in red" becomes, the more likely an issue exists. The threshold values are calculated from historic behavior. The normalized values are calculated from the most recent 24-hour period. Normalization of both is performed using the overall number of visits in the domain (i.e., county or state).

A "stacked bar" chart appears behind the "difference chart", and provides insight into the activity level within the domain. The overall "volume" series shows the overall domain registration volume, with the "syndrome" volume series on top of that. The "delayed" series could be present on top of each stack if the overall volume has been notably reduced by a delay from one or more contributors within the domain. The "delayed" series attempts to approximate the registration volume that was unavailable as the alertable condition was being monitored. It is a warning to the analyst to take into account as they are drawing conclusions about the condition.

If the alertable condition violates one or more of the signaling rules (below), an EpiAlert message will be sent to a list of e-mail users, and the segment (hour) at which the alert was "sounded" will be indicated on the chart. The rules that have been violated at any time during the lifespan of the alertable condition will be shown in a subtitle of the chart. If the condition never violates the signaling rules during its 24-hour lifespan, then no message will be sent.

Each of the signaling rules are configurable on a per-syndrome, or system-wide basis, and they refer to the number of segments (hours) in the chart where the difference chart is red. Their current settings are listed. The signaling rules are:

- Elevated – Series is red for more than 5 segments across the entire lifespan
- Contiguous – Series is red for more than 3 segments in a row, anywhere in the lifespan
- Escalations – The magnitude of the difference has increased 2 segments in a row
- Delta – The magnitude of the difference is greater than or equal to 15% at any point in the lifespan

Sorting Alerts

Initially, alerts are sorted by date/time stamp with the most recent alert appearing at the top. Alerts can be sorted by Syndrome, Date, County, Observed, or Threshold.

MSSS v6.0 Production									
Main Epiplot Reports Alerts Facilities Admin Messalyzer Logout									
Alerts from the Past 14 Days									
Discovered ▼	Sounded	Syndrome	Location	Observed	Threshold	Map It	Plot It	Tab It	Comments
09/27/2017 15:30:00	09/27/2017 15:30:00	Constitutional	Charlevoix County	17.391	15.028	Map It	Plot It	Tab It	*
09/27/2017 11:30:00	09/27/2017 16:30:00	Neurological	Muskegon County	10.204	9.613	Map It	Plot It	Tab It	*
09/26/2017 23:30:00	09/27/2017 01:30:00	Neurological	Ottawa County	13.475	11.722	Map It	Plot It	Tab It	*
09/26/2017 21:30:00	09/26/2017 21:30:00	Constitutional	Hillsdale County	17.778	13.314	Map It	Plot It	Tab It	9/49 visits. Spike i...
09/26/2017 21:30:00	09/27/2017 02:30:00	Gastrointestinal	Ottawa County	17.73	15.492	Map It	Plot It	Tab It	*
09/26/2017 18:30:00	09/26/2017 18:30:00	Heat	Oakland County	0.41	0.186	Map It	Plot It	Tab It	5/1225 visits. Spike...
09/25/2017 19:30:00	09/25/2017 22:30:00	Constitutional	Barry County	22.727	19.646	Map It	Plot It	Tab It	5/22 visits. Spike i...
09/25/2017 10:30:00	09/25/2017 11:30:00	Hemorrhagic	Van Buren County	6.604	4.791	Map It	Plot It	Tab It	7/114 visits. Spike ...
09/24/2017 22:30:00	09/24/2017 22:30:00	Heat	Macomb County	0.545	0.144	Map It	Plot It	Tab It	5/934 visits. Spike ...
09/24/2017 21:30:00	09/24/2017 23:30:00	Hemorrhagic	Ottawa County	6.19	4.486	Map It	Plot It	Tab It	15/359 visits. Count...
09/24/2017 17:30:00	09/24/2017 17:30:00	Hemorrhagic	Isabella County	10.811	8.83	Map It	Plot It	Tab It	4/41 visits. Count a...
09/24/2017 16:30:00	09/24/2017 16:30:00	Rash	Antrim County	20	14.454	Map It	Plot It	Tab It	4/24 visits. Small s...
09/24/2017 14:30:00	09/24/2017 17:30:00	Gastrointestinal	Shiawassee County	22.973	18.753	Map It	Plot It	Tab It	14/69 visits (16 in ...
09/24/2017 13:30:00	09/24/2017 13:30:00	Heat	Kent County	0.629	0.134	Map It	Plot It	Tab It	2nd Alert in 24 hour...
09/24/2017 13:30:00	09/24/2017 23:30:00	Neurological	Lapeer County	11	8.963	Map It	Plot It	Tab It	7/251 visits on 9/23...
09/24/2017 12:30:00	09/24/2017 12:30:00	Neurological	Eaton County	14.607	7.94	Map It	Plot It	Tab It	9/97 visits. Increas...
09/24/2017 11:30:00	09/24/2017 11:30:00	Rash	Sanilac County	10.526	7.01	Map It	Plot It	Tab It	3/61 visits on 9/23 ...
09/24/2017 10:30:00	09/24/2017 10:30:00	Rash	Arenac County	13.333	10.881	Map It	Plot It	Tab It	1/47 visits on 9/23 ...
09/24/2017 10:30:00	09/24/2017 13:30:00	Rash	Alpena County	10	5.125	Map It	Plot It	Tab It	4/44 visits. Small s...
09/24/2017 10:30:00	09/24/2017 17:30:00	Gastrointestinal	Lapeer County	16.129	13.149	Map It	Plot It	Tab It	9/251 visits on 9/23...
09/24/2017 06:30:00	09/24/2017 08:30:00	Gastrointestinal	Clinton County	20.408	13.748	Map It	Plot It	Tab It	8/46 visits. Increas...
09/24/2017 04:30:00	09/24/2017 04:30:00	Heat	Ottawa County	1.689	0.122	Map It	Plot It	Tab It	5/338 visits. Count ...
09/24/2017 01:30:00	09/24/2017 04:30:00	Gastrointestinal	Eaton County	13.684	10.259	Map It	Plot It	Tab It	11/91 visits. Normal...

Alert Status: Sounded Days: 14 Alert Type: All Refresh Help

Alerts Screen

To Change the Sort:

1. Click on the desired column header. Numerical columns sort numerically. Text columns alphabetically. Date/Time columns sort chronologically.

Note: Click the same column header a second time to re-sort in the opposite order.

Mapping an Alert

The mapping functionality in MSSS is currently disabled.

Graphing an Alert

The Alerts page enables you to easily graph data related to an alert.

