



Washington State

**Annual
Healthcare-Associated
Infections
Report
2019**

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INTRODUCTION

BACKGROUND

Every year, about one in 25 hospital patients will develop at least one infection related to their healthcare visits. A healthcare-associated infection (HAI) is an infection that develops during, or soon after, receiving healthcare services or being in a healthcare setting. These settings can include hospitals, clinics, doctor’s offices, surgery centers, nursing homes, or home-care visits. These infections can cause serious illness and death, but many are preventable.

This report focuses on infections in acute care hospitals, which are hospitals that provide short-term, inpatient medical and surgical services for many different conditions and illnesses. Acute care hospitals with fewer than 25 beds in rural areas may be federally designated as critical access hospitals (CAH). CAHs are not included in this report, because the reporting requirements differ for these facilities.

Acute care hospitals are required to track and self-report five types of HAIs:

- Catheter-associated urinary tract infection (CAUTI)
- Central-line associated bloodstream infections (CLABSI)
- Hospital-onset *Clostridioides difficile* infections (CDI)
- Hospital-onset methicillin-resistant *Staphylococcus aureus* bacteremia (MRSA)
- Surgical site infections (SSIs) related to colon surgeries (COLO) and abdominal hysterectomies (HYST)

This report summarizes HAI data reported to Centers for Medicare and Medicaid Services (CMS), Centers for Disease Control and Prevention (CDC), and the Washington State Department of Health (WA DOH) through the National Healthcare Safety Network (NHSN). NHSN is a free and secure web-based data management system maintained by the CDC. The CDC and WA DOH provide support to



hospital surveillance staff on the use of the system and guidance to track infections using a standardized method. For more information about NHSN, please visit: www.cdc.gov/nhsn.

The data for this report was downloaded from NHSN in September 2022. Changes made to the data after this date are not reflected in this report. Any hospital that closed before the dataset was downloaded are also not included. Due to the global pandemic beginning in 2020, COVID-19 quickly became the highest priority at the WA DOH. Unfortunately, this led to a delay in standard work, including producing annual reports.

REPORT AUDIENCE

The WA DOH Healthcare-Associated Infections/Antibiotic Resistance (HAI/AR) Program Epidemiology team produces this report for consumers, healthcare providers, public health officials, and Washington policy makers. These data can drive consumer advocacy, healthcare choice, healthcare facility prevention strategies, awareness of the burden of HAIs within the community, and legislative support for HAI prevention and surveillance.

REPORTING REQUIREMENTS

CMS Required Reporting

CMS requires facility-wide infection reporting from acute care hospitals (ACHs) through the following programs:

- CMS Hospital Inpatient Quality Reporting (IQR) Program authorized by 42 U.S.C. 1395ww (b)(3)(B)(viii))
- CMS PPS-Exempt Cancer Hospital Quality Reporting (PCHQR) Program authorized by 42 U.S.C. 1395cc(k)

WA DOH highly encourages critical access hospitals (CAHs) to report HAIs if they have the capacity. While they are not required by CMS to report infections, and are thus not included in this report, WA CAHs report data to NHSN according to the following program:



- CMS Additional Member Beneficiary Quality Improvement Project (MBQIP) Measures authorized by 42.U.S.C 1395i-4

Detailed information on NHSN reportable events and their reporting deadlines can be found in the [CMS Reporting Requirements and Deadlines](#) document.

Purpose of WAC 246-440-100

The Washington Administrative Code (WAC) established data collection and submission requirements for hospital licensed under chapter 70.41 RCW to report HAIs. In 2019, this included CLABSI, CDI, and SSIs. [WAC 246-440-100](#) was updated in 2020 to align Washington State HAI requirements with current CMS reporting requirements. See Figure 1 for a timeline of reporting requirements for acute care hospitals per CMS rules (blue) and Washington state WAC updates (green), including the WAC updates that went into effect January 1, 2020. Specific reporting requirements are found in WAC 246-440-100 and listed in Table 1.

Purpose of RCW 43.70.056

The [Revised Code of Washington \(RCW\) 43.70.056](#) charges hospitals to collect and submit HAI data to the WA DOH via CDC's NHSN. Under the RCW, WA DOH is charged with using data to compile and publish reports, implement regional infection prevention strategies, and evaluate the quality and accuracy of HAI reporting.



TABLE 1: Hospital Reporting Requirements for HAI under WAC 246-440-100, 2020

Hospital Type	Reporting Requirement	Reporting Specifications
Acute Care Hospital	CLABSI	Adult, pediatric and neonatal intensive care units, medical, surgical, and medical/surgical wards
	CAUTI	Adult and pediatric intensive care units, medical, surgical, and medical/surgical wards
	SSI <ul style="list-style-type: none"> • Colon • Abdominal hysterectomy 	Inpatient procedures
	MRSA bacteremia LabID Event	Facility-wide inpatient
	CDI LabID Event	Facility-wide inpatient
	Healthcare personnel Influenza vaccination	All inpatient locations
Cancer Hospital	CLABSI	Facility-wide inpatient
	CAUTI	Facility-wide inpatient
	SSI <ul style="list-style-type: none"> • Colon • Abdominal hysterectomy 	Inpatient procedures
	MRSA bacteremia LabID Event	Facility-wide inpatient
	CDI LabID Event	Facility-wide inpatient
	Healthcare personnel Influenza vaccination	All inpatient locations
Rehabilitation Hospital	CAUTI	Facility-wide inpatient
	CDI LabID Event	Facility-wide inpatient
	Healthcare personnel Influenza vaccination	All inpatient locations
Critical Access Hospital	Healthcare personnel Influenza vaccination	All inpatient locations



METHODS

Per Washington’s reporting requirements, hospitals report HAIs into the CDC’s NHSN system. The WA DOH HAI/AR Program has established a data use agreement (DUA) with the CDC, which allows the WA DOH to use NHSN to retrieve and report on data submitted by hospitals. The standardized infection ratio (SIR) tables following each HAI section list SIRs for ACHs. CAHs are not required to report HAIs to NHSN and are thus not included in this report. However, WA DOH recommends reporting if the hospital has the capacity.

