



HEALTHCARE
ASSOCIATED
INFECTIONS
PROGRESS

MICHIGAN

ACUTE CARE HOSPITALS



Healthcare-associated infections (HAIs) are infections patients can get while receiving medical treatment in a healthcare facility. Working toward the elimination of HAIs is a CDC priority. The standardized infection ratio (SIR) is a summary statistic that can be used to track HAI prevention progress over time; lower SIRs are better. The infection data are reported to CDC's National Healthcare Safety Network (NHSN). HAI data for nearly all U.S. hospitals are published on the Hospital Compare website. This report is based on 2014 data, published in 2016.

CLABSIs

↓ 60% LOWER COMPARED TO NAT'L BASELINE*

CENTRAL LINE-ASSOCIATED BLOODSTREAM INFECTIONS

When a tube is placed in a large vein and not put in correctly or kept clean, it can become a way for germs to enter the body and cause deadly infections in the blood.

- Michigan hospitals reported no significant change in CLABSIs between 2013 and 2014.
- 9% Among the 61 hospitals in Michigan with enough data to calculate an SIR, 9% had an SIR significantly higher (worse) than 0.50, the value of the national SIR.

CAUTIs

↑ 15% HIGHER COMPARED TO NAT'L BASELINE*

CATHETER-ASSOCIATED URINARY TRACT INFECTIONS

When a urinary catheter is not put in correctly, not kept clean, or left in a patient for too long, germs can travel through the catheter and infect the bladder and kidneys.

- Michigan hospitals reported no significant change in CAUTIs between 2013 and 2014.
- 21% Among the 77 hospitals in Michigan with enough data to calculate an SIR, 21% had an SIR significantly higher (worse) than 1.00, the value of the national SIR.

MRSA Bacteremia

↓ 3% LOWER COMPARED TO NAT'L BASELINE

LABORATORY IDENTIFIED HOSPITAL-ONSET BLOODSTREAM INFECTIONS

Methicillin-resistant *Staphylococcus aureus* (MRSA) is bacteria usually spread by contaminated hands. In a healthcare setting, such as a hospital, MRSA can cause serious bloodstream infections.

- Michigan hospitals reported no significant change in MRSA bacteremia between 2013 and 2014.
- 16% Among the 55 hospitals in Michigan with enough data to calculate an SIR, 16% had an SIR significantly higher (worse) than 0.87, the value of the national SIR.

SSIs

SURGICAL SITE INFECTIONS

When germs get into an area where surgery is or was performed, patients can get a **surgical site infection**. Sometimes these infections involve only the skin. Other SSIs can involve tissues under the skin, organs, or implanted material.

SSI: Abdominal Hysterectomy ↑ 8% HIGHER COMPARED TO NAT'L BASELINE

- Michigan hospitals reported no significant change in SSIs related to abdominal hysterectomy surgery between 2013 and 2014.
- 15% Among the 27 hospitals in Michigan with enough data to calculate an SIR, 15% had an SIR significantly higher (worse) than 0.83, the value of the national SIR.

SSI: Colon Surgery ↑ 22% HIGHER COMPARED TO NAT'L BASELINE*

- Michigan hospitals reported a significant increase in SSIs related to colon surgery between 2013 and 2014.
- 18% Among the 57 hospitals in Michigan with enough data to calculate an SIR, 18% had an SIR significantly higher (worse) than 0.98, the value of the national SIR.

C. difficile Infections

↓ 9% LOWER COMPARED TO NAT'L BASELINE*

LABORATORY IDENTIFIED HOSPITAL-ONSET C. DIFFICILE INFECTIONS

When a person takes antibiotics, good bacteria that protect against infection are destroyed for several months. During this time, patients can get sick from *Clostridium difficile* (*C. difficile*), bacteria that cause potentially deadly diarrhea, which can be spread in healthcare settings.

- Michigan hospitals reported no significant change in *C. difficile* infections between 2013 and 2014.
- 11% Among the 95 hospitals in Michigan with enough data to calculate an SIR, 11% had an SIR significantly higher (worse) than 0.92, the value of the national SIR.

*Statistically significant





MICHIGAN

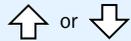
HEALTHCARE ASSOCIATED INFECTIONS PROGRESS



LEGEND



2014 state SIR is significantly lower (better) than comparison group in column header



Change in 2014 state SIR compared to group in column header is not statistically significant



2014 state SIR is significantly higher (worse) than comparison group in column header



2014 state SIR cannot be calculated

Learn how your hospital is performing: www.medicare.gov/hospitalcompare
For additional information:

- 2014 HAI Progress Report: www.cdc.gov/hai/progress-report/
- NHSN: www.cdc.gov/nhsn
- HAIs and prevention activities in Michigan: www.michigan.gov/hai
- Michigan validation efforts: www.cdc.gov/hai/pdfs/state-progress-landscape.pdf



ACUTE CARE HOSPITALS

Healthcare-associated infection (HAI) data give healthcare facilities and public health agencies knowledge to design, implement, and evaluate HAI prevention efforts.

HAI TYPE	# OF MICHIGAN HOSPITALS THAT REPORTED DATA TO CDC'S NHSN, 2014 ⁺ Total Hospitals in Michigan: 149	2014 STATE SIR vs. 2013 State SIR	2014 STATE SIR vs. 2014 Nat'l SIR	2014 STATE SIR vs. Nat'l Baseline [‡]	2014 STATE SIR	2014 NAT'L SIR
CLABSI Nat'l Baseline: 2008	98	↓ 6%	↓ 19%	↓ 60%	0.40	0.50
CAUTI Nat'l Baseline: 2009	102	↓ 6%	↑ 16%	↑ 15%	1.15	1.00
SSI, Abdominal Hysterectomy Nat'l Baseline: 2008	86	↓ 11%	↑ 32%	↑ 8%	1.08	0.83
SSI, Colon Surgery Nat'l Baseline: 2008	93	↑ 16%	↑ 26%	↑ 22%	1.22	0.98
MRSA Bacteremia Nat'l Baseline: 2011	102	↑ < 1%	↑ 12%	↓ 3%	0.97	0.87
C. difficile Infections Nat'l Baseline: 2011	101	↑ 2%	↓ 1%	↓ 9%	0.91	0.92

⁺The number of hospitals that reported to NHSN and are included in the SIR calculation. This number may vary across HAI types; for example, some hospitals do not use central lines or urinary catheters, or do not perform colon or abdominal hysterectomy surgeries.

For additional data points, refer to the technical data tables.

[‡]Nat'l baseline time period varies by HAI type. See first column of this table for specifics.

WHAT IS THE STANDARDIZED INFECTION RATIO?

The **standardized infection ratio (SIR)** is a summary statistic that can be used to track HAI prevention progress over time; lower SIRs are better. The SIR for a facility or state is adjusted to account for factors that might cause infection rates to be higher or lower, such as hospital size, teaching status, the type of patients a hospital serves, and surgery and patient characteristics.

WHAT IS MICHIGAN DOING TO PREVENT HEALTHCARE-ASSOCIATED INFECTIONS?

Prevention efforts to reduce specific HAIs:

- Central line-associated bloodstream infections
- Catheter-associated urinary tract infections
- Surgical site infections
- Multidrug-resistant infections (MRSA, *C. difficile*, CRE)
- Ventilator-associated events

- Long-term care facilities
- Hand hygiene
- Antibiotic stewardship
- Healthcare personnel influenza vaccination
- Targeted Assessment for Prevention (TAP) strategy

For prevention effort details, see glossary.