MSSS v6.0 Production									
Main Epiplot Reports Alerts Facilities Admin Messalyzer Logout									
Alerts from the Past 14 Days									
Discovered	Sounded	Syndrome	Location	Observed	Threshold	Map It	Plot It	Tab It	Comments
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09/26/2017 23:30:00	09/27/2017 01:30:00	Neurological	Ottawa County	13.475	11.722	Map It	Plot It	Tab It	*
09/26/2017 21:30:00	09/26/2017 21:30:00	Constitutional	Hillsdale County	17.778	13.314	Map It	Plot It	Tab It	9/49 visits. Spike i...
09/26/2017 21:30:00	09/27/2017 02:30:00	Gastrointestinal	Ottawa County	17.73	15.492	Map It	Plot It	Tab It	*
09/26/2017 18:30:00	09/26/2017 18:30:00	Heat	Oakland County	0.41	0.186	Map It	Plot It	Tab It	5/1225 visits. Spike...
09/25/2017 19:30:00	09/25/2017 22:30:00	Constitutional	Barry County	22.727	19.646	Map It	Plot It	Tab It	5/22 visits. Spike i...
09/25/2017 10:30:00	09/25/2017 11:30:00	Hemorrhagic	Van Buren County	6.604	4.791	Map It	Plot It	Tab It	7/114 visits. Spike ...
09/24/2017 22:30:00	09/24/2017 22:30:00	Heat	Macomb County	0.545	0.144	Map It	Plot It	Tab It	5/934 visits. Spike ...
09/24/2017 21:30:00	09/24/2017 23:30:00	Hemorrhagic	Ottawa County	6.19	4.486	Map It	Plot It	Tab It	15/359 visits. Count...
09/24/2017 17:30:00	09/24/2017 17:30:00	Hemorrhagic	Isabella County	10.811	8.83	Map It	Plot It	Tab It	4/41 visits. Count a...
09/24/2017 16:30:00	09/24/2017 16:30:00	Rash	Antrim County	20	14.454	Map It	Plot It	Tab It	4/24 visits. Small s...
09/24/2017 14:30:00	09/24/2017 17:30:00	Gastrointestinal	Shiawassee County	22.973	18.753	Map It	Plot It	Tab It	14/69 visits (16 in ...
09/24/2017 13:30:00	09/24/2017 13:30:00	Heat	Kent County	0.629	0.134	Map It	Plot It	Tab It	2nd Alert in 24 hour...
09/24/2017 13:30:00	09/24/2017 23:30:00	Neurological	Lapeer County	11	8.963	Map It	Plot It	Tab It	7/251 visits on 9/23...
09/24/2017 12:30:00	09/24/2017 12:30:00	Neurological	Eaton County	14.607	7.94	Map It	Plot It	Tab It	9/97 visits. Increas...
09/24/2017 11:30:00	09/24/2017 11:30:00	Rash	Sanilac County	10.526	7.01	Map It	Plot It	Tab It	3/61 visits on 9/23 ...
09/24/2017 10:30:00	09/24/2017 10:30:00	Rash	Arenac County	13.333	10.881	Map It	Plot It	Tab It	1/47 visits on 9/23 ...
09/24/2017 10:30:00	09/24/2017 13:30:00	Rash	Alpena County	10	5.125	Map It	Plot It	Tab It	4/44 visits. Small s...
09/24/2017 10:30:00	09/24/2017 17:30:00	Gastrointestinal	Lapeer County	16.129	13.149	Map It	Plot It	Tab It	9/251 visits on 9/23...
09/24/2017 06:30:00	09/24/2017 08:30:00	Gastrointestinal	Clinton County	20.408	13.748	Map It	Plot It	Tab It	8/46 visits. Increas...
09/24/2017 04:30:00	09/24/2017 04:30:00	Heat	Ottawa County	1.689	0.122	Map It	Plot It	Tab It	5/338 visits. Count ...
09/24/2017 01:30:00	09/24/2017 04:30:00	Gastrointestinal	Eaton County	13.684	10.259	Map It	Plot It	Tab It	11/91 visits. Normal...

Alert Status: Sounded Days: 14 Alert Type: All Refresh Help

Alerts Screen

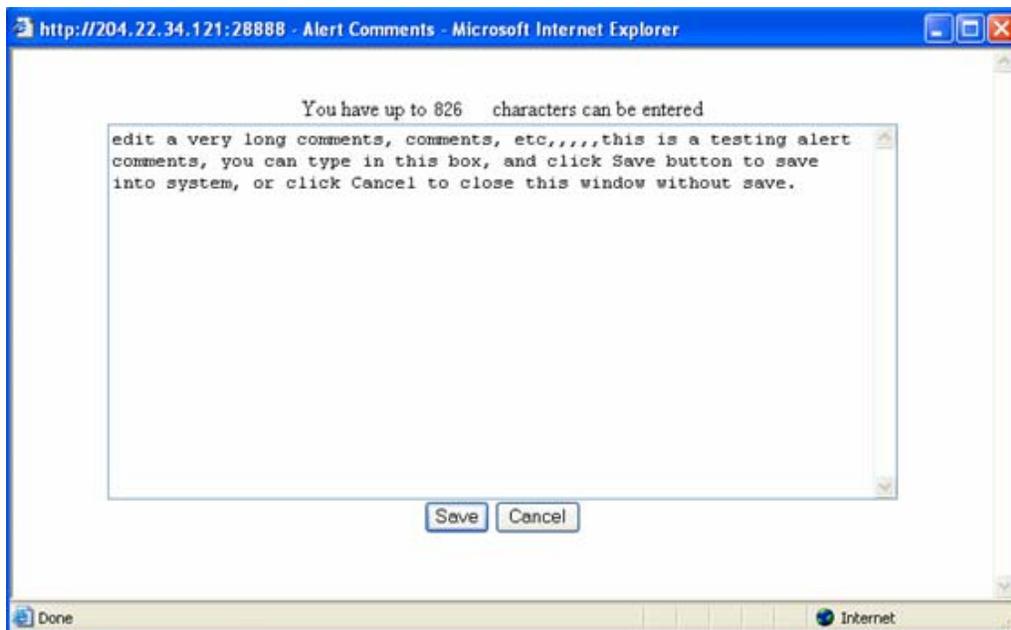
The Alerts page easily allows you to graph data related to an alert.

To Graph an Alert:

1. Decide which alert to graph.
2. Click the [Plot It](#) link.
3. The *Epiplot* screen appears and is loaded with data related to the selected alert.

Saving an Alert Comment

The *Alert Comments* page is accessed from the *Alerts* screen and lets you save text associated with a particular alert. Note: The maximum length for the comment is 1024 characters.



Alert Comments

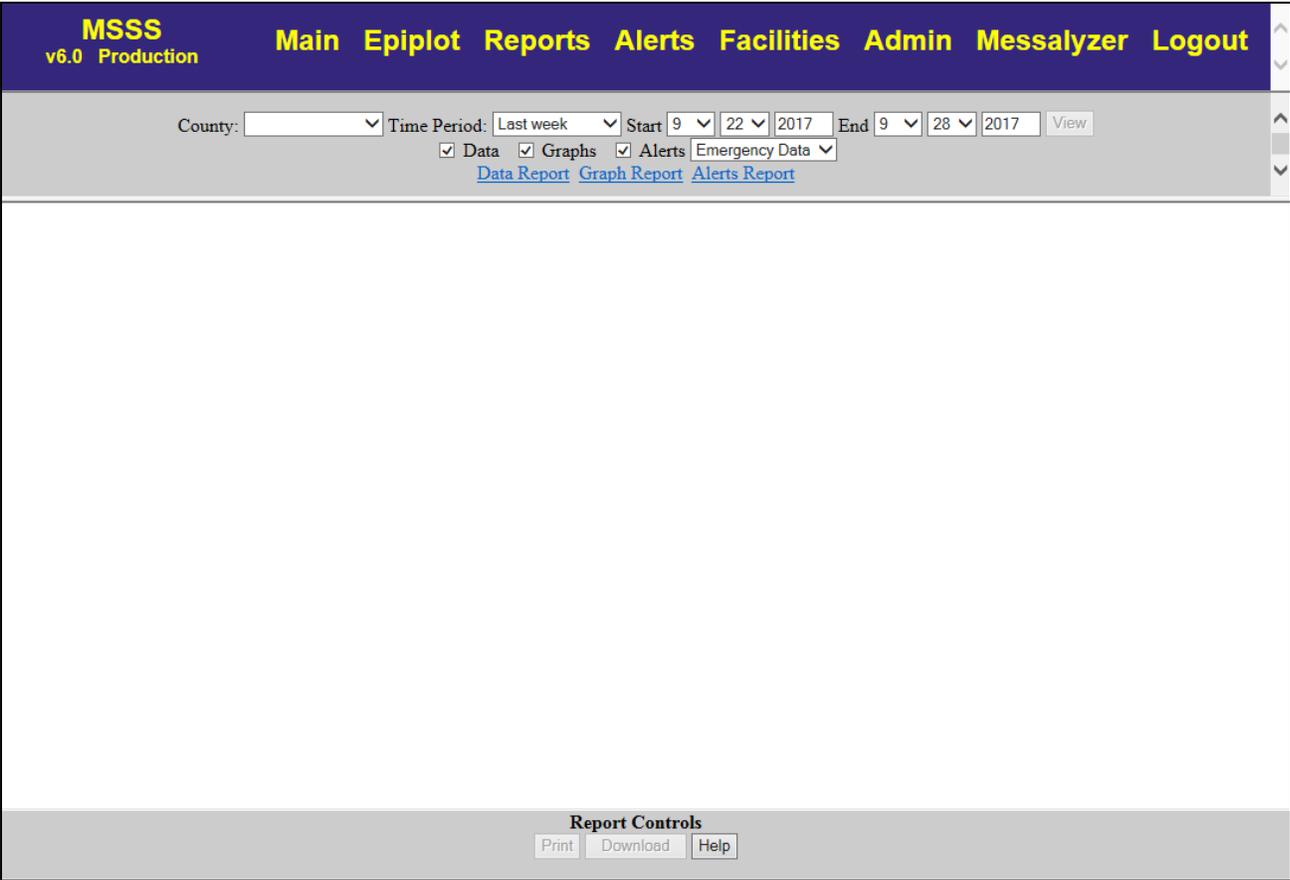
To Save/Edit an Alert Comment:

