MDCH SHARP NHSN USERS CONFERENCE CALL
Wednesday, January 28th, 2015

Thank you to those who were able to join our bi-monthly NHSN users' conference call. If you were unable to participate on this call, we hope that you will be able to participate next month. Any healthcare facility is welcome to participate in these calls, whether they are sharing NHSN data with us or not. These conference calls are voluntary. Registration and name/facility identification are **not** required to participate.

Our monthly conference calls will be held on the 4th Wednesday **every other** month at 10:00 a.m. **Our next conference call is scheduled for March 25th, 2015**

Call-in number: 877-336-1831
Passcode: 9103755
Webinar: http://breeze.mdch.train.org/mdchsharp/

Suggestions for agenda items and discussion during the conference calls are always welcome! Please contact Allie at murada@michigan.gov to add items to the agenda.

HIGHLIGHTS FROM CONFERENCE CALL

Welcome & Introductions

Allie welcomed participants on the call and SHARP staff in the room were introduced. Participants were reminded to put their phones on mute or to press *6.

2015 Reporting

There was some discussion regarding updates in 2015. Please see CDC responses to questions in blue below. The powerpoint discussed on the call is attached to end of these notes.

1. We were reviewing the designation of inpatient and outpatient ORs. I understand that it should be designated inpatient or outpatient based on where the majority of patients will end up (and if they have only one OR, it would be considered inpatient). However, we have a few smaller hospitals that have multiple ORs, and they say each OR is about a 50/50 mix. Are there more details to assist them in designating inpatient or outpatient?

Please see the information below which will be coming out in a blast email to all users, we hope, later today.

Inpatient and Outpatient Operating Room Definitions for 2015

Based on feedback provided by NHSN users regarding the 2015 changes to the Inpatient and Outpatient OR Procedure definition, NHSN has made a decision to

rescind these changes. The SSI protocol in the NHSN manual will be updated to reflect this change in the near future, and users will be notified by email.

NHSN serves many types and sizes of acute care facilities, and feedback has highlighted the heterogeneity of patient type (inpatient vs outpatient) which often occurs in a single OR suite. This heterogeneity among patient types was the most important reason for the decision to revert back to use of, only slightly modified, 2014 definitions for inpatient vs outpatient.

Therefore, for 2015, the NHSN SSI protocol will refer to inpatient and outpatient operative procedures, rather than operative procedures that are performed on inpatients or outpatients. Please disregard earlier guidance to identify OR areas/suites as inpatient or outpatient, and instead apply the following definitions to all surgical cases performed on or after January 1, 2015:

NHSN Inpatient Operative Procedure: An NHSN operative procedure performed on a patient whose date of admission to the healthcare facility and the date of discharge are different calendar days.

NHSN Outpatient Operative Procedure: An NHSN operative procedure performed on a patient whose date of admission to the healthcare facility and date of discharge are the same calendar day.

We apologize for any inconvenience this has caused. NHSN makes changes to definitions and protocols only after careful consideration and with data integrity and surveillance collection burden in mind. However, when user feedback informs us that we have missed the mark, we have a duty to respond. Thank you for your understanding. As always, if you have questions, please do not hesitate to send them to NHSN@cdc.gov.

2. Are UTIs still limited to two organisms even if they are reported throughout the RIT (ex. three different urine cultures show three different organisms)? I want to make sure I understand your question. The system will only allow you to enter 2 organism, unless a secondary BSI is also documented. Then a 3rd organism can be entered. However, if you are asking if 3 separate urine cultures, each with a different organism during a single RIT means that a UTI should NOT be reported, because there were more than 2 organisms, then the answer to this is NO. The exclusion for more than 2 organisms applies to a single urine culture. It signifies that the culture is probably contaminated and should therefore not be used for surveillance. 3 separate urine cultures with a single organism would not be the same. Does this clarify your question?

3. No temperature conversion should be done, even in non-infants, correct? Correct.

Update on Reports

Allie walked through a few graphs and tables from the 2013 Annual Report, due to be published to the www.michigan.gov/hai website in the very near future. This report will include an overall TAP report for the state in which each hospital will be able to see a coded ranking of all participating hospitals and receive their corresponding letter.

Next Meeting

The next SHARP Unit NHSN conference call is scheduled for March 25th, 2015 at 10:00 a.m.

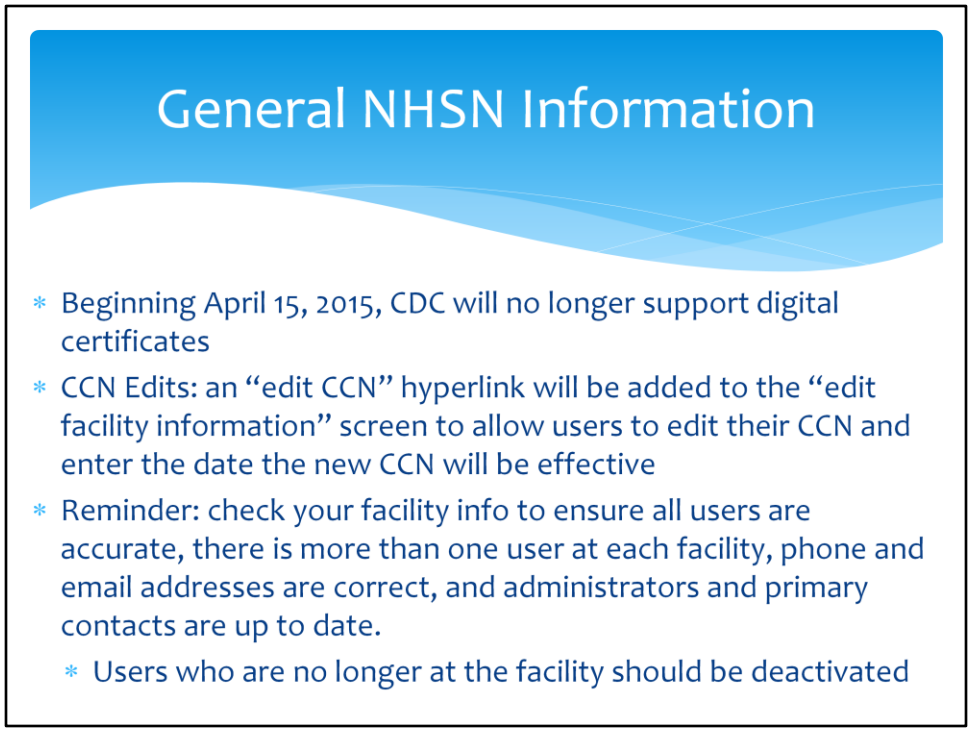
MI NHSN User Group Call

January 28, 2015

Allison Murad
murada@michigan.gov

Hold 2015 Data Entry!