Three types of HAIs were required by Washington reporting in 2019:

- Central Line-Associated Bloodstream Infections (CLABSI)
- Hospital-onset *Clostridioides difficile* infections (CDI)
- Surgical Site Infections (SSI) related to abdominal hysterectomies (HYST) and colon surgeries (COLO)

Hospital-onset MRSA bacteremia and Catheter-Associated Urinary Tract Infections (CAUTI) were not reportable conditions in Washington for reporting year 2019; however, hospitals were required to report to NHSN per CMS requirements. CMS reporting requirements for CAUTI and MRSA allow WA DOH access to aggregated statewide infection data, but not data for individual hospitals.

Incidence

Incidence is the occurrence of new cases of disease in a population over a specified period of time (e.g., month, year). Incidence is typically calculated as a rate or proportion.

$$\text{Incidence} = \frac{\text{Number of new cases of specific disease during specified time period}}{\text{Total population at risk}}$$

Standardized Infection Ratio (SIR)

The SIR is a summary measure used to track HAIs over time and can be calculated on multiple population levels, including unit, facility, state, and nation. The data adjusts for differences between healthcare facilities such as patients and procedures with higher risk of infection, as well as other factors, such as the facility’s size and affiliation with a medical school (refer to the National Targets section). In a given time period, the SIR compares the number of infections *reported* to the number of infections that were *predicted* using data from the 2015 baseline, which varies for each infection type. **Lower SIRs indicate better performance.** For more



information on SIR, please visit [A Guide to the SIR](#). The SIR compares the number of infections associated with a hospital's number of device days, procedures, or patient (denominator) days with national baseline data. Device days refer to the number of days a patient had either a catheter or central line. Patient days refer to the number of days a patient is hospitalized. National data are provided as a metric for comparison and include all hospitals that report data into the NHSN system.

Healthcare-associated Infection	Denominator
CAUTI*	Total device (catheter) days
CLABSI	Total device (central line) days
CDI	Total patient days
MRSA*	Total patient days
SSI	Total procedures

* Not reportable by WAC in 2019, but required by CMS. WA DOH does not have access to the denominator data.

A SIR is not calculated when the number of predicted infections is less than 1.0. According to national baseline data, if the number of predicted infections is less than 1.0, the risk to patients is so low that not even one type of event (or infection) is predicted to occur in that group of patients. For reporting purposes, the SIR can be assumed to be zero if it was not calculated and no judgment can be made on the hospital's performance.

When the SIR is calculated, there are three possible results:

- The SIR is less than 1.0 (**better than predicted**) – this indicates that there were fewer infections reported during the surveillance period than would have been predicted given the baseline data.
- The SIR is equal to 1.0 (**same as predicted**) – as in any ratio, the value of 1 indicates that the numerator and denominator are equal. In this case, the number of infections reported during the surveillance period is the same as the number of infections predicted given the baseline data.
- The SIR is greater than 1.0 (**worse than predicted**) – this indicates that there were more infections reported during the surveillance period than would have been predicted given the baseline data.

$$\text{SIR} = \frac{\text{Number of observed infections}}{\text{Number of predicted infections}}$$

Statistical Significance

The p-value and 95% confidence intervals are statistical measures that describe the likelihood that a numerical estimate, i.e., what was observed, was due to random chance. These measures indicate whether a facility's SIR



is significantly different from 1, the value expected if the facility performed exactly the same as predicted based on the national data.

- If the p-value is **less than or equal to 0.05**, the number of observed infections is **significantly different** than the number of predicted infections (i.e., the SIR is significantly different from 1).
- If the p-value is **greater than 0.05**, the number of observed infections in a facility is **not significantly different** than the number predicted (i.e., the SIR is no different than 1).

The 95% confidence interval is a range of values, indicating a high degree of confidence. In this case, the 95% confidence interval indicates that the true SIR lies within this range. The upper and lower numbers of the confidence interval are used to determine the significance and precision of the SIR.

- If the confidence interval **includes the value of 1**, then the SIR is **not significant** (i.e., the number of observed events is not significantly different than the number predicted).
- If the confidence interval **does not include the value of 1**, then the SIR is **significant** (i.e., the number of observed events is significantly different than the number predicted).
- When the **SIR is 0**, the lower bound of the 95% confidence interval cannot be calculated. However, for ease of interpretation, it can be considered 0.

