

Texas and National Healthcare-Associated Infection Prevention Performance, 2024



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Introduction

- Healthcare-Associated Infections (HAIs) are acquired during or shortly after receiving care, unrelated to the underlying condition. According to the [Agency for Healthcare Research and Quality](#)¹, approximately 5 to 150 excess deaths occur for every 1,000 patients with an HAI.
- Collecting and analyzing HAI surveillance data helps track HAI prevention performance, set HAI reduction goals, and support infection control initiatives.
- Comparing HAI data between individual states and the U.S. overall allows public health officials to infer about effectiveness of state HAI prevention programs.
- The Centers for Disease Control and Prevention's (CDC's) National and State HAI Progress Report provides comparisons of Texas Standardized Infection Ratios (SIRs) for the current year to the previous and collective HAI prevention performance of all states compared to the nation overall.
 - It is unknown how Texas' individual HAI prevention performance compares to the nation because an exclusive analysis between Texas and national SIRs is not provided.
- The Texas Department of State Health Services (DSHS) Healthcare Safety Unit performed a comparison analysis assessing Texas' HAI prevention performance compared to the U.S.

Methods

- SIR, a statistic used to measure progress in reducing HAIs, compares the number of observed to expected number of infections. The expected number is a risk-adjusted estimate determined using [national baseline](#)² data.

$$SIR = \frac{\text{Observed HAIs}}{\text{Expected HAIs}}$$

- SIR data were collected from [CDC's 2024 HAI Progress Report](#)³ on HAIs in Acute Care Hospitals (ACH), inpatient rehabilitation facilities, and long-term ACH, including:

- C. difficile* infection
- Catheter-Associated Urinary Tract Infections (CAUTIs)
- Central Line-Associated Bloodstream Infections (CLABSIs)
- Methicillin-resistant *S. aureus* (MRSA) bacteremia
- Surgical Site Infections (SSIs) (colon surgery or abdominal hysterectomy)
- Ventilator-associated events (VAE)

- National Healthcare Safety Network statistics calculator function, "Compare Two SIRs" (relative ratio of SIRs) was used to compare Texas SIRs with national SIRs.

$$\text{Relative Ratio of SIRs} = \frac{\text{Texas SIR}}{\text{National SIR}^{**}}$$

**Texas HAI data were not included in national SIR calculation to ensure independence

References

- Agency for Healthcare Research and Quality. (2025, July 9). Estimating the Additional Hospital Inpatient Cost and Mortality Associated With Selected Hospital-Acquired Conditions. <https://www.ahrq.gov/hai/pfp/haccost2017.html>
- Centers for Disease Control and Prevention. (2023). Paving the Path Forward: 2015 Rebaseline. <https://www.cdc.gov/nhsn/2015rebaseline/index.html>
- Centers for Disease Control and Prevention. (2024). Current HAI Progress Report. <https://www.cdc.gov/healthcare-associated-infections/php/data/progress-report.html>

Source data available at:



Results

Table 1. Comparison of Texas Standardized Infection Ratio Estimates of Long-Term Acute Care Hospitals to National Estimates, 2024

Healthcare-Associated Infection Type (n = Number of Texas Long-term Acute Care Hospitals)	Long-term Acute Care Hospitals		
	Texas SIR	National SIR**	Relative Ratio (95% CI)
<i>C. difficile</i> infection [^] (n = 53)	0.29	0.26	1.12 (0.91-1.36)
Catheter-associated urinary tract infections [^] (n = 54)	0.59	0.76	0.77* (0.65-0.91)
Central line-associated bloodstream infections [^] (n = 54)	0.53	0.81	0.65* (0.54-0.77)
Methicillin-resistant <i>S. aureus</i> bacteremia (n = 21)	0.72	0.71	1.02 (0.62-1.59)
Ventilator-associated events (n = 16)	0.66	0.38	1.73* (1.23-2.4)

*Statistically significant relative ratio of SIRs

[^]Required reportable HAI by Texas or The Centers for Medicare and Medicaid Programs

- In 2024, Texas long-term ACHs experienced fewer CAUTIs (RR: 0.77, 95% CI: 0.65-0.91), and fewer CLABSIs (RR: 0.65, 95% CI: 0.54-0.77) compared to the U.S. estimates for long-term ACHs. Texas facilities experienced more VAEs (RR: 1.73, 95% CI: 1.23-2.4) compared to the U.S. estimates for long-term ACHs.