* 2015 Patient Safety, Dialysis, and LTC Component reporting plans, surveys, events, summary data, and procedures should not be entered
  * New version of NHSN is coming any day now!
  * Can continue to enter 2014 data, update user info, and edit locations
  * Can begin collecting 2015 data with paper forms



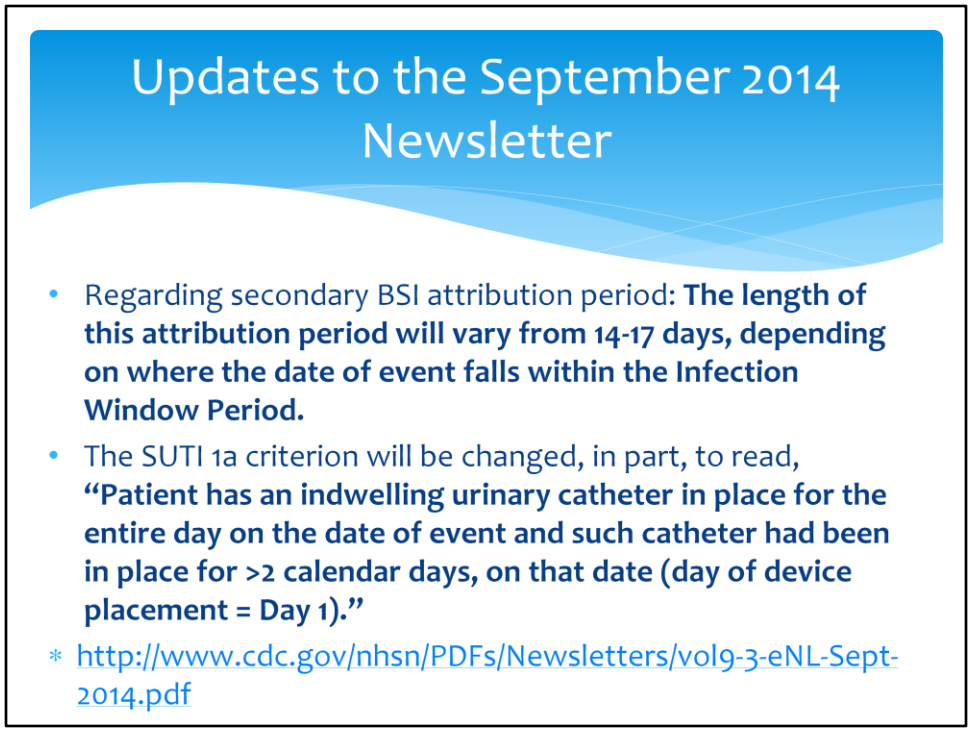
The new "CCN Effective Date" field will allow users to change their facility's CCN in NHSN and designate the correct effective date. Changing a CCN may be necessary for newly certified facilities or following an acquisition of an existing facility by a new company. This new feature will ensure that the facility's NHSN data are attributed to the correct CCN for CMS reporting in a specific quarter.

2015 NHSN Manuals and Data Collection Forms

* Updated protocols, reporting forms, and additional guidance documents have been posted to NHSN website.
* All previous protocols and forms are now obsolete (continue to use old protocols for 2014 data)

Updates to the September 2014 Newsletter

* The September 2014 Newsletter has been edited and re-posted to the NHSN website **(additions in bold)**
  * NHSN Infection Window Period **(Does NOT apply to SSI, VAE, or LabID Event surveillance)**
  * Date of Event (Event Date) **(Does NOT apply to VAE or LabID Event surveillance)**
  * Repeat Infection Timeframe (RIT) **(Does NOT apply to SSI, VAE, or LabID Event surveillance)**



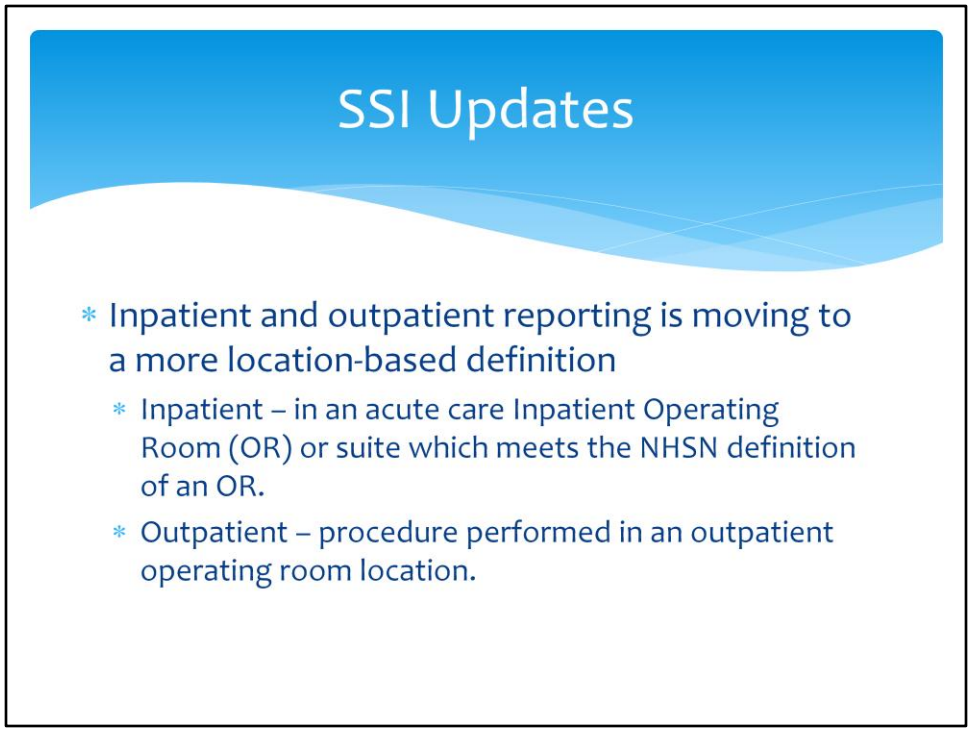
Secondary BSI Note: More details and guidance regarding this subject is provided in the "NHSN Definition and Rules Changes for 2015" Hot Topics webinar as well as in the Bloodstream Infection Event [Central Line-Associated Bloodstream Infection and Non-central line-associated Bloodstream Infection] chapter in the NHSN manual for 2015.)