1. At the *Alerts* screen, find the alert you wish to comment on.
2. Click your cursor in the Comments field associated with the alert. The *Alert Comments* page appears.
3. Type the desired text (up to 1024 characters). If editing, highlight the text to modify and type over it.
4. Click the **Save** button when done.

Reports

Reports Screen

Click on the **Reports** menu item at the top of any screen to access the Report functionality. The following screen appears.



Reports Screen

Initially, the screen will be blank without a specified county. The report functionality allows you to view, print, and download syndromic reports for a specified county and time period.

There are three reports available:

- Data Report – The Data Report is broken into three levels: State-Level, Facility-Level, and County-Level. The State-Level section provides state-level counts by syndrome for the specified time period. The Facility-Level section provides counts by facility by syndrome for the specified time period. The registrations included in the facility numbers are all registrations for that facility regardless of the patient’s home zip code. The County-Level section provides county-level counts by syndrome for the specified time period. The registrations included in the county numbers are all registrations where the patient’s home zip code falls within the specified county.
- Graph Report – The Graph Report provides a graph for each syndrome (plus All Visits) for the specified county and time frame.
- Alerts Report – The Alerts Reports provides a report of all the alerts that occurred within the specified county and time frame. Note: If an alert occurred that applies to all counties, it will be displayed as well with a County value of “All”.

The *Reports* Screen is divided into three frames.

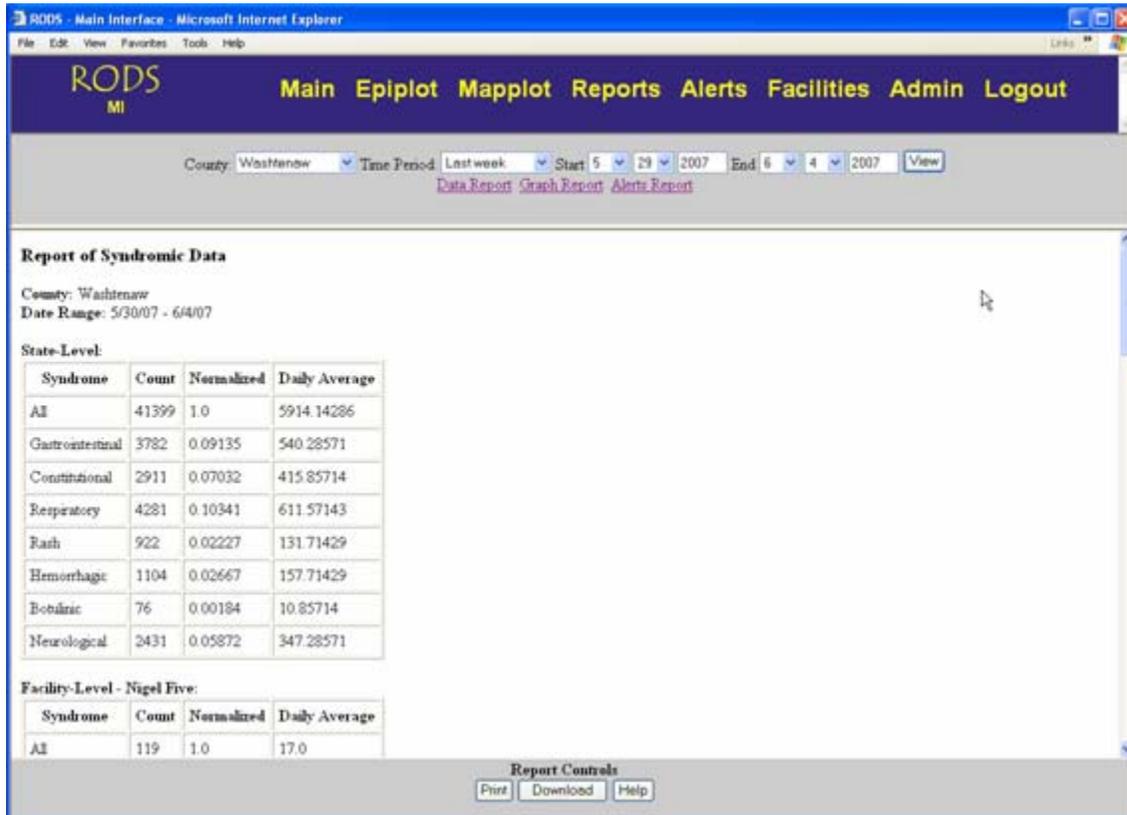
- The top frame allows the user to specify the report parameters.
- The middle frame is where the three reports will be displayed.
- The bottom frame contain the report controls and allow the user to print reports, download reports, or view report specific help.

Report Parameters:

- County – This drop-down list allows the user to select a county.
- Time Period – Pre-defined time periods (i.e. Last week, Last month, etc.) or a custom time period.
- Start – Date to start pulling data.
- End – Date to end pulling data (includes this day).

Viewing Reports

You can view reports after specifying a county and time period.

