

Your Hospital

Facility-Specific Annual Summary of Data Received by the Michigan Department of Community Health through the National Healthcare Safety Network (NHSN)

Created Month Day, Year

The Michigan Department of Community Health (MDCH) Surveillance for Healthcare-Associated & Resistant Pathogens (SHARP) 2009- 2010 Annual Report of Michigan healthcare-associated infection (HAI) surveillance and prevention activities has been published at www.michigan.gov/hai. The report contains de-identified, aggregated counts and rates collected through the Centers for Disease Control and Prevention's (CDC's) National Healthcare Safety Network (NHSN) and shared with MDCH SHARP in order to facilitate statewide trend monitoring.

We sincerely appreciate your facility's dedication to data collection and your efforts to share this data with us. Your hospital's data contributed to the results in the SHARP Annual Report, as well as our understanding of infections at a statewide level. In addition to the aggregate report, we'd like to provide you with your facility-specific rates. We hope that this provides valuable feedback for your facility and allows you to make comparisons with state and national level data, where available. The data contained in this report were created specifically for you and are intended for your use only; it will not be shared with nor distributed to others, as stated in our data use agreement with your hospital.

Date Signed Data Use Agreement: 1/1/2010

Facility Data included in the Michigan Annual 2009-2010 Report:

Date Range Included for Analysis: 10/1/2009 through 9/30/2010

Annual Survey Completed: 2009 2010

Rights conferred to the SHARP Unit:

- View Monthly Reporting Plan , Facility Survey Data , Facility Info
- Analyze
- View Gender, Date of Birth, Race, Ethnicity
- View Device-Associated Summary Data
(In and out of plan, for all locations, for all months entered)
- View Procedure Data
(In and out of plan, for Hip and Knee Prosthesis, as of Jan 2010)
- View Multidrug-Resistant Organism Summary Data
(In plan, for ICU, for all months entered)
- View Multidrug-Resistant Organism Events
(In plan, for ICU, for all months for MRSA, VRE, C. diff)

Device-Associated Modules:

Facility name of location: ICU		CDC Location: Inpatient, Acute, Critical Care, Med/Surg						
Infection Rates		Infections	Number of Device Days	Rate per 1,000 Device Days	MI Rate	NHSN Rate	Incidence Density p-value ¹	Incidence Density Percentile ²
CAUTI ³		1	1000	1.0	unavailable	unavailable	-	-
CLABSI ⁴		2	500	4.0	0.53	1.5	0.25	50
VAP ⁵		0	250	0.0	1.72	2.2	<0.0001	5
Device Utilization Ratios		Number of Patient Days	Number of Device Days	Device Utilization Ratio	MI Ratio	NHSN Ratio	Proportion p-value ¹	Proportion Percentile ²
Urinary Catheter		2000	1000	0.50	0.25	0.64	0.35	50
Central Line		2000	500	0.25	0.27	0.39	0.46	61
Ventilator		2000	250	0.13	0.25	0.29	0.02	13

■ Rate per 1,000 Device Days: Your facility's rate during the time period under review. Rate is calculated as the number of infections per 1,000 device days.

■ MI Rate: Overall Michigan rate calculated from all NHSN data shared with MDCH SHARP during the time period under review. Rate is calculated as the number of infections per 1,000 device days. Please reference the annual report to find more information as well as to see the rates stratified by variables of interest, such as unit type.

■ NHSN Rate: National rate calculated by the NHSN for similar units during the time period under review. Rate is calculated as the number of infections per 1,000 device days.