Patient Safety Annual Facility Survey

* The 2014 Patient Safety surveys contain new and updated questions on microbiology laboratory practices, infection control practices, and antibiotic stewardship practices.
  * PDF versions along with instructions have already been posted to the NHSN website
  * Surveys must be completed by March 1, 2015 (will not be able to create a March 2015 monthly reporting plan without completing a 2014 survey)

Protocol Update - Pathogens

* A particular pathogen species should only be entered once, using the antibiotic susceptibility panel that shows the most resistance overall
  * Starting with 2015 reporting, NHSN will not allow you to save an event if you have listed the same pathogen species twice on the event form
  * Patient Safety note: this rule also applies when adding an additional pathogen to an existing event that occurred during a repeat infection window period



If the OR suite is largely intended to be used for procedures on patients who will be admitted to an inpatient unit, then all of the procedures from this OR suite will be considered NHSN inpatient procedures. 80/20 rule does not apply.

SSI Updates

* APPY Procedures
  * The current list of ICD-9 CM codes for appendectyomy procedures does not include the code for incidental appendectomies. Therefore, in 2015, do NOT report incidental APPY procedures.
* Primary and Non-primary closure
  * Primary closure: closure of the skin level during the original surgery, regardless of any device or object extruding through the incision (removes "all tissue levels" from definition)
  * Non-Primary closure: includes surgeries in which the skin level is left completely open during the original surgery.

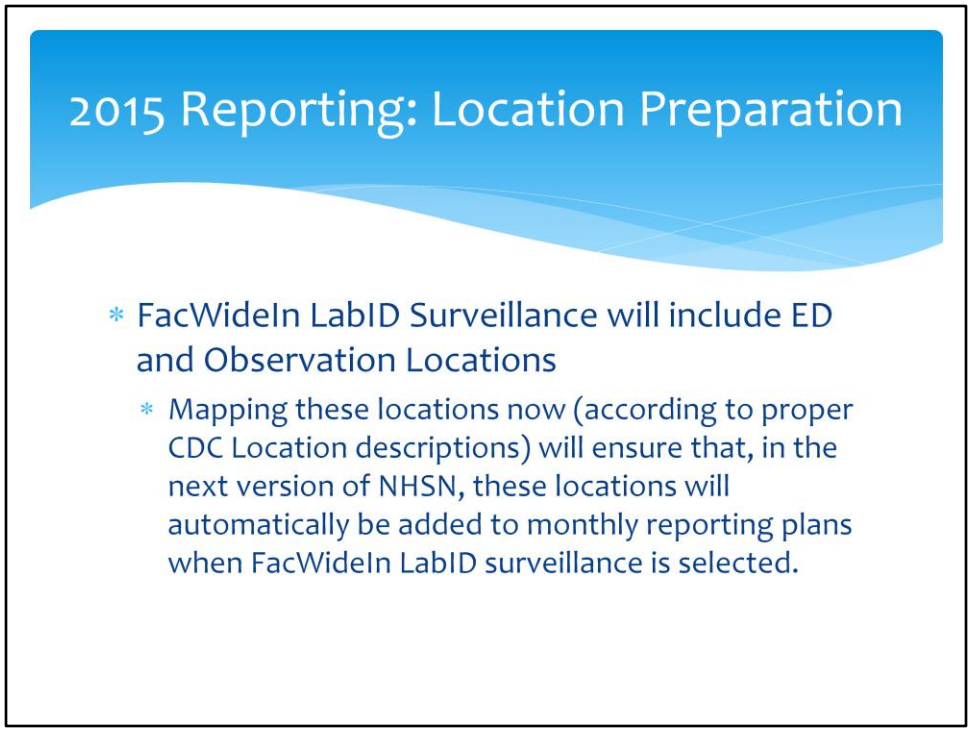
Non-primary closure: deep tissue layers may be closed by some means (with skin level left open), or the deep and superficial layers may both be left completely open. Wounds with non-primary closure may or may not be described as "packed" with gauze or other material, and may or may not be covered with plastic, wound vacs, or other synthetic devices or materials.

2015 Reporting: Location Preparation

* Reminder: In addition to reporting CLABSI and CAUTI data from all adult, pediatric, and neonatal ICUs, CMS IPPS hospitals will also be required to report CLABSI and CAUTI data from **adult and pediatric medical, surgical, and medical/surgical wards.**

2015 Reporting: Location Preparation

Scenario	CDC Location	Are CLABSI and CAUTI required in this location for Hospital IQR in 2015?
An inpatient adult ward in which approximately 90% of patients are admitted to that unit because of the need for telemetry.	Telemetry Ward (IN:ACUTE:WARD:TELE)	No
An inpatient adult unit that is comprised of 60% step -down patients and 40% medical ward patients.	Adult Mixed Acuity Unit (IN:ACUTE:MIXED:ALL_ADULT)	No
An inpatient adult ward that is comprised of 55% surgical patients and 45% medical patients.	Medical/Surgical Ward (IN:ACUTE:WARD:MS)	Yes



PLEASE NOTE: If your facility does not have a designated observation unit, then you do not need to map an observation unit in NHSN. The observation patients should continue to be included in the surveillance efforts for the unit in which they reside.

TAP Reports

* TAP Reports will now be available in the analysis output options
  * This allows for the ranking of facilities or locations in order to identify and target those areas with the greatest need for improvement
  * Will be available for CLABSI, CAUTI, and CDI LabID event data
  * Will rank facilities or locations by the number of excess infections identified (calculated as cumulative attributable difference (CAD)).