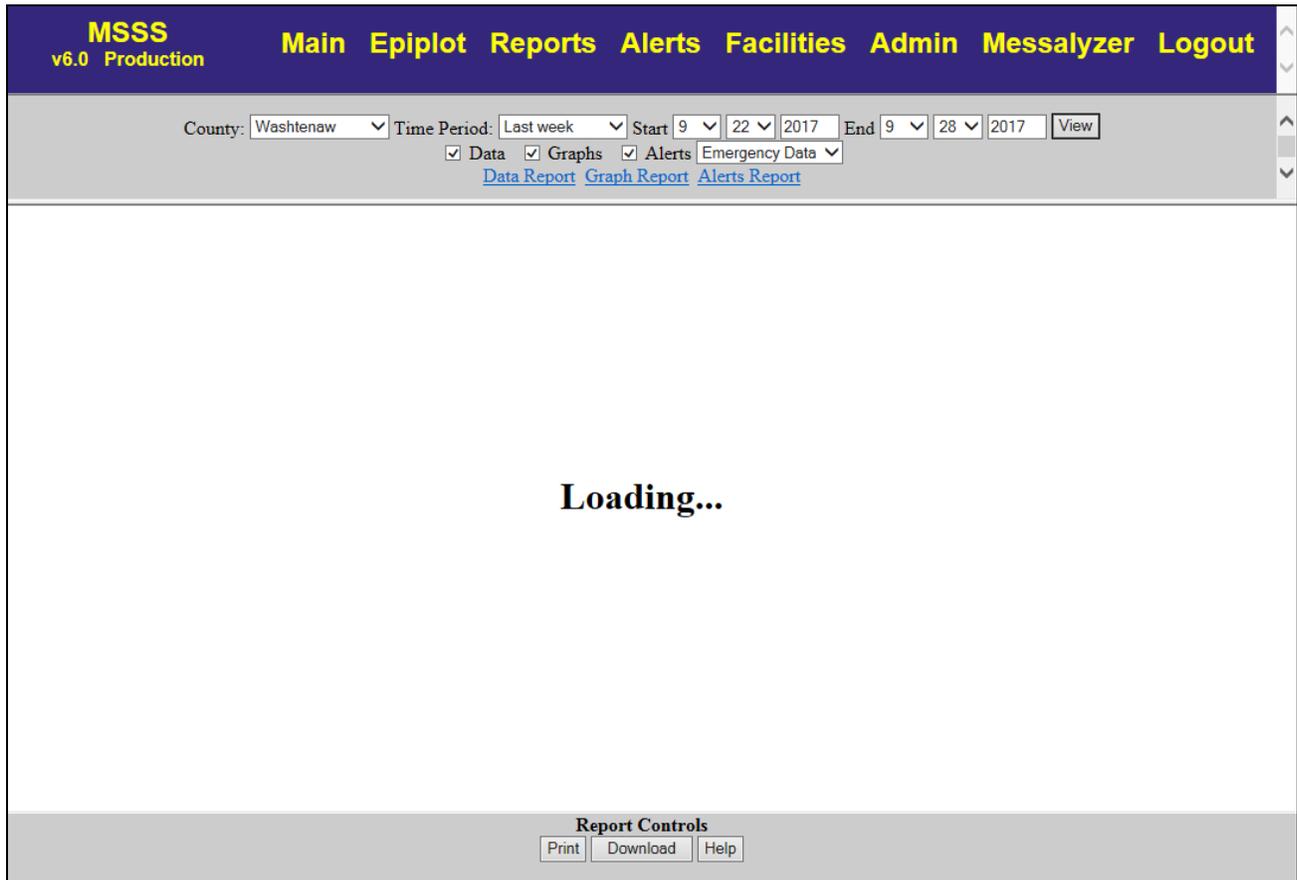


Reports Screen – Viewing a Report

To View Reports:

1. Select a county from the County drop-down list.
2. Specify a time period:
 - a. Time Period – Pre-defined time periods (e.g., Last Week, Last Month). Note: This will pre-populate Start and End.
 - b. Start – Month, day and year to start pulling data.
 - c. End – Month, day and year to stop pulling data (includes this day).
3. Click the **View** button.

Note: While the reports are loading, a loading screen will appear. See the screen below.



Reports Screen – Loading a Report

When the reports are finished loading, you can view the different reports by using the vertical scroll bar on the right-hand side of the screen or you can use the three links under the reports parameters: Data Report, Graph Report, or Alerts Report. To jump to the top of the specified report, click on its associated link.

Printing Reports

You can print reports once you view them.

MSSS v6.0 Production **Main Epiplot Reports Alerts Facilities Admin Messalyzer Logout**

County: Washtenaw Time Period: Last week Start: 9/22/2017 End: 9/28/2017 View

Data Graphs Alerts Emergency Data

[Data Report](#) [Graph Report](#) [Alerts Report](#)

Report of Syndromic Data

County: Washtenaw
Date Range: 9/22/17 - 9/28/17

State-Level:

Syndrome	Count	Normalized	Daily Average
All	83169	1	11,881.286
Gastrointestinal	8700	0.105	1,242.857
Constitutional	4956	0.06	708
Respiratory	9405	0.113	1,343.571
Rash	1690	0.02	241.429
Hemorrhagic	2088	0.025	298.286
Botulinic	168	0.002	24
Neurological	4906	0.059	700.857
Heat	208	0.002	29.714

Facility-Level -

Syndrome	Count	Normalized	Daily Average
All	130	1	24.286

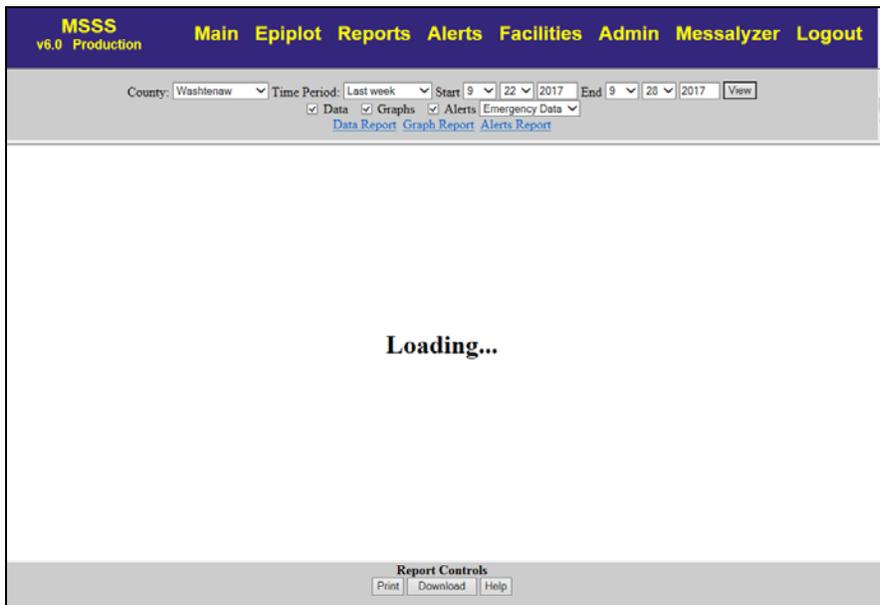
Report Controls
Print Download Help

Reports Screen – Report Loaded

To Print Reports:

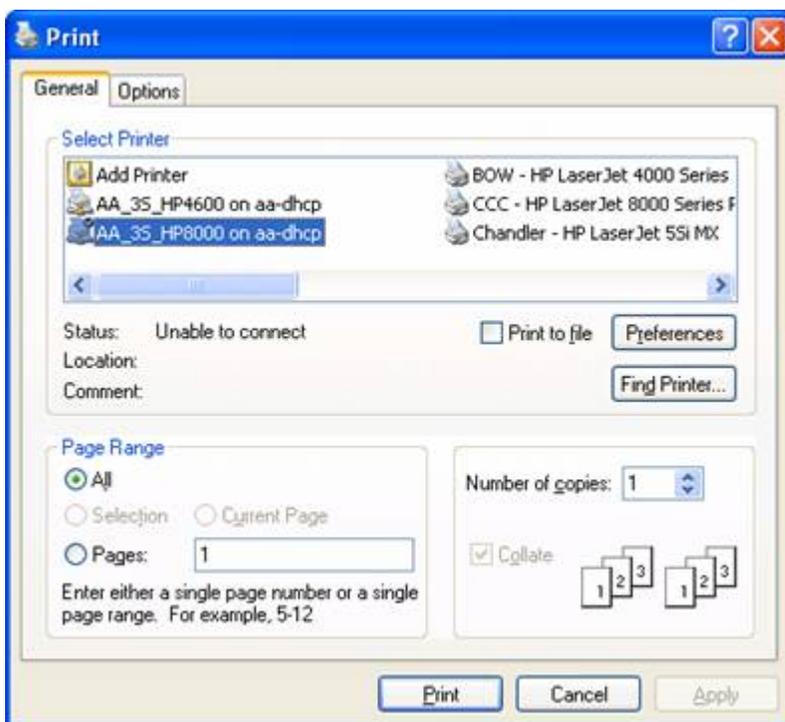
1. Select a county from the County drop-down list.
2. Specify a time period:
 - a. Time Period – Pre-defined time periods (i.e., Last Week, Last Month). Note: This will pre-populate Start and End.
 - b. Start – Month, day and year to start pulling data.
 - c. End – Month, day and year to stop pulling data (includes this day).

3. Click the **View** button. Note: While the reports are loading, a loading screen will appear. See the screen below.



Reports Screen – Loading a Report

When the reports are finished loading, click the **Print** button. The Print window appears. Select the desired printer and options then click the **Print** button.