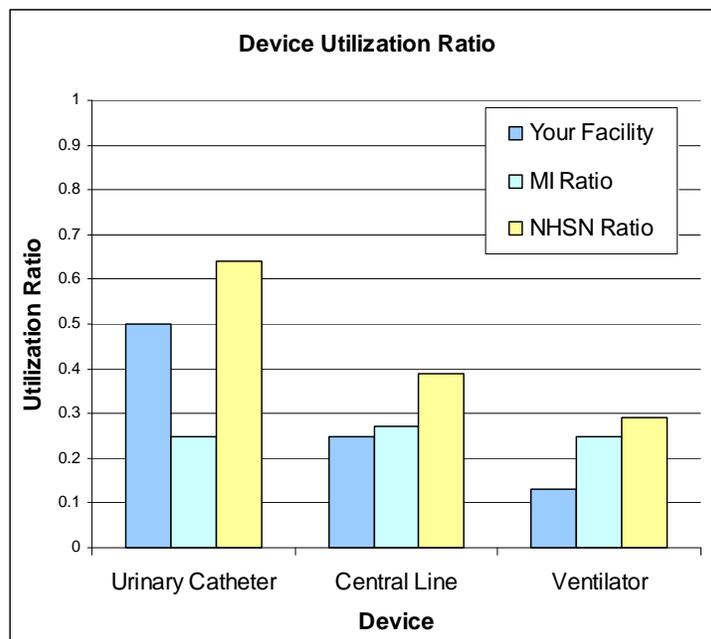
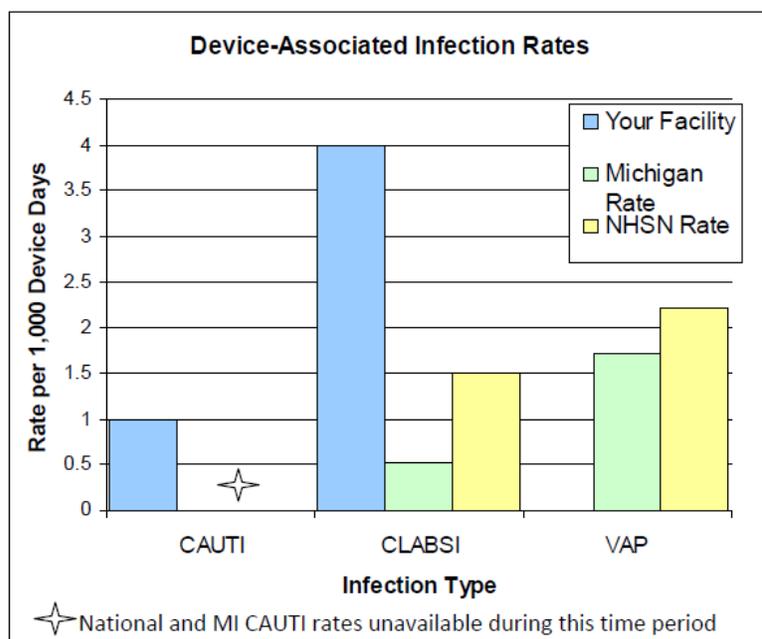
¹Incidence density p-value: the p-value for the infection rate at your facility compared to the national NHSN rate. P-values that are 0.05 or less are considered to be statistically significantly different than the national rate, and can be in either direction, higher or lower.