Validation

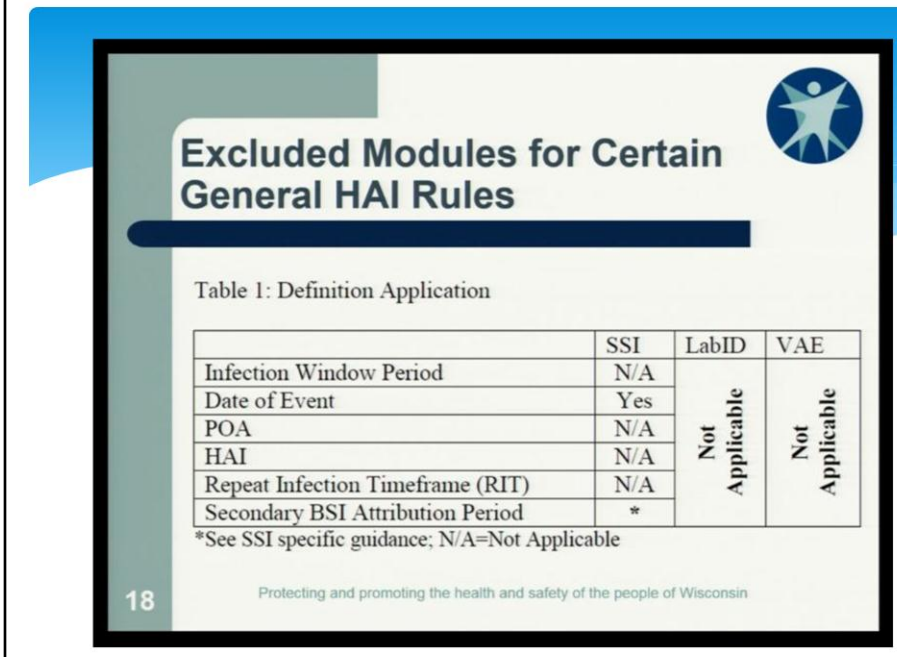
* The 2013 NHSN Data Validation Guidance and Toolkit includes standardized guidance for conducting both internal and external validation
  * Provides standardized methods for validating: ICU CLABSI, ICU CAUTI, COLO SSIs, HYST SSIs, MRSA Bacteremia LabID Events, and CDI LabID Events
  * Internal guidance: meant for facilities
  * External guidance: meant for state health departments or oversight agencies
  * Available at: www.cdc.gov/nhsn/validation

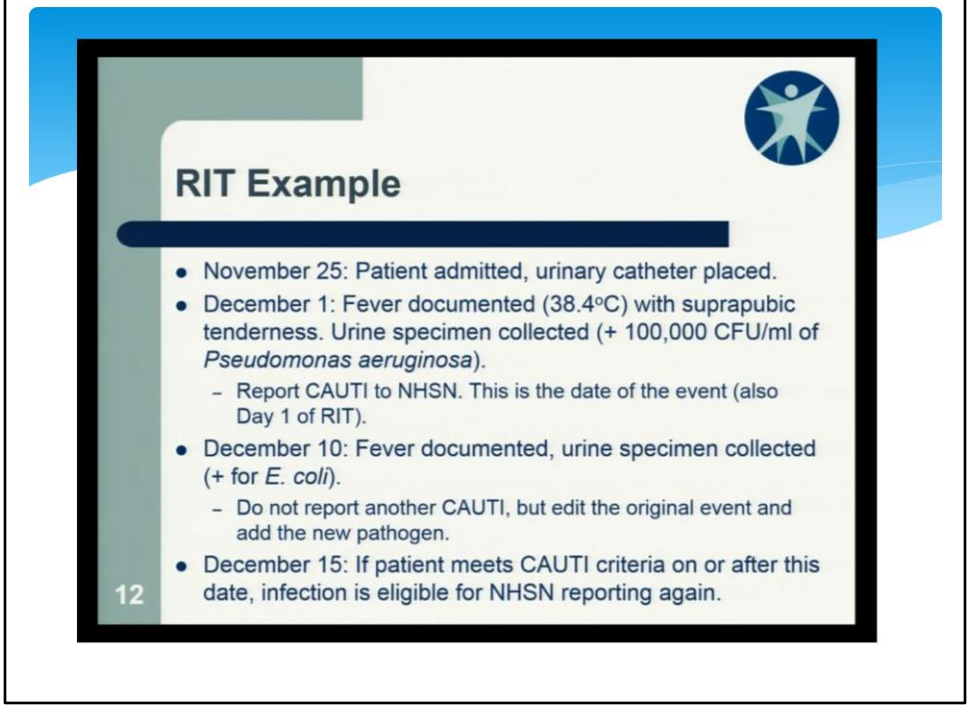
Healthcare Personnel Safety

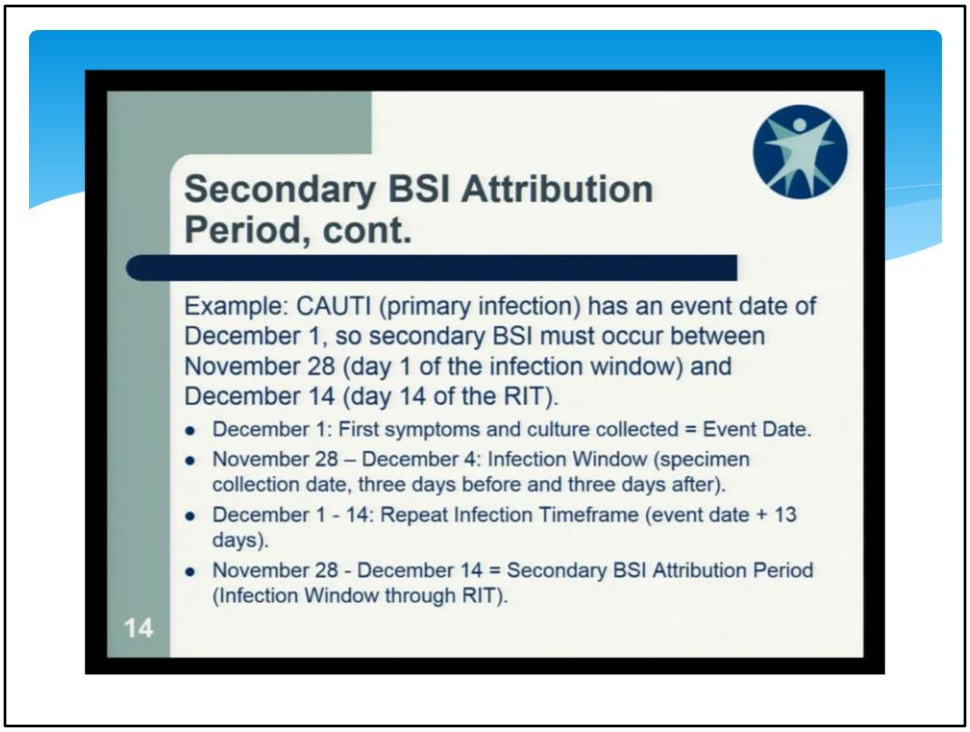
* CMS Reporting Deadline: May 15, 2015 for the October 1 – March 31 flu season.
  * Although vaccinations may be complete at your facility, vaccination status of any new healthcare workers will still need to be reported

Notes from Wisconsin

* Helpful chart for excluded modules for general HAI reporting, a RIT example, and a secondary BSI example