Print Window

Downloading Reports

You can download reports after specifying a county and time period. Note: You can download reports without ever viewing them. The Download button enables you to save a copy of the reports to your hard-drive. A single file, named `ReportDownload.zip`, will be saved to the location you specify.

MSSS v6.0 Production **Main Epiplot Reports Alerts Facilities Admin Messalyzer Logout**

County: Time Period: Start End

Data Graphs Alerts

[Data Report](#) [Graph Report](#) [Alerts Report](#)

Report of Syndromic Data

County: Washtenaw
Date Range: 9/22/17 - 9/28/17

State-Level:

Syndrome	Count	Normalized	Daily Average
All	83169	1	11,881.286
Gastrointestinal	8700	0.105	1,242.857
Constitutional	4956	0.06	708
Respiratory	9405	0.113	1,343.571
Rash	1690	0.02	241.429
Hemorrhagic	2088	0.025	298.286
Botulinic	168	0.002	24
Neurological	4906	0.059	700.857
Heat	208	0.002	29.714

Facility-Level -

Syndrome	Count	Normalized	Daily Average
All	170	1	24.286

Report Controls

Reports Screen

The `ReportDownload.zip` file contains ten files with the following format:

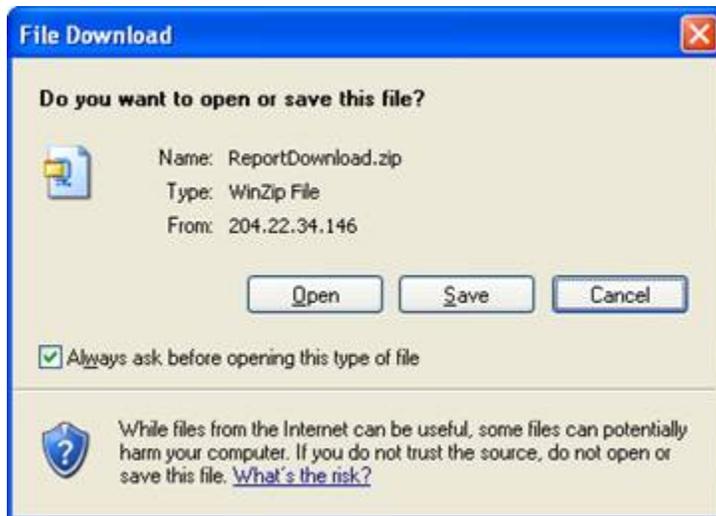
- `Alerts_Report.csv` – This file contains the Alerts Report in a comma-separated file.
- `Data_Report.csv` – This file contains the Data Report in a comma-separated file.
- `Graph_Report_All.zip` – This file contains the charts, plot-points, and the case information used to create the Total Visits graph of the Graph Report.
- `Graph_Report_Botulinic.zip` – This zip file contains the charts, plot-points, and the case information used to create the Botulinic graph of the Graph Report.

- `Graph_Report_Constitutional.zip` – This zip file contains the charts, plot-points, and the case information used to create the Constitutional graph of the Graph Report.
- `Graph_Report_Gastrointestinal.zip` – This zip file contains the charts, plot-points, and the case information used to create the Gastrointestinal graph of the Graph Report.
- `Graph_Report_Hemorrhagic.zip` – This zip file contains the charts, plot-points, and the case information used to create the Hemorrhagic graph of the Graph Report.
- `Graph_Report_Neurological.zip` – This zip file contains the charts, plot-points, and the case information used to create the Neurological graph of the Graph Report.
- `Graph_Report_Rash.zip` – This zip file contains the charts, plot-points, and the case information used to create the Rash graph of the Graph Report.
- `Graph_Report_Respiratory.zip` – This zip file contains the charts, plot-points, and the case information used to create the Respiratory graph of the Graph Report.
- `Graph_Report_Heat.zip` – This zip file contains the charts, plot-points, and the case information used to create the Heat graph of the Graph Report.
- Note: Each of the "Graph_Report_" zip files contain three files: `Cases.csv`, `Points.csv`, and `Charts.png`.
 - `Cases.csv` – This file contains the registration information the meet the selected criteria in a comma-separated file. The file contains the following information:
 - Admitted – admitted date/time
 - Facility – abbreviated name of the hospital
 - Assigned Zip – the assigned zip code (either the patient’s reported home zip if a valid Michigan zip or the treatment facility’s zip if not)
 - Reported Zip – the patient’s reported home zip code
 - Valid – a Y/N indicator as to whether the zip code is a valid Michigan zip code
 - Assigned County – the FIPS county code associated with the Assigned (i.e., perceived) Zip, so it is either the county code of the patient’s home address (if a valid Michigan zip) or the county code of the treatment facility (in the absence of a valid Michigan Zip for the patient).
 - Gender – M/F/U
 - Age – age at the time of admission
 - Syndrome – the syndrome classification
 - Provider – the treatment facility name
 - Provider ID – ID of the treatment facility

- Organization – the organization that the treatment facility belongs to
- Org ID – ID of the organization
- Complaint – chief complaint
- `Points.csv` – This file contains the number of registrations by admitted date (to represent the points on the graph) in a comma-separated file.
- `Chart.png` – This file contains an image of the downloaded graph.

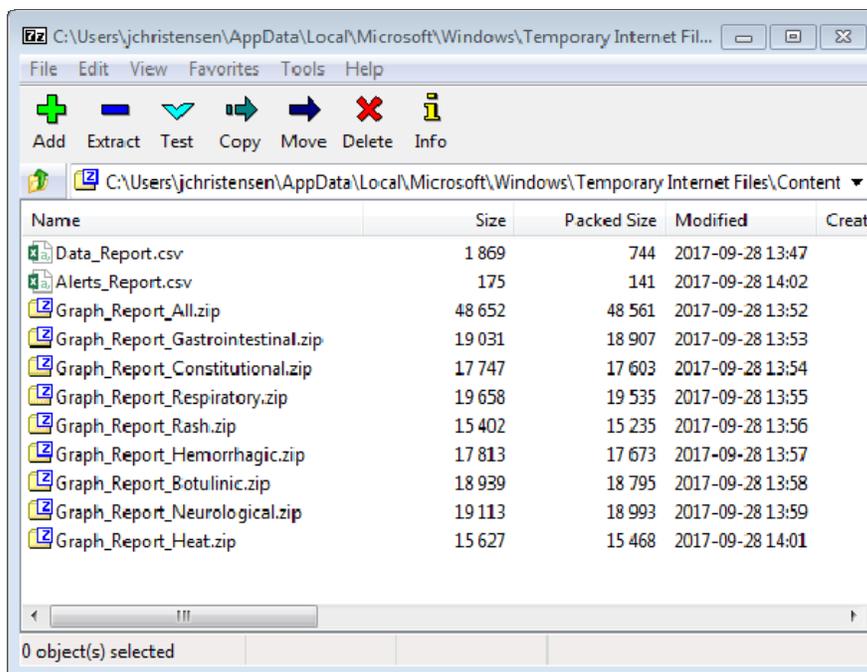
To Download Reports:

1. Select a county from the County drop-down list.
2. Specify a time period:
 - a. Time Period – Pre-defined time periods (i.e., Last Week, Last Month). Note: This will pre-populate Start and End.
 - b. Start – Month, day and year to start pulling data.
 - c. End – Month, day and year to stop pulling data (includes this day).
3. Click the **Download** button. Note: The *File Download* screen may take a few moments to appear.



File Download Screen

4. Click the **Save** button. The following screen appears.



Save As Screen

5. Extract the files to your desired location.

Data Report

To generate the *Data Report*, please refer to the Viewing Reports topic.

