Missouri Harm Dashboards

The Missouri Hospital Association, in collaboration with hospital members, began producing three healthcare-associated infection harm dashboards in March 2018. The harm dashboards track catheter-associated urinary tract infections, central line-associated bloodstream infections and *Clostridium difficile* infection. Each of these infections are largely preventable with well-established evidence-based practices shown to decrease infection risk and incidence, regardless of care location.[i] Given that infections contracted during a hospital stay are a significant cause of death in the U.S.[ii], Missouri hospitals have an opportunity to increase the pace of reducing these infections to zero across the state. By taking a zero tolerance approach to HAIs, hospitals can improve not only patient safety, but also the financial position of the organization.[iii]

The intent of the Missouri Harm Dashboards is two-fold.

1. Use modified data transparency to inspire a statewide drive toward zero harm.
2. Provide hospital leaders with a tool to engage front-line staff to improve care and reduce infections.

Modifications

(The following changes have been made with this dashboard release.)

1. The "State Performance" table clarifies that the state target is a 10 percent reduction in the state infection rate from the state baseline rate.

2. The "Summary of State Progress" table is updated to correspond with the section headers; since the color coding has been removed, a light gray shading has been added.

    A. Hospitals with a SIR <1, improvement from hospital baseline and performing better than the state target.
    B. Hospitals with a SIR <1, and either improvement from hospital baseline or performing better than the state target.
    C. Hospitals with a SIR <1, no improvement from hospital baseline and not performing better than the state target.
    D. Hospitals with a SIR >1.

3. A quick link to the dashboard tutorial has been added. This three-minute tutorial gives an overview of each of the dashboard components for quick reference.

4. For clarification, the heading "Progress over Hospital Baseline" is changed to "% Progress from Hospital Baseline." Facilities identified with a green cell are experiencing a reduction in their rate in comparison to their baseline rate; facilities identified with a red cell are experiencing an increase.

5. The heading “Progress Over State Target” is changed to “Hospitals Meeting State Target” to provide clarification. Facilities identified with a green cell are meeting the state target; facilities identified with a red cell are not.

6. The headers are updated to show how the dashboard is ranked and organized to correlate with the “Summary of State Progress” table as outlined in #2 above.

7. An evidence-based practice source and citation is provided on a total harms/cost by harm graphic.

Frequently Asked Questions

Why identify a state target as a goal?

National health rankings often are depicted through state rates. The challenge of meeting an overall reduced aggregate rate as a state encourages all hospitals to focus efforts on harm reduction and to work collectively to achieve lower rates for Missourians.

What does “No Data Reported” mean, and why are some hospitals meeting goals when data is missing?

When “No Data Reported” is indicated, the hospital either has not reported data to the National Healthcare Safety Network in the baseline time frame of CY 2016, or has not reported data within the dashboard monitoring period of July 2017 through the current month. For SIRs, when no data is reported, there has likely not been enough data reported to formulate a SIR.

What does the color coding indicate?

Two colors are used on the dashboards to identify if a hospital is either achieving reductions in infections/SIRs or meeting the state target (green shading), or is not achieving reductions or meeting the state target (red shading).

What does the percent difference from hospital baseline indicate?

The percent difference from hospital baseline indicates either a reduction in infection rate from the hospital’s baseline (negative percentage), or an increase in infection rate from the baseline (positive percentage). This value is rolling over the monitoring period beginning in July 2017 through the last data submission month.

What is a Standardized Infection Ratio (SIR)?

Simply put, the SIR compares the facility’s actual HAI incidence to the baseline national HAI experience and is adjusted for several risk factors that are significantly associated with differences in infection incidence. If the SIR is greater than 1, it means the health care facility reported more HAIs than the nation and, therefore, is doing worse than the national experience. If the SIR is less than 1, it means the health care facility reported fewer HAIs than the nation and, therefore, is doing better than the national

experience. If the SIR is equal to 1, the facility reported about the same number of HAIs as the national experience. The infection incidence populates the SIR as the observed number of infections.[iv]

Why is the SIR not used as the state target?

After robust review and based on member feedback, it was elected not to base the start target on the SIR for the following reasons.

- Calculating an accurate statewide pooled SIR is not reliable based on available methodology.
- SIRs are reported on the dashboard as the most recent month of data submission – they are not rolling over the monitoring period.
- For some hospitals who would not derive a SIR due to a monthly denominator <1, a pooled SIR could inflate their predicted infections.

The SIR remains the preferred metric for external, consumer-facing reports and payment models as it allows for comparability.

Why are both SIRs and infection rates reported?

A hospital's infection rate and percent difference from baseline rate are displayed on the dashboards to inform internal improvement. The hospital rate is included to identify if a positive or negative relation to the hospital's reported baseline exists. This allows hospitals to identify internally if drift is occurring and to gauge success around implemented processes.

Additionally, several hospitals do not have enough accrued data to inform a SIR; therefore, infection rates are incorporated to ensure broad inclusion with the best information available. While not a benchmarking metric, the Centers for Disease Control and Prevention states that infection rates can be used to track internal HAI incidence over time.[iv]

Hospital leaders are encouraged to use this information to advise front-line staff and physicians on the incidence of patient infections and to use this simplified data to initiate dialogue and improvement. It generally is easier for staff to take action based on a number of actual infections versus understanding a SIR and how many patient infections that actually represents.

What is the difference between SIRs reported on the Focus on Hospitals website and those on the harm dashboard?

SIRs reported on the Focus on Hospitals consumer-facing transparency website are reported as averages with each quarterly data refresh. The harm dashboards report the most recent month's SIR value based on when data was submitted to NHSN.

What is the data source for the harm dashboards?

MHA uses hospital reported data from NHSN's database through a data conferral process to populate the dashboards. Hospitals must have completed data reporting plans through the NHSN modules and reported data on CAUTI, CLABSI and *C. diff* during CY 2016, and for the monitoring period of July 2018 through July 2019, for data to show on the dashboards.

What are the steps for a hospital to report to NHSN and have data reported on the harm dashboards?

MHA developed an instructional guide for hospitals reporting data to NHSN who would like to confer rights to MHA's wholly-owned subsidiary, Hospital Industry Data Institute, to have data displayed on the harm dashboards.

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[i] Magill, S., et al. (2014, March). Multistate Point-Prevalence Survey of Health Care-Associated Infections. *New England Journal of Medicine, 370*, 1198-1208. doi: 10.1056/NEJMoa1306801.

[ii] Institute of Healthcare Improvement. (2015). What Zero Looks Like: Eliminating Hospital-Acquired Infections.

[iii] Association for Professionals in Infection Control and Epidemiology. (2009). Target: Zero hospital-acquired infections.

[iv] Centers for Disease Control and Prevention. (2018, March). The NHSN Standardized Infection Ratio (SIR): A Guide to the SIR.