Excluded Modules for Certain General HAI Rules
Table 1: Definition Application
SSI
LabID
VAE
Infection Window Period
N/A
Date of Event
Yes
POA
N/A
HAI
N/A
Repeat Infection Timeframe (RIT)
N/A
Secondary BSI Attribution Period
*
Not Applicable
Not Applicable
*See SSI specific guidance; N/A=Not Applicable
18
Protecting and promoting the health and safety of the people of Wisconsin

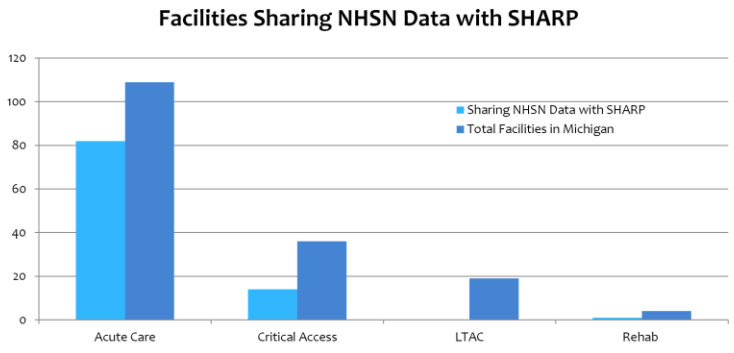

RIT Example
November 25: Patient admitted, urinary catheter placed.
December 1: Fever documented (38.4°C) with suprapubic tenderness. Urine specimen collected (+ 100,000 CFU/ml of Pseudomonas aeruginosa).
Report CAUTI to NHSN. This is the date of the event (also Day 1 of RIT).
December 10: Fever documented, urine specimen collected (+ for E. coli).
Do not report another CAUTI, but edit the original event and add the new pathogen.
December 15: If patient meets CAUTI criteria on or after this date, infection is eligible for NHSN reporting again.
12


Secondary BSI Attribution Period, cont.
Example: CAUTI (primary infection) has an event date of December 1, so secondary BSI must occur between November 28 (day 1 of the infection window) and December 14 (day 14 of the RIT).
December 1: First symptoms and culture collected = Event Date.
November 28 – December 4: Infection Window (specimen collection date, three days before and three days after).
December 1 - 14: Repeat Infection Timeframe (event date + 13 days).
November 28 - December 14 = Secondary BSI Attribution Period (Infection Window through RIT).
14

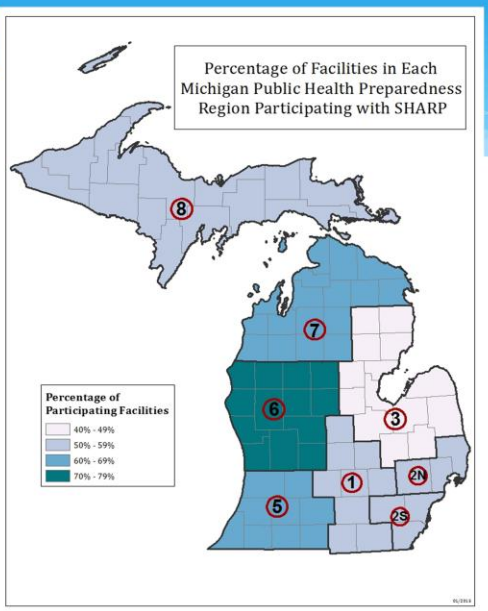
2013 MI HAI Surveillance Report

Note: Report is not final; tables and graphs subject to change

2013 MI HAI Surveillance Report



2013 MI HAI Surveillance Report



2013 MI HAI Surveillance Report

Table 9.

Cumulative Michigan MRSA Rate

	Facilities	Number of MRSA Events	Number of Patient Days	Number of Patient Admits/Encounters	MRSA Rate[1]	MRSA Prevalence Rate[2]
2013 H2 Data						
MRSA Inpatient LabID[3]	86	2,231 LabID[4]	2,328,801	549,648 Admits	0.9580	0.4059
MRSA Bacteremia LabID[5]	86	818 LabID	2,328,801	549,648 Admits	0.3513	0.1488
MRSA Outpatient LabID[6]	10	237 LabID	-----	224,163Encounters	0.1057	-----
2013 Annual Data						
MRSA Inpatient LabID	86	4,420 LabID	4,741,962	1,108,483 Admits	0.9321↓	0.3987↓
MRSA Bacteremia LabID	86	1,690 LabID	4,741,962	1,108,483 Admits	0.3564	0.1525
MRSA Outpatient LabID	10	507 LabID	-----	406,157Encounters	0.1248↓	-----

Michigan Data

[1]MRSA Rate: Methicillin-Resistant *Staphylococcus aureus* (MRSA) rate. This is the number of MRSA LabID Events or surveillance infections per 1,000 patient days.

[2]MRSA Prevalence Rate. This is the number of MRSA LabID Events per 100 patients admitted or 100 encounters.

[3]MRSA Lab ID: MRSA Laboratory-Identified (LabID) Event. This is an option within the Multidrug-Resistant Organism / *Clostridium difficile* Infection (MDRO/CDI) Module of NHSN for tracking laboratory results without conducting additional surveillance for infections.

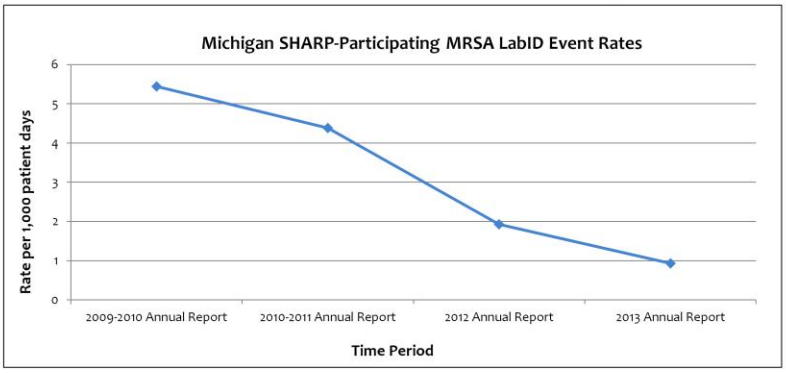
[4]The number of MRSA LabID Events indicated in this table is less than the number of MRSA LabID Events indicated in Table 7. This is because events used to calculate a rate required denominator data (patient days and/or admissions). Those without denominator data were excluded from the calculation.