MSSS v6.0 Production **Main Epiplot Reports Alerts Facilities Admin Messalyzer Logout**

County: Washtenaw Time Period: Last week Start: 9/22/2017 End: 9/28/2017 View

Data Graphs Alerts Emergency Data

[Data Report](#) [Graph Report](#) [Alerts Report](#)

Report of Syndromic Data

County: Washtenaw
Date Range: 9/22/17 - 9/28/17

State-Level:

Syndrome	Count	Normalized	Daily Average
All	83169	1	11,881.286
Gastrointestinal	8700	0.105	1,242.857
Constitutional	4956	0.06	708
Respiratory	9405	0.113	1,343.571
Rash	1690	0.02	241.429
Hemorrhagic	2088	0.025	298.286
Botulinic	168	0.002	24
Neurological	4906	0.059	700.857
Heat	208	0.002	29.714

Facility-Level -

Syndrome	Count	Normalized	Daily Average
All	170	1	21.286

Report Controls
Print Download Help

Reports Screen – Data Report

The *Data Report* is broken into three levels. Each level has the same four columns: Syndrome, Count, Normalized, and Daily Average. Each row in the table represents a syndrome (All represents total) and provides the count, normalized value, and daily average.

- State-Level – The State-Level section provides state-level counts by syndrome for the specified time period. Sample State-Level section:

State-Level:

Syndrome	Count	Normalized	Daily Average
All	46278	1.0	6611.14286
Gastrointestinal	4593	0.09925	656.14286
Constitutional	2995	0.06472	427.85714
Respiratory	4999	0.10802	714.14286
Rash	906	0.01958	129.42857
Hemorrhagic	1139	0.02461	162.71429
Botulinic	108	0.00233	15.42857
Neurological	2974	0.06426	424.85714

- Facility-Level – The Facility-Level section provides counts by facility by syndrome for the specified time period. The registrations included in the facility numbers are all registrations for that facility regardless of the patient’s home zip code. There will be one facility section for each facility within the county. The name of the facility will appear after the Report Header (Facility-Level). If no facilities exist within the selected county, then the report will note that no facilities exist. Sample Facility-Level section:

Facility-Level - Test Facility 1:

Syndrome	Count	Normalized	Daily Average
All	2587	1.0	369.57143
Gastrointestinal	230	0.08891	32.85714
Constitutional	213	0.08233	30.42857
Respiratory	267	0.10321	38.14286
Rash	81	0.03131	11.57143
Hemorrhagic	85	0.03286	12.14286
Botulinic	7	0.00271	1.0
Neurological	108	0.04175	15.42857

- County-Level – The County-Level section provides county-level counts by syndrome for the specified time period. The registrations included in the county numbers are all registrations where the patient’s home zip code falls within the specified county. Sample County-Level section:

County-Level:

Syndrome	Count	Normalized	Daily Average
All	2930	1.0	418.57143
Gastrointestinal	302	0.10307	43.14286
Constitutional	219	0.07474	31.28571
Respiratory	246	0.08396	35.14286
Rash	77	0.02628	11.0
Hemorrhagic	93	0.03174	13.28571
Botulinic	9	0.00307	1.28571
Neurological	154	0.05256	22.0

Graph Report

To generate the *Graph Report*, please refer to the Viewing Reports topic.

The *Graph Report* is similar to the Main screen of the system. It provides a graph for each syndrome (plus Total) for the specified county and time frame. The graphs shown in this report contain registrations that occurred in this county and time period where the patient's home zip code fell within the county selected.



Reports Screen – Graph Report

Eight graphs appear:

- All Visits – The graph includes all syndromes for all facilities within the county and time period.
- Gastrointestinal – The graph includes all Gastrointestinal registrations for all facilities within the county and time period.
- Constitutional – The graph includes all Constitutional registrations for all facilities within the county and time period.
- Respiratory – The graph includes all Respiratory registrations for all facilities within the county and time period.

- Rash – The graph includes all Rash registrations for all facilities within the county and time period.
- Hemorrhagic – The graph includes all Hemorrhagic registrations for all facilities within the county and time period.
- Botulinic – The graph includes all Botulinic registrations for all facilities within the county and time period.
- Neurological – The graph includes all Neurological registrations for all facilities within the county and time period.

Alerts Report

To generate the *Alerts Report*, please refer to the Viewing Reports topic.

The *Alerts Report* provides a report of all the alerts that occurred within the specified county (and alerts that apply to All counties) and time frame. The report is broken into two sections: Total and Detail.

- Total – This section of the report provides a total count of the number of alerts that occurred within that county/time period for the given syndrome.
- Detail – This section of the report provides a detailed list of alerts that occurred within the specified county/time period. The alerts are sorted in descending date/time order. This section provides the exact date/time the alert occurred, the county it occurred in (All represents an alert that applies to all counties), the observed value, the threshold value and any comments associated with the alert.

MSSS
v6.0 Production
Main Epiplot Reports Alerts Facilities Admin Messalyzer Logout

County: Washtenaw Time Period: Last week Start 9 22 2017 End 9 28 2017 View
 Data Graphs Alerts Emergency Data v
[Data Report](#) [Graph Report](#) [Alerts Report](#)

All Facilities
People in: Washtenaw County
Botulinic

All Facilities
People in: Washtenaw County
Neurological

Alerts Report

County: Washtenaw
Date Range: 9/22/17 - 9/28/17

Total:

Syndrome	Total
Constitutional	1

Detail:

Syndrome	Date	County	Observed	Threshold	Status	Comments
Constitutional	09/27/2017 02:30:00	Washtenaw	9.44	8.955	Expired	

Report Controls
Print Download Help

Reports Screen – Alerts Report

Facility

Facility Screen

The Facilities page provides summarized and detailed information about the reception characteristics of registration data. The display is divided into an entity pane, synopsis/detail pane, and a control pane. For system efficiency, entity pane and synopsis content is generated by the server on a regular basis. Content provided to fulfill user selections of specific entities is generated on demand. Both entity and detail pane content are automatically refreshed in the user's browser at the same rate as it is generated on the server.

Entity Pane

The entity pane is on the left and can show one of three views: executive, facility, and organization. Each view exists in a circular queue in the aforementioned order. The location in the queue is controlled by the "entity" button in the control pane. The button's name will reflect the view that will be shown if it is clicked. Because all of the entity content is generated and then cached by the server, the overhead required to peruse this queue is insignificant.

Executive View. Initially, the "executive" view is displayed in the entity pane. It provides a traffic-light metaphor regarding the transmission status of each facility, a facility name, the reception timestamp of its last registration, and a timestamp after which a given facility's transmission status will be considered questionable. Each facility name is an active link that, when clicked, will generate details about a given facility's transmission status and history. This content will be presented in the "detail" pane.

The executive view can be sorted by each of its columns. The initial sort order is by the status column, which sorts by the descending difference between a given facility's deadline and its last reception timestamps (i.e., its transmission delta). The signal color is derived from the comparison of a given facility's transmission history and its current transmission delta. A "green" light indicates that registrations from a given facility are being received within an "acceptable" timeframe. A "yellow" light indicates that a given facility's transmission delta is outside its "normal" transmission timeframe, which could indicate a problem. A "red" light indicates that a given facility's transmission delta is alarmingly beyond its tolerance, and the integrity of its data link should be investigated by the support staff. Care must be taken when interpreting alerts, charts, and maps whose content involves "yellow" or "red" facilities. Three "black" lights indicate that the feed has been down for more than 30 days.

Facility View. The "facility" view presents an active-content chart whose high-level interpretation is identical to that of the executive view. Green bars are for facilities whose transmission deltas are

within tolerance. Yellow bars are for facilities whose transmission deltas are beyond their "normal" transmission history. Red bars are for facilities whose transmission deltas are alarmingly beyond their tolerance and warrant investigation.

The chart is arranged with each facility listed down the left side and an hours gradient across the top. The hours shown in the chart are relative to each facility's average transmission delta. Thus, negative values indicate a facility whose last registration reception, when compared to the time of the chart, was less than that facility's average. As such, we would anticipate that the majority of facilities will be seen to be shown relatively close to the average line most of the time (which is another diagnostic clue). The distance from the average line for most facilities is influenced by the FTP facilities whose average transmission deltas tend to be around 12 or 24 hours (and thus influence the scaling of the non-FTP facility displays).