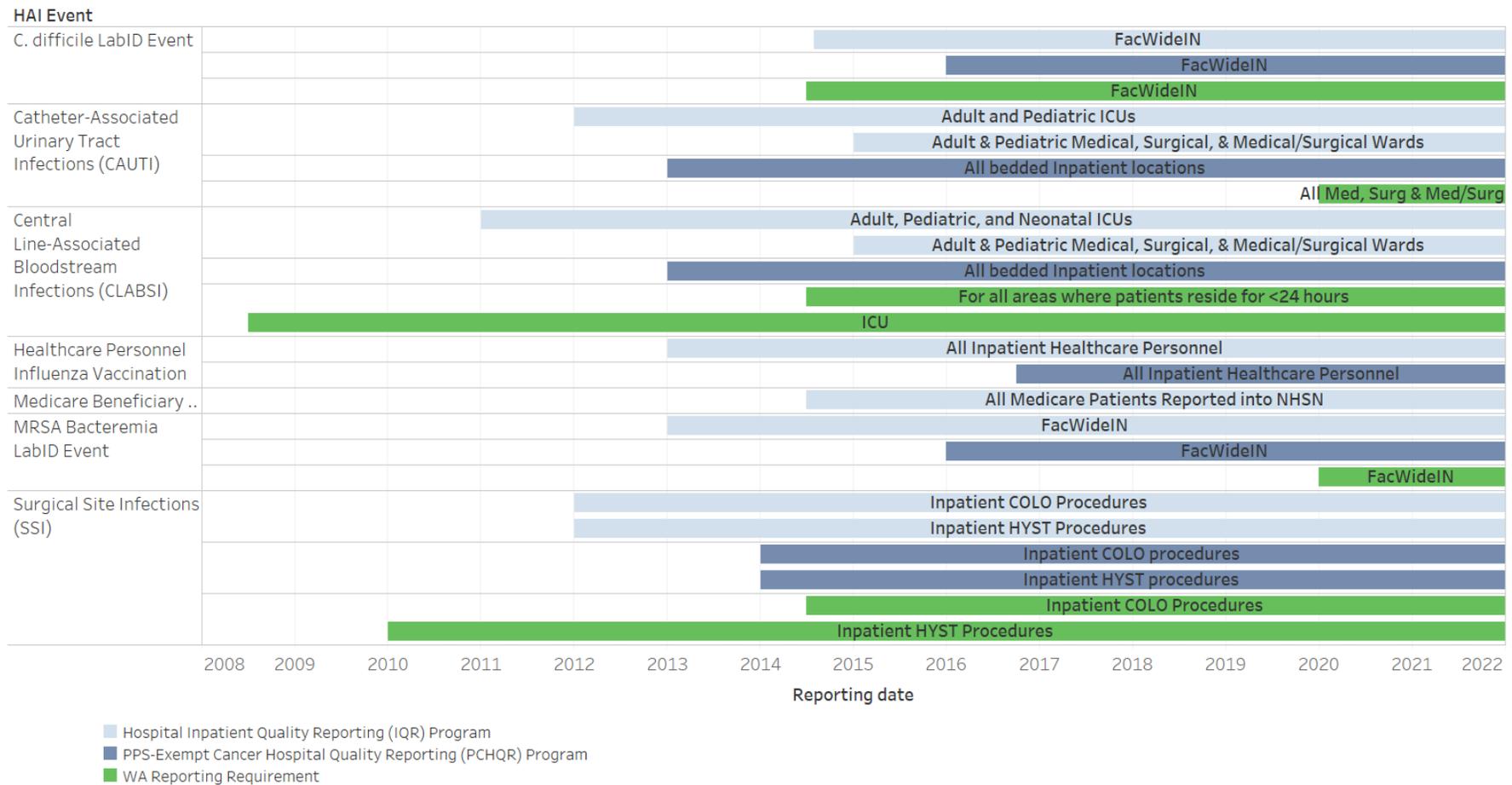
Hospital Performance Legend

The following symbols visually describe how a facility’s observed number of HAIs compare to the number of HAIs predicted by NHSN based on the national baseline. “Observed similar to predicted” was used when the difference between the number of observed and predicted infections is less than 1. For statewide tables, the symbol in the performance column describes the state’s SIR compared to the national SIRs in the specified acute care locations. “Observed similar to predicted” was used when the difference between the state SIR was and the national SIR is less than 0.05.

	Statistically fewer (better) infections
	Fewer infections (not statistically significant)
	More infections (not statistically significant)
	Statistically more (worse) infections
	Number of predicted infections is less than 1; SIR cannot be calculated
	Observed similar to predicted (not statistically significant)



Figure 1. HAI Reporting Requirement Timeline



*Facility-wide inpatient (FacWideIN)

Figure 1 shows the timeline of reporting requirements for ACHs per CMS rules (light and dark blue) and Washington state WAC updates (green), including the WAC updates that went into effect January 1, 2020.



EXECUTIVE SUMMARY

HAIs are infections patients acquire while receiving care for other reasons in a healthcare setting. These infections threaten patient safety and public health. The impact of HAIs is significant, contributing to increased length of hospitalization, financial burden, loss of trust in the healthcare system, and potential death.

The WA DOH HAI/AR Program works closely with local health jurisdictions (LHJs) and Washington state hospitals to track HAIs. Tracking of HAIs is standardized nationwide using the CDC’s NHSN surveillance system and consistent surveillance definitions.

The WA DOH publishes HAI data annually to provide information about the quality of hospital care in Washington and to monitor HAI prevention progress, as compared to national averages and targets. This 2019 report is the 2nd comprehensive report to be released by the WA DOH. The data summarize the performance of Washington ACHs on HAIs in 2019 and demonstrate the continued strides to reduce the burden of HAIs in Washington ACHs.

NATIONAL TARGETS

In 2015, CDC created new baselines of all the HAIs reported to NHSN for comparing HAI data. HAI prevention progress is measured in comparison to infection data reported to NHSN using updated risk-adjustment models. These models account for the differences in risk that may impact infections reported by a hospital (e.g., unit type, hospital bed size, patient age). Hospital performance is compared using the SIR, discussed in more detail in the Methods section above. The 2020 U.S. Department of Health and Human Services (HHS) SIR target for the [National Action Plan to Prevent Health Care-Associated Infections: Road Map to Elimination \(HAI Action Plan\)](#) provides HAI target goals for each NHSN reportable condition. The HHS HAI Action Plan targets the most common infections in inpatient settings and provides a standard of measurable improvement for all ACHs.

PROGRESS TOWARDS NATIONAL TARGETS

Since 2015, there has been a downward trend in the incidence of most HAIs in Washington hospitals. Significant progress in preventing HAIs has been made when compared to the national experience. Of



the five HAIs included in this report, only the SIR for CAUTI was significantly worse than the national average (SIR: 0.84 to 0.74, respectively). The SIR for CDI was similar to the national SIR (SIR: 0.60 to 0.58, respectively), and the SIRs for CLABSI, MRSA, SSI-COLO, and SSI-HYST were all significantly less than the national SIR in all acute care locations.

Table 2 shows the progress Washington ACHs made towards three different national HAI goals in 2019:

- NHSN SIR Baseline of 1.0
- National Average SIR
- HHS HAI Action Plan Target

Goals that were met in 2019 are marked with a green checkmark, while goals where the target SIR was not met are marked with a black X. Washington ACHs have made significant strides to reduce SIRs below these national targets, meeting or exceeding each goal for at least half of the HAIs tracked. Notably, Washington ACHs performed better than the national average for four of the five HAIs. However, more improvement is needed across all HAIs, as every goal was only met for SSIs.