[5]MRSA bacteremia LabID: MRSA LabID event from a blood specimen

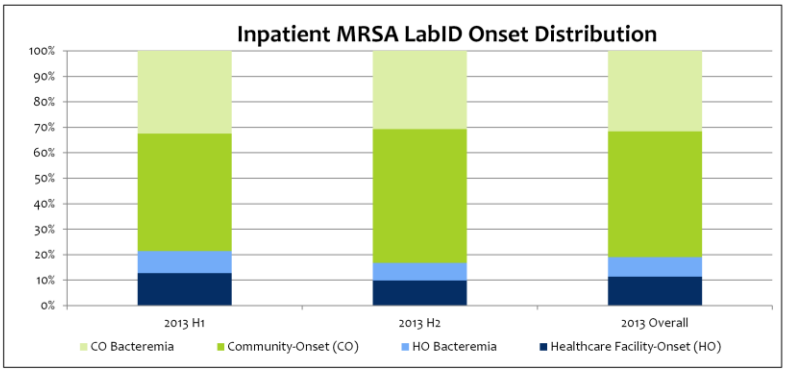
[6]MRSA outpatient LabID: MRSA LabID event taken in an outpatient location, and reported only if the hospital is reporting outpatient events. These events are also reported in inpatient location, and are attributed to the admitting location.

↓ or ↑ indicates statistically significantly less than or greater than previous year (respectively). Significance testing was only performed on annual data, comparing 2013 annual data to 2012 annual data.

2013 MI HAI Surveillance Report



2013 MI HAI Surveillance Report



2013 MI HAI Surveillance Report

Table 11.

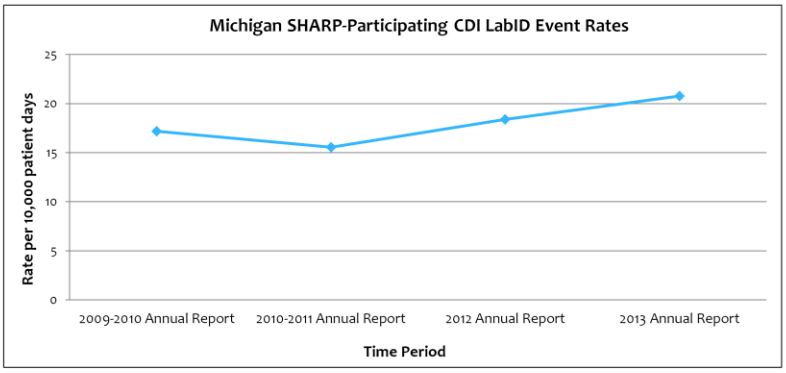
Cumulative Michigan CDI Rate

	Facilities	Number of CDI Events	Number of Patient Days	Number of Patient Admits/Encounters	CDI Rate[1]	CDI Prevalence Rate[2]
2013 H2 Data						
CDI Inpatient LabID[3]	86	4,418 LabID[4]	2,163,459	512,581 Admits	20.4210	0.8619
CDI Outpatient LabID[5]	10	155 LabID	-----	223,300Encounters	0.0694	-----
2013 Annual Data						
CDI Inpatient LabID	86	9,159 LabID	4,408,069	1,031,671 Admits	20.7778↑	0.8878↑
CDI Outpatient LabID	10	307 LabID	-----	402,996Encounters	0.0762↑	-----

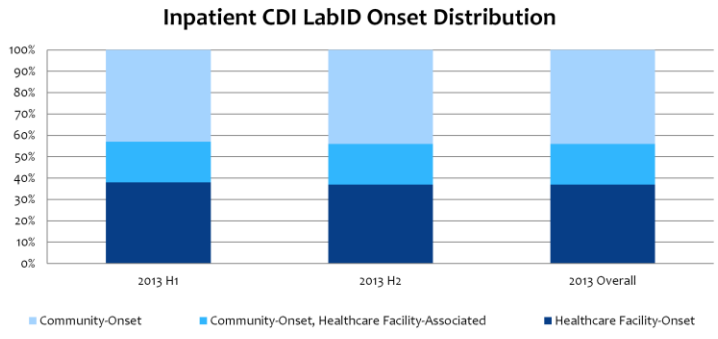
Michigan Data

[1]CDI Rate: *Clostridium difficile* rate. This is the number of CDI LabID or surveillance events per 10,000 patient days.
[2]CDI Prevalence Rate. This is the number of *C. diff* LabID events per 100 patients admitted or per 100 encounters.
[3]CDI Lab ID: *Clostridium difficile* Infection (CDI) Laboratory-Identified (LabID) Event. This is an option within the Multidrug-Resistant Organism / *Clostridium difficile* Infection (MDRO/CDI) Module of NHSN for tracking laboratory results without conducting additional surveillance for infections.
[4]The number of CDI LabID Events indicated in this table is less than the number of CDI LabID Events indicated in Table 8. This is because events used to calculate a rate required denominator data (patient days and/or admissions). Those without denominator data were excluded from the calculation.
[5]CDI outpatient LabID: CDI LabID event specimen collected in an outpatient location, and reported only if the hospital is reporting outpatient events. If a patient is then admitted as an inpatient, these events are also reported as inpatient events, and are attributed to the admitting location.
↓ or ↑Indicates statistically significantly less than or greater than previous year (respectively). Significance testing was only performed on annual data, comparing 2013 annual data to 2012 annual data.

2013 MI HAI Surveillance Report



2013 MI HAI Surveillance Report



2013 MI HAI Surveillance Report

Table 14.

MDRO/CDI Standardized Infection Ratios (SIR)

Type of Infection	Facilities	Patient Days	Observed[1]	Predicted[2]	MI SIR[3]	MI p-value	MI 95% CI[4]
2013 H2 Data							
MRSA Bac LabID[5]	83	2,299,821	147	168.1274	0.874	0.1069	0.741, 1.025
C.diff LabID[6]	83	2,142,014	1,588	1785.859	0.889	<0.0001	0.846, 0.934
2013 Annual Data							
MRSA Bac LabID	83	4,689,042	327	341.5245	0.957	0.4502	0.858, 1.066
C.diff LabID	83	4,364,348	3,378	3641.14	0.928	<0.0001	0.897, 0.959

Michigan Data **US Data**

Highlight: Indicates significantly fewer infections than expected

Highlight: Indicates significantly more infections than expected

[1]Observed: Number of infections reported during the time frame.

[2]Predicted: The number of infections predicted based on the type of hospital unit(s) under surveillance.