Table 2. Comparison of Texas Standardized Infection Ratio Estimates of Inpatient Rehabilitation Facilities to National Estimates, 2024

Healthcare-Associated Infection Type (n = Number of Texas Inpatient Rehabilitation Facilities)	Inpatient Rehabilitation Facilities		
	Texas SIR	National SIR**	Relative Ratio (95% CI)
<i>C. difficile</i> infection [^] (n = 167)	0.31	0.32	0.95 (0.82-1.11)
Catheter-associated urinary tract infections [^] (n = 167)	0.92	1.06	0.87 (0.75-1.02)
Central line-associated bloodstream infections (n = 73)	1.10	0.50	2.21* (1.28-3.63)
Methicillin-resistant <i>S. aureus</i> bacteremia (n = 85)	0.70	0.59	1.18 (0.5-2.46)

*Statistically significant relative ratio of SIRs

[^]Required reportable HAI by Texas or The Centers for Medicare and Medicaid Programs

- In 2024, Texas inpatient rehabilitation facilities experienced more CLABSIs (RR: 2.21, 95% CI: 1.28-3.63) compared to the U.S. estimates for inpatient rehabilitation facilities.

Table 3. Comparison of Texas Standardized Infection Ratio Estimates of Acute Care Hospitals to National Estimates, 2024

Healthcare-Associated Infection Type (n = Number of Texas Acute Care Hospitals)	Acute Care Hospitals		
	Texas SIR	National SIR**	Relative Ratio (95% CI)
<i>C. difficile</i> infection [^] (n = 365)	0.28	0.38	0.72* (0.69-0.76)
Catheter-associated urinary tract infections [^] (n = 359)	0.44	0.57	0.77* (0.72-0.83)
Central line-associated bloodstream infections [^] (n = 347)	0.60	0.67	0.90* (0.86-0.95)
Methicillin-resistant <i>S. aureus</i> bacteremia [^] (n = 369)	0.62	0.71	0.87* (0.80-0.95)
Surgical site infections: colon surgery [^] (n = 264)	0.77	0.85	0.91* (0.83-0.99)
Surgical site infections: abdominal hysterectomy [^] (n = 238)	1.19	1.10	1.08 (0.93-1.25)
Ventilator-associated events (n = 165)	1.20	1.10	1.09* (1.05-1.14)

*Statistically significant relative ratio of SIRs

[^]Required reportable HAI by Texas or The Centers for Medicare and Medicaid Programs

- In 2024, Texas ACHs experienced fewer *C. difficile* infections, CAUTIs, CLABSIs, MRSA bacteremia, and SSIs following colon surgery compared to the U.S. estimates for ACHs. Texas facilities experienced more VAEs (RR: 1.09, 95% CI: 1.05-1.14) compared to the U.S. estimates for ACHs.

Conclusions

- This analysis allowed DSHS to evaluate the effectiveness of Texas' HAI prevention programs.
- Texas' SIRs for most HAIs were lower or similar to national estimates across ACHs, inpatient rehabilitation facilities, and long-term ACHs.
 - Suggests Texas performs as well as or better than the national average in preventing HAIs.
- Overall, long-term and ACHs in the U.S. performed better at preventing VAEs compared to long-term and ACHs in Texas.
 - VAEs are voluntarily reported in Texas.
 - Due to the small sample size of Texas long-term ACHs (n=16), the VAE SIR in this report may not represent the true cumulative SIR.
- This methodology can be used by other states to compare HAI prevention performance with US trends, evaluate intervention effectiveness, and inform HAI reduction goals.