TABLE 2: Washington Acute Care Hospitals’ Progress toward National Targets in 2019

2019 WA HAI	Less than or equal to NHSN Baseline SIR 1.0	Less than or equal to National Average SIR	Less than or equal to 2020 HHS Target
CAUTI*	✓	✗	✗
CLABSI	✓	✓	✗
CDI	✓	✗	✓
MRSA LAB-ID*	✓	✓	✗
SSI – COLO	✓	✓	✓
SSI – HYST	✓	✓	✓

*Not reportable by WAC in 2019, but required by CMS



CAUTI: Did Not Meet HHS Target Goal of 0.75, Improving as Statewide SIR Decreased to 0.84

Historically, Washington ACHs have faced challenges decreasing the incidence of CAUTI. Prior to 2019, the greatest decrease in CAUTI incidence was a 2.9% decrease between 2016 and 2017. In reporting year 2019, Washington ACHs reported the greatest percent decrease in CAUTI incidence since the CDC updated the national baseline in 2015, with a 14.3% reduction. The SIR dropped from 0.98 in 2018 to 0.84 in 2019. While the CAUTI incidence in Washington remained above the national average and 2020 HHS HAI Action Plan 2020 target goal of 0.75, this is a significant improvement in CAUTI reduction and represents the largest reduction in any HAI in reporting year 2019. However, further effort is necessary to achieve the HHS HAI Action Plan 2020 target goal by 2020.

CDI: Met and Exceeded HHS Target Goal of 0.70, Greatest Improvement as Statewide SIR Decreased to 0.60

The greatest reduction in SIR during reporting year 2019 was for CDI, which decreased from 0.75 in 2018 to 0.60 in 2019, reflecting a 20% reduction. The percent decrease between 2018 and 2019 matches the 20.2% decrease between 2017 and 2018. The two consecutive reporting years of large decreases in CDI incidence illustrates the continued focus on patient safety and quality of care in Washington. Due to these efforts, Washington ACHs have successfully met, and exceeded, the HHS HAI Action Plan 2020 target goal of 0.70 for CDI. Since the CDC updated the national baseline in 2015, CDI incidence has been reduced by 46.4%, the greatest decrease of any reportable HAI in Washington.

CLABSI: On Track to Meet HHS Target Goal of 0.50, Improving as Statewide SIR Decreased to 0.52

The total decrease in incidence of CLABSI since the update of the national baseline was a close second to CDI, with a 40.2% reduction of SIR since 2015. The smallest reduction in CLABSI incidence since 2015 occurred between 2018 and 2019, with a 7.1% decrease in SIR, from 0.56 to 0.52, respectively. However, this decrease was not statistically significant. Despite the slowed progress, Washington ACHs are on track to meet the HHS HAI Action Plan target goal of 0.50.



SSI-COLO: Met HHS Target Goal of 0.70, Stable as Statewide SIR Remained the Same at 0.66

Incidence of SSI-COLO has been stable since the 23.3% reduction between 2017 and 2018. In 2019, the SIR was 0.66, the same as it was in 2018. The continued work to maintain the low level of SSI-COLO has resulted in another year of Washington ACHs meeting the HHS HAI Plan target goal of 0.70.

SSI-HYST: Met HHS Target Goal of 0.70, No Improvement as Statewide SIR Increased to 0.70

Despite the strides that have been made to reduce HAI impact, not all HAIs have experienced a reduction in SIR. The most pronounced increase during the 2019 reporting year was the 21.4% increase in incidence of SSI-HYST. Although not statistically significant, the SIR increased from 0.56 in 2018 to 0.70 in 2019. Despite this increase, Washington ACHs met the HHS HAI Action Plan target goal of 0.70 for the second year in a row in 2019. Since the CDC updated the national baseline in 2015, there has been an 11% reduction in SSI-HYST.

MRSA: More Effort Needed to Meet HHS Target Goal of 0.50, No Improvement as Statewide SIR Increased to 0.60

The incidence of Methicillin-resistant *Staphylococcus aureus* (MRSA) bacteremia increased slightly between 2018 and 2019, with a 7.1% increase in SIR, from 0.56 to 0.60. This marked the second consecutive year with a non-significant increase in MRSA incidence, although the increase between 2017 and 2018 was not as pronounced (1.8% increase). MRSA incidence has had the smallest decrease of any HAI since the CDC updated the national baseline, with only a 7.7% reduction since 2015. Despite these challenges, the SIR for MRSA remains below the national average. With further effort to reduce MRSA bacteremia, Washington ACHs may still be able to meet the HHS HAI Action Plan target goal of 0.50 by 2020. The 16.7% reduction necessary to meet the HHS HAI Action Plan target goal is less than the 20.3% reduction noted between 2016 and 2017.

NEXT STEPS

While much progress has been made, opportunities yet exist to prevent HAIs in ACHs. Variations in occurrence of HAIs between hospitals depends on several factors, including infection prevention practices or policies, patient risk factors, and underlying conditions. Sharing state-wide data promotes



patient safety and best practices in clinical settings. Continued vigilance in surveillance and education in infection control practices are essential to improve patient safety and outcomes and foster patient trust in healthcare systems. The WA DOH HAI/AR Program continues to work with partner organizations, including Washington State Hospital Association (WSHA), Association for Professionals in Infection Control and Epidemiology (APIC), LHJs, and ACHs to improve existing programs and develop new strategies to reduce HAI incidence and ultimately protect patients.



Figure 2. Healthcare-Associated Infections SIRs in Washington Hospitals, 2015-2019