[3]SIR: Standardized Infection Ratio: Ratio of observed events compared to the number of predicted events, accounting for unit type or procedure. An SIR of 1 can be interpreted as having the same number of events that were predicted. An SIR that is between 0 and 1 represents **fewer** events than predicted, while an SIR of greater than 1 represents **more** events than expected.

[4]95% CI: 95% confidence interval around the SIR estimate. A 95% CI indicates that 95% of the time, the actual SIR will fall within this interval.

[5]MRSA Bacteremia LabID: Inpatient facility-wide MRSA bacteremia Laboratory-identified Event

[6]Clostridium difficile LabID: Inpatient facility-wide Clostridium difficile Laboratory-identified Event

↓ or ↑ Indicates statistically significantly less than or greater than previous year (respectively). Significance testing was only performed on annual data, comparing 2013 annual data to 2012 annual data.

2013 MI HAI Surveillance Report

Table 17.

Device Standardized Infection Ratios (SIR)

Type of Infection	Number Facilities	Device Days	Observed[1]	Predicted[2]	MI SIR[3]	MI SIR p-value[4]	MI 95% CI[5]	US SIR[6]	US 95% CI[7]
2013 H2 Data									
CAUTI[8]	86	197,534	539	431.8226	1.248	<0.0001	1.146, 1.357	TBA	TBA
CLABSI[9]	83	182,853	177	384.5512	0.460	<0.0001	0.396, 0.532	TBA	TBA
CLABSI ICU	83	165,474	156	340.9259	0.458	<0.0001	0.390, 0.534	TBA	TBA
CLABSI NICU	17	17,379	21	43.6253	0.481	0.0002	0.306, 0.723	TBA	TBA
2013 Annual Data									
CAUTI[8]	86	403,843	1,108	879.7258	1.259↑	<0.0001	1.187, 1.335	TBA	TBA
CLABSI[9]	83	376,438	344	788.362	0.436	<0.0001	0.392, 0.484	TBA	TBA
CLABSI ICU	83	341,589	300	703.1017	0.427	<0.0001	0.380, 0.477	TBA	TBA
CLABSI NICU	17	34,849	44	85.2603	0.516	<0.0001	0.380, 0.687	TBA	TBA

Michigan Data US Data

Highlight: Indicates significantly fewer infections than expected

Highlight: Indicates significantly more infections than expected

[1]Observed: Number of infections (CAUTI or CLABSIs) reported during the time frame.

[2]Predicted: The number of CAUTIs or CLABSIs predicted based on the type of hospital unit(s) under surveillance.

[3]SIR: Standardized Infection Ratio: Ratio of observed events compared to the number of predicted events, accounting for unit type or procedure. An SIR of 1 can be interpreted as having the same number of events that were predicted. An SIR that is between 0 and 1 represents **fewer** events than predicted, while an SIR of greater than 1 represents **more** events than expected. ↑: significant SIR increase from previous annual report, ↓: significant SIR decrease from previous annual report. Note: only annual comparisons were made.

[4]P-value: An SIR p-value of <0.05 is considered significantly different than expected. It can show either significantly more infections (if the SIR is greater than 1 and the p-value is <0.05) or significantly fewer infections (if the SIR is less than 1 and the p-value is <0.05).

[5]95% CI: 95% confidence interval around the SIR estimate. A 95% CI indicates that 95% of the time, the actual SIR will fall within this interval.

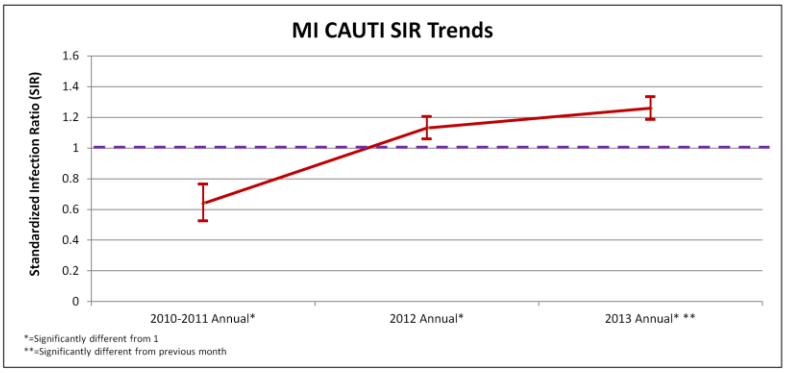
[6]US SIR taken from the National and State Healthcare-Associated Infections Standardized Infection Ratio Report, January-December 2012

[7]US 95% CI taken from the Nation and State Healthcare-Associated Infections Standardized Infection Ratio Report, January-December 2012

[8]CAUTI: Catheter-Associated Urinary Tract Infection

[9]CLABSI: Central Line-Associated Blood Stream Infection

2013 MI HAI Surveillance Report



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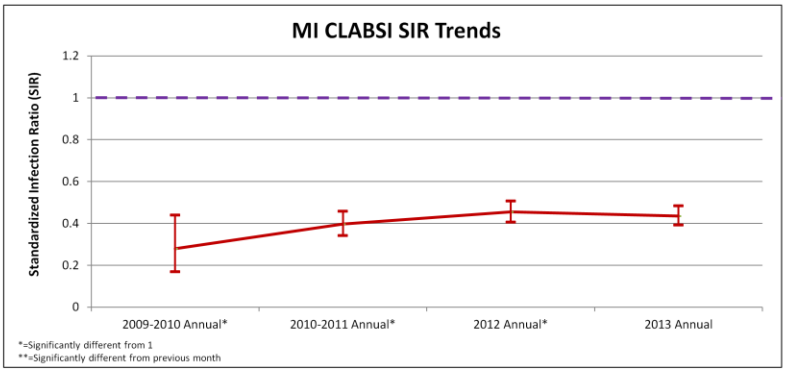

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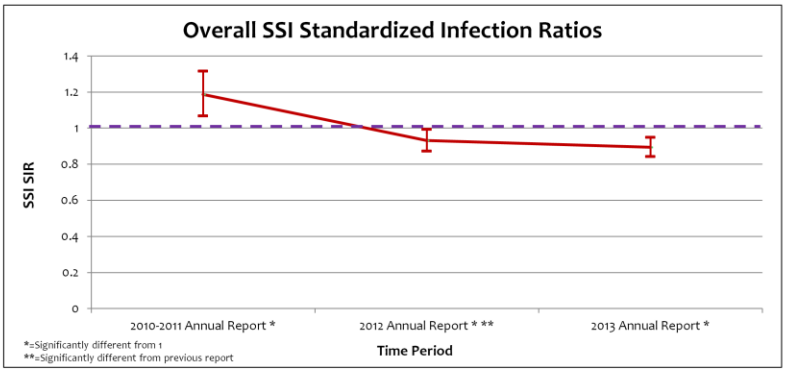

2013 MI HAI Surveillance Report

Table 20.