A tool-tip is provided for each facility when the mouse "hovers" over any part of its range. It displays the percentage over/under the calculated tolerance, the calculated tolerance, the 30-day volume, and average transmission delta (a.k.a. average response). Clicking in a facility's range will generate details about a given facility's transmission status and history. This content will be presented in the "detail" pane.

The legend at the top of the chart identifies each of the elements used within the chart. A tool-tip containing a brief description of each element is provided when the mouse hovers over each element name. Each of these elements is defined below.

The Range shows the minimum-to-maximum transmission delay from a given facility. It provides an "at a glance" view of a given facility's "normal" transmission pattern. For calculation accuracy, the range excludes "abnormal" transmission delays as defined by the report generation parameters.

The Tardy bars are red to indicate a facility that is alarmingly beyond its calculated tolerance. The tolerance will vary with the reception history of a given facility, and is sensitive within this history to both the time of day, and the day of week. That is, the anticipated reception rate is different at 3:00am on a Sunday than it is at 5:00pm on a Monday.

The Active bars indicate a facility that is within its calculated tolerance.

The Volume bars collectively form a "watermark" chart showing the contribution of registrations by each facility relative to its peers.

The Average line provides an anchor at which each facility is normalized. This provides an "at a glance" determination as to how close a given facility is to its calculated reception average. It also provides a clean cross-facility comparison, and has a clarifying effect on the overall chart.

The Tolerance mark indicates the high-water mark for the "normal" reception range. This is a per-facility calculation and varies with a given facility's transmission history, time of day, and day of week.

The Status mark indicates the current status of a given facility. If the Status mark is to the left of the Tolerance, then the facility is within its tolerance and its bar will be green. If the Status mark is to the right of the Tolerance, the facility is over its tolerance and will be either yellow or red, depending upon how far over tolerance it is.

Organization View. The "organization" view is identical to the "facility" view in every way, except that it shows the transmission status of organizations rather than their individual facilities. This can be very helpful when attempting to diagnose suspected transmission failures. It can also afford insight

into the interpretation of alerts, charts, and maps. There are some organizations whose registration data is received from multiple sources. Thus, one or more facilities within an organization could show a tardy status when the organization itself does not.

Synopsis/Detail Pane

The synopsis/detail pane presents the parameters and a performance chart specific to either the overall system (synopsis) or an entity (i.e., a facility or organization). The default display is the system-wide synopsis page. It is generated at the same time as are the executive, facility, and organization views. Click on Facility in the top menu to restore the default view.

The system-wide synopsis page provides the timestamp at which the synopsis and views were generated, the "data window" (i.e., how far back in time data was obtained for the calculations), the minimum tolerance for any entity (to minimize false alerts), and a high-water interval over which delays are ignored as "out of the norm" for calculation purposes.

The detail pages provide the following content for the entity selected by the user: the organization name, the facility name(s), the municipalities in which each facility resides, the counties in which each municipality resides, the average transmission delta (delay), the calculated tolerance, the transmission delta since the last registration was received (current delay), the maximum transmission delta within the "data window," the volume received within the "data window", the average daily volume within the "data window", the timestamp of the last received registration, and the type of transmission (currently either VPN or FTP).

For the Facility view, only the selected facility (i.e., not any "sister" facilities within its organization) are shown in the selected entity. For the Organization view, all facilities within the organization are shown in "latest" order.

Both system-wide and detail pages also provide an EpiPlot chart specific to their respective domains. These charts reflect reception timestamps, not admission timestamps as is shown when using EpiPlot directly. They are advanced charts, having a moving average line and showing any relevant alerts in their timeframe (e.g., the system-wide chart only shows state-level alerts). The charts also have active content. The usual informational tool-tips are presented for registration and alert details. Clicking an alert will launch EpiPlot using the selected context for its initial chart.

Administration

Administration Screen

The Administration screen displays the current list of system users. It includes the user information such as login ID, name, role, status, jurisdiction, job title, and time of last login. It also associates an edit button with each user, which allows the administrator to update the information.

The screenshot shows the MSSS Administration Screen. At the top, there is a navigation bar with the following items: MSSS v6.0 Production, Main, Epiplot, Reports, Alerts, Facilities, Admin, Messalyzer, and Logout. Below this is a section titled "User Information" which contains a table with the following columns: SSO ID, First Name, Last Name, Role, Status, Jurisdiction, Job Title, Last Login, and Edit. The table lists several users, with one row for the Admin user where the information is blurred. A "Help" button is located at the bottom of the table.

SSO ID	First Name	Last Name	Role	Status	Jurisdiction	Job Title	Last Login	Edit
							05/26/2017 14:55:52	Edit
							12/14/2015 15:30:00	Edit
							04/26/2017 05:12:00	Edit
							03/25/2016 07:02:26	Edit
							09/28/2017 14:49:12	Edit
							05/30/2017 07:15:00	Edit
							01/22/2014 13:55:53	Edit
							01/27/2016 17:36:54	Edit
							03/30/2017 16:08:00	Edit
							05/10/2012 14:11:00	Edit
							10/19/2015 16:19:56	Edit
							11/12/2015 11:03:00	Edit
							02/06/2015 08:45:00	Edit

Administration Screen

Administration Edit

The Administration Edit screen allows administrators to update user information. Administrators can enter user names and addresses, assign roles, and enter other data. Updated information is stored in the database and allows users to log in next time with corresponding privileges.

Note: For any roles other than Admin and MDCH, Jurisdiction must be assigned specifically.

The screenshot shows a web browser window titled "RODS - Main Interface - Microsoft Internet Explorer". The browser's address bar shows "http://localhost:8080/RODS/". The page has a dark blue header with the "RODS MI" logo and navigation links: "Main", "Epiplot", "Mapplot", "Reports", "Alerts", "Facilities", "Admin", and "Logout". The main content area is titled "User Information" and contains several sections:

- Contact:** Fields for First, Last, Job Title, Phone (with area code, number, and extension), Email, Street, County (dropdown menu), City, State (dropdown menu), and Zip.
- Supervisor:** Fields for First, Last, Phone, and Email.
- Current Access:** Fields for Role (dropdown menu), Jurisdictions (dropdown menu), and Active (checkbox).
- Requested Access:** Fields for User Type and Jurisdiction.
- System Generated:** Fields for User SSO ID, Last Login Time, Last Modified Time, and Creation Time.

A "Help" button is located at the bottom right of the form area.