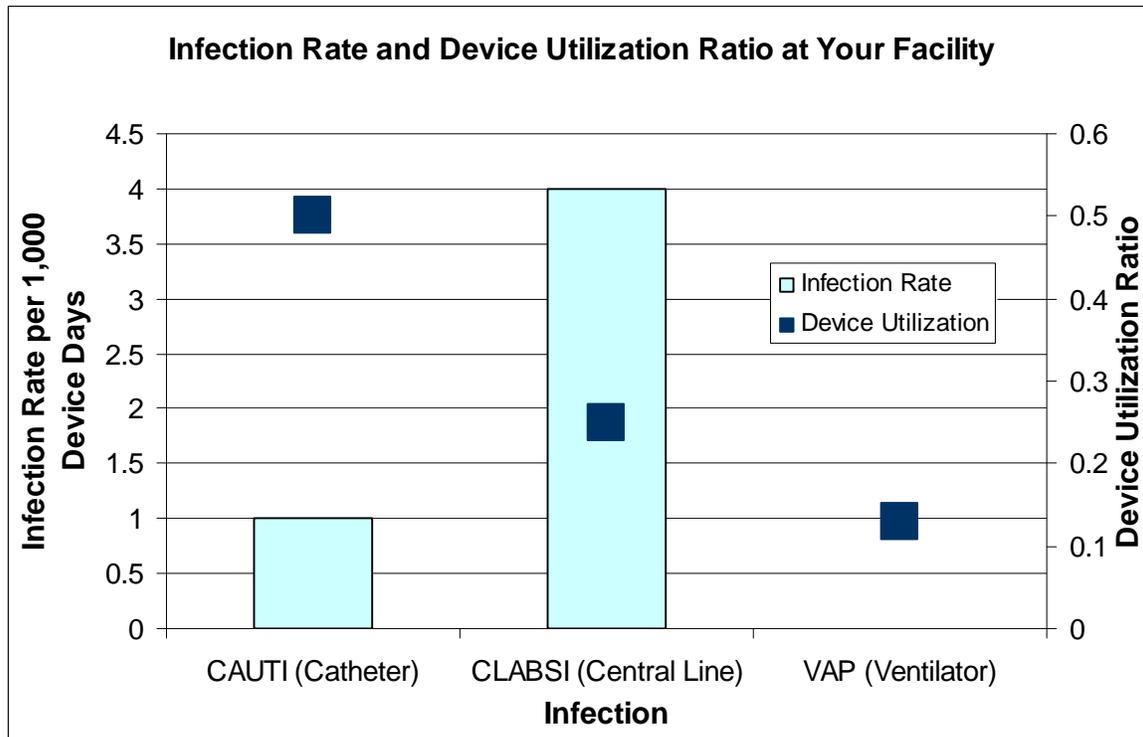
²Incidence density percentile: the percentile of your facility compared to all other hospitals nationwide. A percentile of 80 can be interpreted as 80% of hospitals having a lower infection rate. Thus, 20% of hospitals across the nation would have a higher rate of infection, while 80% would have a lower rate of infection than your facility. A low percentile is desirable.

³CAUTI: Catheter-associated urinary tract infection

⁴CLABSI: Central line-associated blood stream infection

⁵VAP: Ventilator-associated pneumonia





Procedure-Associated Modules:

Surgical Site Infections (SSI) - Overall					
Procedures done	Number of Infections ¹	Number of Predicted Infections	SIR ²	SIR-Associated p-value ³	SIR- Associated Confidence Interval ⁴
750	4	5.2	0.80	0.48	0.2, 1.4

Number of Predicted Infections: Calculated by the NHSN from national data for similar procedures. This is the number of infections your unit would expect based on the number and type of procedures being performed if you operated at the national infection rate.

Your facility's rates and associated statistics during the time period under review.

¹Number of Infections: includes only SSIs secondary to procedures for which aggregate data are available. Counted infections exclude 'Superficial Incisional Secondary (SIS)' and 'Deep Incisional Secondary (DIS)' SSIs.

²SIR: Standardized infection ratio. Compares the number of infections your facility had to the number of predicted infections. An SIR of 1 means that there were the same number of infections as predicted from the national rate. An SIR of less than 1 means the facility is having fewer infections than predicted. For example an SIR of 0.5 means that the facility had 50% fewer infections than would be predicted based on procedures. Similarly, an SIR greater than 1 is an elevated number of infections at the facility. For example, an SIR of 1.25 may be interpreted as 25% more infections that were predicted.

³SIR-Associated p-value: Probability of the SIR being attributable to chance. If equal to or less than 0.05, the result is considered statistically significant.

⁴SIR-Associated Confidence Interval: Lower bound of 95% Confidence Interval is only calculated if the number of all infections > zero. SIR values only calculated if number of predicted infections >= 1.