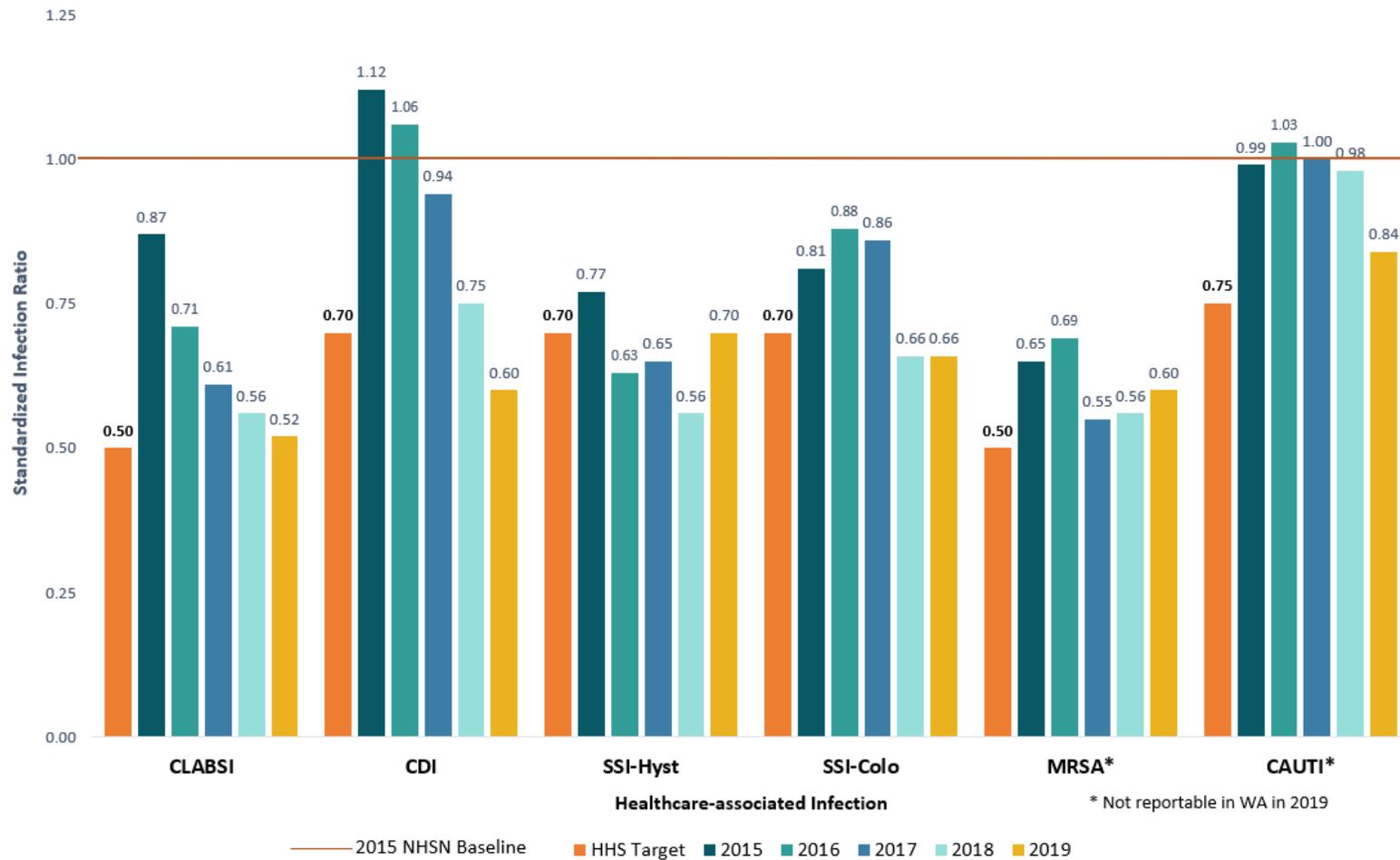


Figure 2 shows the statewide SIR for each reportable HAI since the CDC updated the national baseline in 2015. Since 2015, there has been a general downtrend in HAI incidence, most notably for CLABSI, CDI, SSI-COLO, and CAUTI. In 2019 (yellow bar), four of the five tracked HAIs were at their lowest since the national rebaseline. There were fewer infections than predicted for all HAIs (SIR < 1, represented by the orange line) and significant progress was made towards the 2020 HHS HAI Action Plan Target Goals (orange).



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GLOSSARY

- ACH: Acute care hospital
- BSI: Bloodstream infection
- CAH: Critical access hospital
- CAUTI: Catheter-associated urinary tract infection
- CC: Critical care
- CDC: Centers for Disease Control and Prevention
- CDI: *Clostridioides difficile* infection
- CI: Confidence interval
- CLABSI: Central line-associated bloodstream infection
- CMS: Centers for Medicare and Medicaid Services
- Colo: Colon surgery
- DUA: Data use agreement
- FacWideIN: Facility-wide Inpatient
- HAI: Healthcare-associated infection
- HAI/AR: Healthcare-Associated Infections/Antibiotic Resistance
- HHS: U.S. Department of Health and Human Services
- HO: Hospital-onset
- HO-CDI: Hospital-onset *Clostridioides* (formerly *Clostridium*) *difficile* infection
- HO-MRSA: Hospital-onset methicillin-resistant *Staphylococcus aureus*
- HYST: Abdominal hysterectomy surgery
- ICU: Intensive care unit
- IUC: Indwelling urinary catheter
- IQR: Inpatient Quality Reporting
- LabID: Laboratory-identified
- LHJ: Local health jurisdictions
- MBQIP: Member Beneficiary Quality Improvement Project
- MDRO: Multidrug-resistant organism
- MRSA: Methicillin-resistant *Staphylococcus aureus*
- NHSN: National Healthcare Safety Network
- PCHQR: PPS-Exempt Cancer Hospital Quality Reporting
- RCW: Revised Code of Washington
- SIR: Standardized infection ratio
- SSI: Surgical site infection
- UTI: Urinary tract infection
- WA DOH: Washington State Department of Health
- WAC: Washington Administrative Code



CATHETER-ASSOCIATED URINARY TRACT INFECTIONS (CAUTI)

A urinary tract infection (UTI) is an infection involving any part of the urinary system, including urethra, bladder, ureters, and kidneys. Among UTIs acquired in the hospital, approximately 75% are associated with a urinary catheter, which is a tube inserted into the bladder through the urethra to drain urine. Between 15% to 25% of hospitalized patients receive urinary catheters during their hospital stay.

The most important risk factor for developing a CAUTI is prolonged use of the urinary catheter. Therefore, catheters should only be used for appropriate indications and removed as soon as they are no longer medically needed.

Although CAUTI data are not required to be reported to the WA DOH for 2019, hospitals following CMS guidelines are required to report their infections to NHSN, therefore data for individual facilities are not available. Table 3 shows the SIR for the state, with aggregated NHSN data, compared to national CAUTI SIR for the same care location.

The 2020 HHS HAI Action Plan target goal is 0.75. The 2019 SIR for CAUTI in all Washington acute care locations is 0.84. Between 2018 and 2019, the state SIR for CAUTI **decreased significantly by 13.8%** ($p < 0.05$).