MDRO Rates[1] and SIR by Facility Type

Facility Type	MDRO Infection Type (number of hospitals)	Rate	CO Rate[2] (%CO)	SIR[3]	SIR p-value[4]	SIR 95% Confidence Interval[5]
2013 H2 Data						
Teaching	MRSA LabID[6] (46)	0.8688	0.2940 (78)	0.902	0.2366	0.760, 1.062
	CDI LabID[7] (46)	20.4530	0.3684 (42)	0.909	0.0002	0.863, 0.957
Non-Teaching	MRSA LabID (39)	1.4464	0.4759 (87)	0.547	0.0232	0.296, 0.929
	CDI LabID (39)	20.9186	0.4200 (53)	0.766	0.0001	0.665, 0.878
2013 Annual Data						
Teaching	MRSA LabID (46)	0.8455↓	0.2790 (76)	0.987	0.8417	0.881, 1.102
	CDI LabID (46)	20.8071↑	0.3721 (41)	0.947	0.0023	0.913, 0.981
Non-Teaching	MRSA LabID (39)	1.4037↓	0.4564 (84)	0.614	0.0064	0.413, 0.880
	CDI LabID (39)	21.2614↑	0.4379 (53)	0.803	<0.0001	0.730, 0.881

Michigan Data

Highlight: Indicates significantly fewer infections than expected Highlight: Indicates significantly more infections than expected

[1]Rates were calculated using the number of infections/events per 1,000 (or per 10,000 for CDI) patient days or device days according to the same MI rate shown in Tables 9–14 among hospitals that shared data with MDCH SHARP through the NHSN. Note: MRSA LabID rates include all specimen types.

[2]CO Rate: Community Onset Rate, (%CO): Percent of LabID events that were community onset

[3]SIR: Standardized Infection Ratio: Ratio of observed events compared to the number of predicted events, accounting for unit type or procedure. An SIR of 1 can be interpreted as having the same number of events that were predicted. An SIR that is between 0 and 1 represents **fewer** events than predicted, while an SIR of greater than 1 represents **more** events than expected. Note: MRSA LabID SIRs only include blood specimens.

[4]P-value: An SIR p-value of <0.05 is considered significantly different than expected. It can show either significantly more infections (if the SIR is greater than 1 and the p-value is <0.05) or significantly fewer (if the SIR is less than 1 and the p-value is <0.05).

[5]95% CI: 95% confidence interval around the SIR estimate. A 95% CI indicates that 95% of the time, the actual SIR will fall within this interval.

[6]MRSA LabID: Methicillin-Resistant *Staphylococcus aureus* (MRSA) Laboratory-identified (LabID) Event option within the Multidrug-Resistant Organism / *Clostridium difficile* Infection (MDRO/CDI) Module of NHSN for tracking MRSA laboratory results without conducting additional surveillance for infections.

[7]CDI LabID: *Clostridium difficile (C. diff)* Infection (CDI) LabID Event option within the MDRO/CDI Module of NHSN for tracking CDI laboratory results without conducting additional surveillance for infections.

↑: significant rate or SIR increase from previous annual report, ↓: significant rate or SIR decrease from previous annual report.

2013 MI HAI Surveillance Report

Table 21.

Device Rates[1] and SIR by Facility Type

Facility Type	Device-Associated Infection	Rate (Number of Hospitals)	US Rate[2]	SIR[3]	SIR p-value[4]	SIR 95% Confidence Interval[5]
2013 H2 Data						
Teaching	CAUTI[6]	2.7828 (47)	1.8547	1.336	<0.0001	1.222, 1.457
	CLABSI[7]	0.8608 (46)	0.9599	0.469	<0.0001	0.402, 0.544
	Total VAE[8]	5.9439 (34)	-----	-----	-----	-----
Non-Teaching	CAUTI	1.3209 (39)	1.4261	0.819	0.1908	0.598, 1.097
	CLABSI	0.6090(35)	0.8928	0.307	<0.0001	0.150, 0.563
	Total VAE	3.0982 (23)	-----	-----	-----	-----
2013 Annual Data						
Teaching	CAUTI	2.8571 (47) ↑	1.8039	1.355↑	<0.0001	1.274, 1.439
	CLABSI	0.8308 (46)	0.9504	0.436	<0.0001	0.390, 0.486
	Total VAE	6.1423 (37)	-----	-----	-----	-----
Non-Teaching	CAUTI	1.3249 (39) ↓	1.4261	0.752	0.0081	0.601, 0.932
	CLABSI	0.8100 (36)	0.8927	0.411	<0.0001	0.272, 0.598
	Total VAE	3.2546 (25)	-----	-----	-----	-----

US Data Michigan Data

Highlight: Indicates significantly fewer infections than expected Highlight: Indicates significantly more infections than expected

[1]Rates were calculated using the number of infections/events per 1,000 device days according to the same MI rate shown in Tables 9-14 among hospitals that shared data with MDCH SHARP through the NHSN.

[2] The US comparative rates were calculated from a pooled mean using data from the national estimate on the National Healthcare Safety Network (NHSN). This is according to 2010 NHSN data (Am J Infect Control 2011;39:798-816).These data are for a descriptive reference only, and do not necessarily represent the true national rate. Each rate is individually matched to the Michigan data by facility type and unit type, then aggregated into an overall rate.

[3]SIR: Standardized Infection Ratio: Ratio of observed events compared to the number of predicted events, accounting for unit type or procedure. An SIR of 1 can be interpreted as having the same number of events that were predicted. An SIR that is between 0 and 1 represents **fewer** events than predicted, while an SIR of greater than 1 represents **more** events than expected.

[4]P-value: An SIR p-value of <0.05 is considered significantly different than expected. It can show either significantly more infections (if the SIR is greater than 1 and the p-value is <0.05) or significantly fewer (if the SIR is less than 1 and the p-value is <0.05).

[5]95% CI: 95% confidence interval around the SIR estimate. A 95% CI indicates that 95% of the time, the actual SIR will fall within this interval.

[6]CAUTI: Catheter-Associated Urinary Tract Infection

[7]CLABSI: Central Line-Associated Blood Stream Infection

[8]VAP: Ventilator-Associated Pneumonia

↑: significant rate or SIR increase from previous annual report, ↓: significant rate or SIR decrease from previous annual report.