Surgical Site Infections (SSI) by Procedure Type							
Procedure	Number of Procedures	Number of Infections ¹	Number of predicted Infections	SSI rate by Procedure (per 100)	SIR ²	SIR-Associated p-value ³	SIR-Associated Confidence Interval ⁴
HPRO ⁵	300	2	1.2	0.67	1.7	0.26	0.8, 2.5
KPRO ⁶	450	2	3.8	0.44	0.7	0.66	0.2, 1.5

Number of Predicted Infections: Calculated by the NHSN from national data for similar procedures. This is the number of infections your unit would expect based on the number and type of procedures being performed if you operated at the national infection rate.

Your facility's rates and associated statistics during the time period under review.

¹Number of Infections: includes only SSIs secondary to procedures for which aggregate data are available. Counted infections exclude 'Superficial Incisional Secondary (SIS)' and 'Deep Incisional Secondary (DIS)' SSIs.

²SIR: Standardized infection ratio. Compares the number of infections your facility had to the number of predicted infections. An SIR of 1 means that there were the same number of infections as predicted from the national rate. An SIR of less than 1 means the facility is having fewer infections than predicted. For example an SIR of 0.5 means that the facility had 50% fewer infections than would be predicted based on procedures. Similarly, an SIR greater than 1 is an elevated number of infections at the facility. For example, an SIR of 1.25 may be interpreted as 25% more infections that were predicted.

³SIR-Associated p-value: Probability of the SIR being attributable to chance. If equal to or less than 0.05, the result is considered statistically significant.

⁴SIR-Associated Confidence Interval: Lower bound of 95% Confidence Interval is only calculated if the number of all infections > zero. SIR values only calculated if number of predicted infections >= 1.

⁵HPRO: Hip Prosthesis

⁶KPRO: Knee Prosthesis

Post Procedure Pneumonia (PPP)						
Procedure	Number of PPP	Number of Procedures	Facility rate of PPP per 100 procedures	National rate of PPP per 100 procedures	p-value ¹	Percentile ²
HPRO ³	1	300	0.33	0.17	0.65	86
HYST ⁴	0	200	0.00	0.06	0.23	5
KPRO ⁵	0	450	0.00	0.06	0.16	10
LAM ⁶	3	600	0.50	0.05	0.00	79

Your facility's rate during the time period under review.

NHSN Data: National rate, calculated by the NHSN, can be used for comparison for your unit to the national infection rate.

¹p-value: Probability that the difference between the infection rate at your facility and the national NHSN rate is attributable to chance. If equal to or less than 0.05, the result is considered statistically significant.

²Percentile: The percentile of your facility compared to all other hospitals nationwide. A percentile of 80 can be interpreted as 80% of hospitals having a lower infection rate. Thus, 20% of hospitals across the nation would have a higher rate of infection, while 80% would have a lower rate of infection than your facility. A low percentile is desirable.

³HPRO: Hip Prosthesis

⁴HYST: Hysterectomy

⁵KPRO: Knee Prosthesis

⁶LAM: Laminectomy

Multidrug-Resistant Organism Module:

Infections Surveillance: MRSA					
	MRSA Events	Num Patient Days	MRSA Rate	MI Rate	
ICU	1	250	4.0		unavailable
SICU	2	1000	2.0		unavailable
Ward	0	2222	0.0		unavailable

Your facility's rate per 1,000 patient days during the time period under review.
 Overall MI rate was calculated from all NHSN reports shared with MDCH during the time period. Please reference the annual report to find more information as well as to see the rates stratified by variables, such as unit type.

Infections Surveillance: C. difficile					
	C. diff Events	Num Patient Days	C. diff Rate	MI Rate	
ICU	2	250	80.0		unavailable
SICU	2	1000	20.0		unavailable
Ward	5	2222	22.5		unavailable

Your facility's rate per 10,000 patient days during the time period under review.
 Overall MI rate was calculated from all NHSN reports shared with MDCH during the time period. Please reference the annual report to find more information as well as to see the rates stratified by variables, such as unit type.