For more information, visit CDC's webpage on [CAUTI](#).

KEY POINTS

- ☑ Did not meet 2020 HHS HAI Action Plan target.
- ☑ Among the Washington ACHs with enough data to calculate a SIR, 12% had a SIR significantly higher than the national SIR (0.74).
- ☑ WA ACHs reported a significant decrease in CAUTI between 2018 and 2019.



State and National CAUTI Standardized Infection Ratios

Table 3 shows the SIR for the state, with aggregated NHSN data. The symbol in the performance column describes the state’s SIR compared to the national SIRs for CAUTI in the specified care location. Overall, the statewide SIR for CAUTI is significantly higher than the national SIR.

Table 3: CAUTI Standardized Infection Ratios 2019 State Summary

Acute Care Facility Location	Performance	Number of Infections	Number Predicted	SIR	95% Confidence Interval
All locations (State)	▲	401	477	0.84	0.76, 0.93
Critical Care locations (State)	▲	164	204	0.81	0.69, 0.94
Non-Critical Care locations (State)	▲	237	273	0.87	0.76, 0.99
All locations (National)	Reference	19,398	26,183	0.74	0.73, 0.75
Critical Care Locations (National)	Reference	8,436	12,590	0.67	0.66, 0.68
Non-Critical Care Locations (National)	Reference	10,962	13,593	0.81	0.79, 0.82

▼	Statistically fewer (better) infections
▼	Fewer infections (not statistically significant)
▲	More infections (not statistically significant)
▲	Statistically more (worse) infections
◆	Number of predicted infections less than 1; SIR cannot be calculated
▬	Observed similar to predicted (not statistically significant)

DID YOU KNOW?

There is a 3% to 7% increased risk of acquiring a CAUTI each day an indwelling urinary catheter (IUC) is in place².



CENTRAL LINE-ASSOCIATED BLOODSTREAM INFECTIONS (CLABSI)

A central line is a long, flexible tube (catheter) that is inserted into a large vein in the neck, chest, upper arm, or leg to access a patient's bloodstream with a tip that ends near the heart. They are used to provide medicines, nutrients, or fluids, access for laboratory testing, or to monitor pressure inside the heart. Central lines are typically kept in place longer than a regular intravenous (IV) catheter. Central lines are often used for treatments of kidney disease (dialysis) or cancer (chemotherapy) and can be left in place even after discharge from the hospital.

Serious infection can occur if bacteria enter the bloodstream through a central line, called Central Line-Associated Bloodstream Infections (CLABSI). CLABSIs typically cause prolonged hospitalization, increased costs, and risk of mortality. Hospital CLABSI SIRs are compared by the [type of hospital unit](#) based on the type of patient care required.

Since 2011, Washington hospitals have been required to report all adult, pediatric, and neonatal intensive care unit (ICU) acquired CLABSIs. That requirement was extended to all adult and pediatric medical, surgical, and medical/surgical wards in 2015.

The HHS HAI target goal is 0.50. The 2019 SIR for CLABSI in all Washington acute care locations is 0.52. Between 2018 and 2019, the state SIR for CLABSI **decreased by 3.5%. However, this decrease is not statistically significant** ($p>0.05$). Table 4 lists SIRs for CLABSI for each ACH in WA.

For more information, visit CDC's webpage on [CLABSI](#).

KEY POINTS

- ☑ Did not meet 2020 HHS HAI Action Plan target.
- ☑ Among the Washington ACHs with enough data to calculate a SIR, 4% had a SIR significantly higher than the national SIR (0.69).
- ☑ WA ACHs reported no significant change in CLABSI between 2018 and 2019.



Table 4: CLABSI Standardized Infection Ratios by Facility

Facility Name	Performance	Number of Infections	Number Predicted	Device Days	SIR	95% Confidence Interval
Astria Toppenish Hospital		0	0.06	109		N/A
Capital Medical Center		0	1.17	1,652	0.00	0.00, 2.56
Cascade Valley Hospital		1	0.62	990		N/A
Central Hospital		0	0.04	76		N/A
Central Washington Hospital		3	4.33	6,344	0.69	0.18, 1.88
CHI-FHS St. Anne Hospital		1	3.05	3,339	0.33	0.02, 1.62
CHI-FHS St. Anthony Hospital		0	4.72	5,271	0.00	0.00, 0.64
CHI-FHS St. Clare Hospital		0	2.69	2,871	0.00	0.00, 1.11
CHI-FHS St. Francis Hospital		5	4.37	4,760	1.15	0.42, 2.54
CHI-FHS St. Joseph Medical Center		8	17.81	15,643	0.45	0.21, 0.85
Evergreen Health Kirkland		5	6.06	5,805	0.82	0.30, 1.83
Evergreen Health Monroe		0	0.16	262		N/A
Grays Harbor Community Hospital		0	1.33	2,186	0.00	0, 2.25
Harborview Medical Center		22	26.07	18,956	0.84	0.54, 1.26
Island Hospital		0	0.41	690		N/A
Kadlec Regional Medical Center		6	7.73	8,284	0.78	0.32, 1.61
Legacy Health Salmon Creek		1	2.81	3,775	0.36	0.02, 1.75
MultiCare Auburn Medical Center		1	2.62	3,159	0.38	0.02, 1.88
MultiCare Covington Medical Center		0	0.07	125		N/A