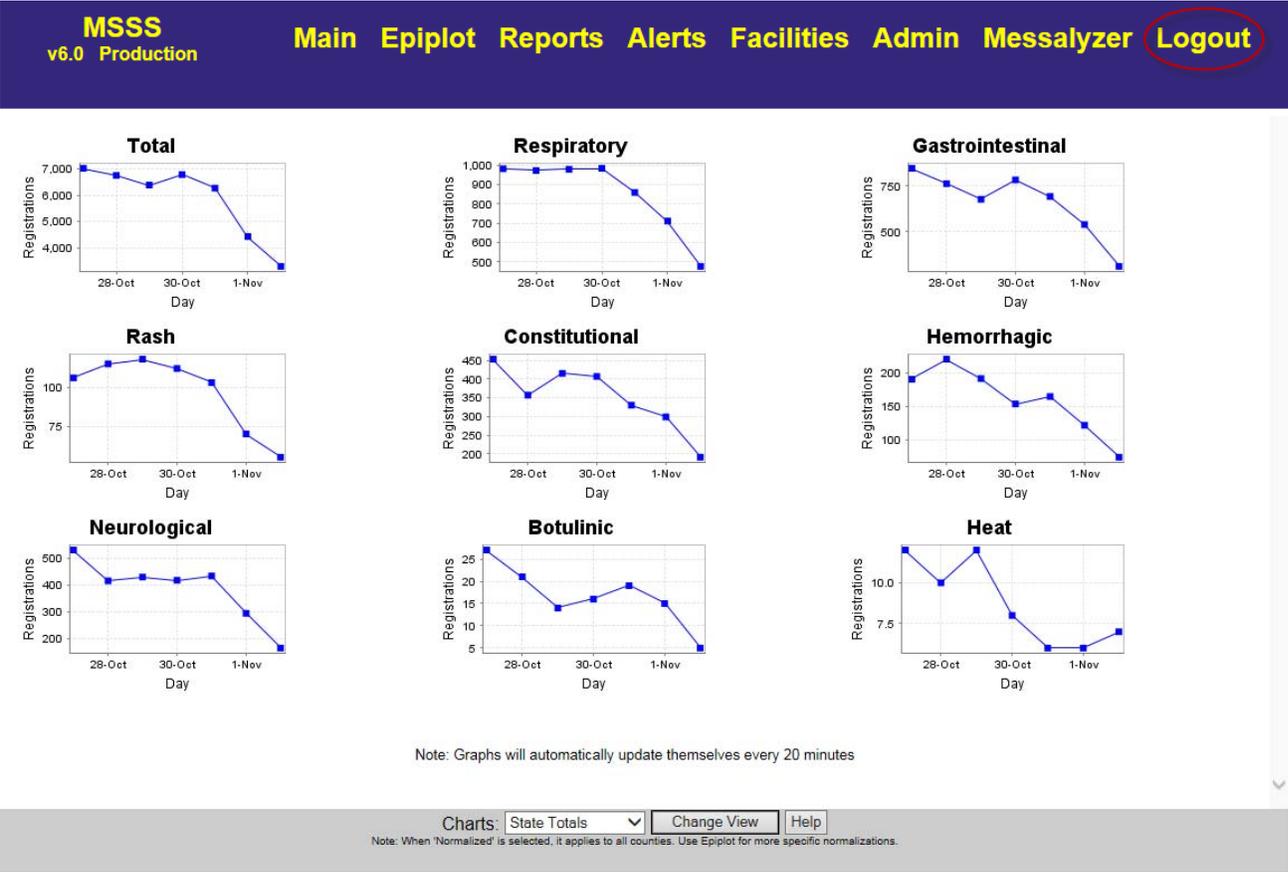
Administration Edit Screen

Logout

Logout

To log out from MSSS, you must first click Logout in the MSSS menu. You can then choose to log out from SOM MILogin.

When you click Logout from the MSSS menu, the window closes but your MILogin session is still active.



MSSS v6.0 Production **Main Epiplot Reports Alerts Facilities Admin Messalyzer Logout**

Symptom	28-Oct	30-Oct	1-Nov
Total	7,000	6,500	4,000
Respiratory	1,000	1,000	500
Gastrointestinal	800	750	500
Rash	100	110	60
Constitutional	450	400	200
Hemorrhagic	200	150	100
Neurological	500	400	200
Botulinic	25	15	5
Heat	10.0	7.5	6.0

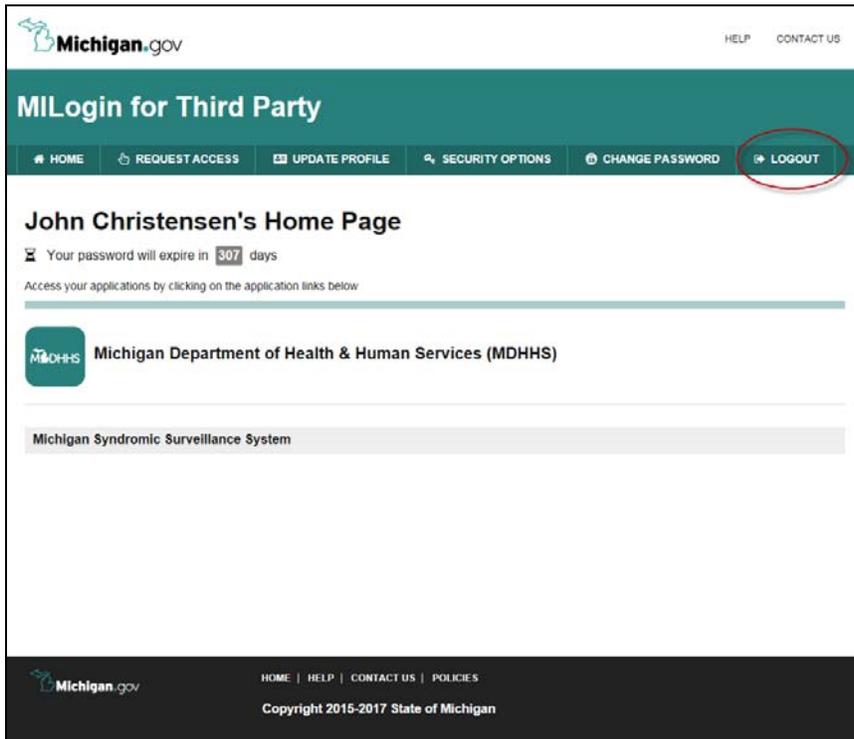
Note: Graphs will automatically update themselves every 20 minutes

Charts: State Totals Change View Help

Note: When 'Normalized' is selected, it applies to all counties. Use Epiplot for more specific normalizations.

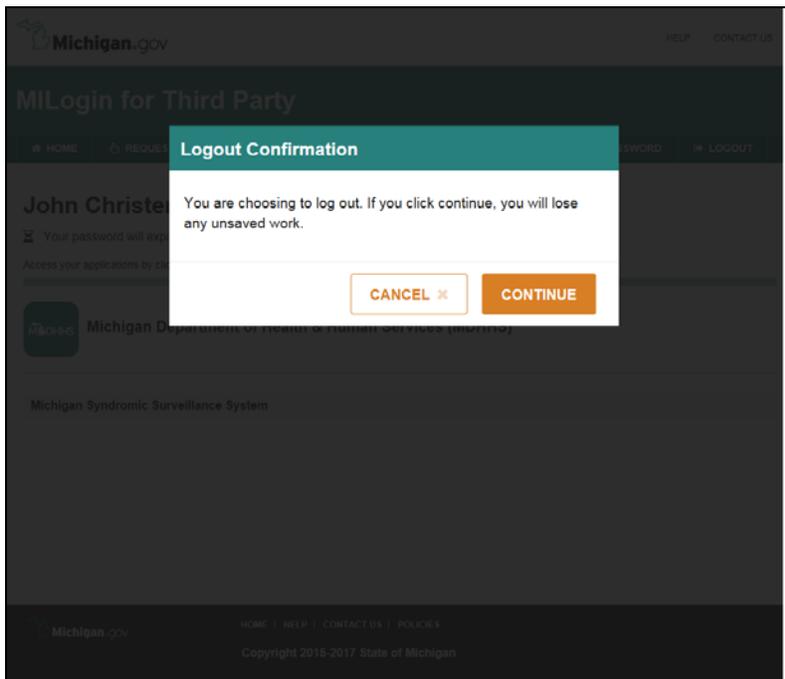
Logout Menu Item at MSSS

To end your MILogin session, you must also click LOGOUT here.



LOGOUT Menu Item at MILogin

You will be asked to confirm. Click **Continue**.



LOGOUT Confirmation dialog

MILogin for Third Party

[# HOME](#)

Confirmation

✓ Success

You have been successfully logged out. Please close the web browser.

[LOGIN](#)

LOGOUT Confirmation

Glossary

CoCo

Chief Complaint algorithm that categorizes emergency room visits

Epiplot

Term used to refer to the graphing functionality within the Syndromic Surveillance System

HL7

Health Level Seven (HL7) is a standardized electronic data format

MDHHS

Michigan Department of Health and Human Services

MILogin

The State of Michigan single sign-on application

RODS

Realtime Outbreak Detection System

Syndromic

The classification of emergency room and urgent care visits into syndrome categories based on symptoms expressed in chief complaints