No events reported during this time frame for the following Infection Surveillance targets:

- Methicillin-sensitive *Staphylococcus aureus* (MSSA)
- Vancomycin-resistant *Enterococcus* (VRE)
- *Klebsiella*
- *Acinetobacter*

LabID Events: MRSA						
	MRSA LabID Events	Num Patient Admits	Num Patient Days	MRSA Prev. Rate ¹	MRSA LabID Rate ²	MI MRSA LabID Rate ²
ICU	8	500	1234	1.6	6.5	5.4
Ward	10	1000	5678	1.0	1.8	5.4

Your facility's rate during the time period under review.
 Overall MI rate was calculated from all NHSN reports shared with MDCH during the time period. Please reference the annual report to find more information as well as to see the rates stratified by variables, such as unit type.

¹MRSA Prevalence Rate: The proportion of patients with MRSA LabID events per 100 patients admitted. Found by taking the number of LabID events divided by the number of patients admitted, multiplied by 100.

²MRSA LabID Rate: Is the rate of LabID Events per 1,000 patient days. Found by taking the number of LabID events divided by the number of patient days, multiplied by 1,000.

LabID Events: C. difficile						
				Inpatient, Acute, Critical Care, Medical Surgical Unit		
	C. diff LabID Events	Num Patient Admits	Num Patient Days	C.diff Prev. Rate ¹	C. diff LabID Rate ²	MI C. diff LabID Rate ²
ICU	20	3000	2244	0.7	89.1	17.0

Your facility's rate during the time period under review.
 Overall MI rate was calculated from all NHSN reports shared with MDCH during the time period. Please reference the annual report to find more information as well as to see the rates stratified by variables, such as unit type.

¹C. diff Prevalence Rate: The proportion of patients with C.diff LabID events per 100 patients admitted. Found by taking the number of LabID events divided by the number of patients admitted, multiplied by 100.

²C.diff LabID Rate: Is the rate of LabID Events per 10,000 patient days. Found by taking the number of LabID events divided by the number of patient days, multiplied by 10,000.

No events reported during this time frame for the following Laboratory-Identified (LabID) event targets:

- Methicillin-sensitive *Staphylococcus aureus* (MSSA)
- Vancomycin-resistant *Enterococcus* (VRE)
- *Klebsiella*
- *Acinetobacter*

No events reported during this time frame for the following MDRO Module Process Measures:

- Specific Processes
- Methicillin-resistant *Staphylococcus aureus* (MRSA) Active Surveillance Testing (AST)
- Vancomycin-resistant *Enterococcus* (VRE) Active Surveillance Testing (AST)

No events reported during this time frame for the following MDRO Module Outcome Measures:

- Specific Processes
- Methicillin-resistant *Staphylococcus aureus* (MRSA) Active Surveillance Testing (AST)
- Vancomycin-resistant *Enterococcus* (VRE) Active Surveillance Testing (AST)

Discussion:

Your facility has reported this many device-associated infections from these units; this is similar to the state rate and the national rate. Here's some more analysis of what the data means. Your surgical site infections looked like this. This is what we would expect, your rates are right on target or lower or higher than expected compared to similar units. Your facility also conducted surveillance on these organisms and your rates are as follows. Your rates compared to other Michigan facilities were this, and compared to national rates were like that. Some more analysis of all the surveillance you've conducted and what we have rights conferred to see.

Best wishes in your continued efforts towards eliminating healthcare-associated infections! If there is anything which would be helpful for you to receive in future facility-specific reports, please let MDCH SHARP know. Thank you for your continued support of our surveillance activities!

The SHARP Unit

2009-2010 Sample Individual Facility Report
March 17, 2011