Facility Name	Performance	Number of Infections	Number Predicted	Device Days	SIR	95% Confidence Interval
MultiCare Deaconess Hospital	▼	2	9.72	10,354	0.21	0.03, 0.68
MultiCare Good Samaritan	▼	5	8.57	9,296	0.58	0.21, 1.29
MultiCare Mary Bridge Hospital	▼	1	3.83	4,388	0.26	0.01, 1.29
MultiCare Tacoma General Hospital	▼	9	19.51	18,316	0.46	0.22, 0.85
MultiCare Valley Hospital and Medical Center	▬	1	1.80	2,645	0.56	0.03, 2.75
Northwest Hospital and Medical Center	▼	2	5.60	6,304	0.36	0.06, 1.18
Olympic Medical Center	▼	1	2.00	2,475	0.50	0.03, 2.47
Overlake Hospital Medical Center	▼	5	6.89	8,578	0.72	0.27, 1.61
PeaceHealth Southwest Medical Center	▼	4	9.01	9,515	0.44	0.14, 1.07
PeaceHealth St John Medical Center	▬	2	2.04	2,959	0.98	0.16, 3.24
PeaceHealth St. Joseph Medical Center	▼	0	7.92	10,098	0.00	0.00, 0.38
Providence Centralia Hospital	▼	0	1.19	1,745	0.00	0.00, 2.52
Providence Holy Family Hospital	▼	2	4.66	6,822	0.43	0.07, 1.42
Providence Regional Medical Center Everett	▼	6	19.99	19,334	0.30	0.12, 0.62
Providence Sacred Heart Medical Center	▼	5	20.72	17,743	0.24	0.09, 0.54
Providence St. Mary Medical Center	▼	0	1.77	2,904	0.00	0.00, 1.69
Providence St. Peter's Hospital	▼	9	15.93	17,082	0.56	0.28, 1.04
Samaritan Hospital	◆	0	0.26	443	◆	N/A
Seattle Children's Hospital	▼	25	34.18	24,579	0.73	0.48, 1.06



Facility Name	Performance	Number of Infections	Number Predicted	Device Days	SIR	95% Confidence Interval
Skagit Regional Hospital	▲	9	4.80	6,196	1.88	0.92, 3.44
Swedish Edmonds	▼	1	2.72	3,939	0.37	0.02, 1.81
Swedish Medical Center - Ballard	◆	0	0.52	687	◆	N/A
Swedish Medical Center - Cherry Hill	▼	6	10.54	11,022	0.57	0.23, 1.18
Swedish Medical Center - First Hill	▼	10	23.18	24,132	0.43	0.22, 0.77
Swedish Medical Center - Issaquah	▬	1	1.73	2,583	0.58	0.03, 2.85
Trios Southridge Hospital	▬	2	2.25	2,813	0.89	0.15, 2.94
University of Washington Medical Center	▼	16	28.04	25,781	0.57	0.34, 0.91
Valley Medical Center	▼	7	9.44	11,747	0.74	0.32, 1.47
Virginia Mason Medical Center	▼	2	9.91	11,230	0.20	0.03, 0.67
Wenatchee Valley Medical Center	◆	0	0.05	89	◆	N/A
Yakima Valley Memorial Hospital	▼	1	3.06	2,865	0.33	0.02, 1.61

▼	Statistically fewer (better) infections
▼	Fewer infections (not statistically significant)
▲	More infections (not statistically significant)
▲	Statistically more (worse) infections
◆	Number of predicted infections less than 1; SIR cannot be calculated
▬	Observed similar to predicted (not statistically significant)



State and National CLABSI Standardized Infection Ratios

Table 5 shows the SIR for the state, with aggregated NHSN data. The symbol in the performance column describes the state’s SIR compared to the national SIRs for CLABSI in the specified care location. Overall, the statewide SIR for CLABSI is significantly lower than the national SIR.

Table 5: CLABSI Standardized Infection Ratios 2019 State Summary

Acute Care Facility Location	Performance	Number of Infections	Number Predicted	Device Days	SIR	95% Confidence Interval
All Locations (State)		187	359	363,563	0.52	0.45, 0.60
Critical Care Locations (State)		108	1,656	149,238	0.65	0.54, 0.78
Non-Critical Care Locations (State)		63	167	195,322	0.38	0.29, 0.48
Neonatal Critical Care Locations (State)		16	26	19,003	0.61	0.36, 0.98
All Locations (National)	Reference	18,009	26,149	26,015,901	0.69	0.68, 0.70
Critical Care Locations (National)	Reference	6,769	9,247	8,499,103	0.73	0.72, 0.75
Non-Critical Care Locations (National)	Reference	10,129	15,077	16,192,862	0.67	0.66, 0.69
Neonatal Critical Care Locations (National)	Reference	1,111	1,825	1,323,936	0.61	0.57, 0.65

	Statistically fewer (better) infections
	Fewer infections (not statistically significant)
	More infections (not statistically significant)
	Statistically more (worse) infections
	Number of predicted infections less than 1; SIR cannot be calculated
	Observed similar to predicted (not statistically significant)



CLOSTRIDIoidES DIFFICILE (C. diff or CDI) LAB-ID INFECTIONS

Clostridioides difficile (formerly *Clostridium difficile*), also known as “CDI, *C. difficile* or *C. diff*”, is a bacterium (germ) that can cause severe diarrhea, colitis, sepsis, and death. Most cases of CDI occur in people who are or have been taking antibiotics, clearing the way for *C. difficile* to colonize in the gastrointestinal tract. Other risk factors include a recent stay in a hospital or nursing home, weakened immune system, being at least 65 years old, and having previous infection.

C. difficile infection can spread from person to person on contaminated equipment and the hands of healthcare providers and visitors. *C. difficile* forms inactive spores with a protective coating that allows the bacteria to persist in the environment and resist some methods of cleaning and disinfection, making *C. difficile* an infection prevention challenge in healthcare settings.

Since 2014, Washington ACHs have been required to report hospital-onset (HO) of *C. difficile* infections identified by a laboratory test. According to NHSN, the onset of the infection is assigned based on the location that the specimen was collected, the date of specimen collection, and the date of admission to the facility. Table 6 lists SIRs for hospital-onset *Clostridioides difficile* infections (HO-CDI) for each ACH in WA.

The 2020 HHS HAI Action Plan target goal is 0.70. The 2019 SIR for CDI events in Washington is 0.60. Between 2018 and 2019, the state SIR for CDI events **decreased significantly by 14.4%** ($p < 0.05$).

For more information, visit the CDC’s webpage on [C. difficile](#)

KEY POINTS

- ☑ Met and exceeded 2020 HHS HAI Action Plan target.
- ☑ Among the Washington ACHs with enough data to calculate a SIR, 17% had a SIR significantly higher than the national SIR (0.58).
- ☑ WA hospitals reported a significant decrease in CDIs between 2018 and 2019.



Table 6: HO-CDI Standardized Infection Ratios by Facility

Facility Name	Performance	Number of Infections	Number Predicted	Patient Days	SIR	95% Confidence Interval
Astria Toppenish Hospital	▼	0	1.09	4,250	0.00	0.00, 2.74
Capital Medical Center	▼	2	9.56	17,788	0.21	0.04, 0.69
Cascade Valley Hospital	▬	3	2.41	6,940	1.25	0.32, 3.39
Central Hospital	◆	0	0.65	1,773	◆	N/A
Central Washington Hospital	▼	31	32.40	47,665	0.96	0.66, 1.34
CHI-FHS St. Anne Hospital	▼	6	17.43	30,563	0.34	0.14, 0.72
CHI-FHS St. Anthony Hospital	▼	7	18.31	30,368	0.38	0.17, 0.76
CHI-FHS St. Clare Hospital	▼	13	21.89	34,951	0.59	0.33, 0.99
CHI-FHS St. Francis Hospital	▼	15	18.42	36,145	0.81	0.47, 1.31
CHI-FHS St. Joseph Medical Center	▼	61	74.79	116,748	0.82	0.63, 1.04
Evergreen Health Kirkland	▼	7	31.30	68,373	0.22	0.10, 0.44
Evergreen Health Monroe	▬	2	2.06	4,130	0.97	0.16, 3.2
Grays Harbor Community Hospital	▼	3	5.88	9,557	0.51	0.13, 1.39
Harborview Medical Center	▼	80	86.21	114,375	0.93	0.74, 1.15
Island Hospital	▼	2	5.19	9,058	0.39	0.07, 1.27
Kadlec Regional Medical Center	▼	23	33.43	68,518	0.69	0.45, 1.02
Legacy Health Salmon Creek	▼	17	31.14	50,966	0.55	0.33, 0.86
MultiCare Auburn Medical Center	▼	3	13.69	24,566	0.22	0.06, 0.60
MultiCare Covington Medical Center	▼	0	1.21	4,531	0.00	0.00, 2.48



Facility Name	Performance	Number of Infections	Number Predicted	Patient Days	SIR	95% Confidence Interval
MultiCare Deaconess Hospital	▼	10	30.31	47,003	0.33	0.17, 0.59
MultiCare Good Samaritan	▼	23	52.52	88,002	0.44	0.28, 0.65
MultiCare Mary Bridge Hospital	▼	3	6.05	16,447	0.50	0.13, 1.35
MultiCare Tacoma General Hospital	▼	31	43.10	63,925	0.72	0.5, 1.01
MultiCare Valley Hospital and Medical Center	▼	4	10.13	21,777	0.40	0.13, 0.95
Northwest Hospital and Medical Center	▼	17	24.82	38,859	0.69	0.41, 1.07
Olympic Medical Center	▼	10	13.01	14,015	0.77	0.39, 1.37
Overlake Hospital Medical Center	▼	12	46.65	75,913	0.26	0.14, 0.44
PeaceHealth Southwest Medical Center	▼	19	55.98	85,495	0.34	0.21, 0.52
PeaceHealth St John Medical Center	▲	18	15.72	27,333	1.15	0.7, 1.78
PeaceHealth St. Joseph Medical Center	▼	19	36.37	59,017	0.52	0.32, 0.80
Providence Centralia Hospital	▼	1	12.75	31,555	0.08	0.00, 0.39
Providence Holy Family Hospital	▬	14	14.99	35,418	0.93	0.53, 1.53
Providence Regional Medical Center Everett	▼	29	77.32	157,820	0.38	0.26, 0.53
Providence Sacred Heart Medical Center	▼	37	75.23	144,472	0.49	0.35, 0.67
Providence St. Mary Medical Center	▼	4	10.22	21,320	0.39	0.12, 0.94
Providence St. Peter's Hospital	▼	18	63.53	107,572	0.28	0.17, 0.44
Samaritan Hospital	▼	0	1.80	9,557	0.00	0.00, 1.67
Seattle Cancer Care Alliance	▲	21	9.33	6,418	2.25	1.43, 3.38



Facility Name	Performance	Number of Infections	Number Predicted	Patient Days	SIR	95% Confidence Interval
Seattle Children's Hospital		45	31.71	92,216	1.42	1.05, 1.88
Shriners Hospitals for Children – Spokane		0	0.40	1,366		N/A
Skagit Regional Hospital		25	20.55	38,558	1.22	0.81, 1.77
Swedish Edmonds		6	21.12	46,758	0.28	0.12, 0.59
Swedish Medical Center – Ballard		0	3.14	15,341	0.00	0.00, 0.96
Swedish Medical Center – Cherry Hill		1	23.18	53,266	0.04	0.00, 0.21
Swedish Medical Center – First Hill		23	67.06	137,306	0.34	0.22, 0.51
Swedish Medical Center – Issaquah		4	8.48	22,517	0.47	0.15, 1.14
Trios Southridge Hospital		9	7.84	16,414	1.15	0.56, 2.11
University of Washington Medical Center		79	88.66	117,819	0.89	0.71, 1.11
Valley Medical Center		38	49.22	75,928	0.77	0.55, 1.05
Virginia Mason Medical Center		19	39.56	67,146	0.48	0.30, 0.74
Wenatchee Valley Medical Center		0	0.25	1,131		N/A
Yakima Valley Memorial Hospital		28	29.23	39,643	0.96	0.65, 1.37



State and National HO-CDI Standardized Infection Ratios

Table 7 shows the SIR for the state, with aggregated NHSN data. The symbol in the performance column describes the state’s SIR compared to the national SIRs for CDI for all acute care locations. The statewide SIR for CDI was similar to the national SIR, with only a 3% difference between the SIRs.

Table 7: HO-CDI Standardized Infection Ratios 2019 State Summary

	Performance	Number of Events	Number Predicted	Patient Days	SIR	95% Confidence Interval
All Locations (State)	☐	843	1,403	2,467,971	0.60	0.56, 0.64
All Locations (National)	Reference	54,282	93,185	146,950,807	0.58	0.58, 0.59

▼	Statistically fewer (better) infections
▽	Fewer infections (not statistically significant)
▲	More infections (not statistically significant)
▲	Statistically more (worse) infections
◆	Number of predicted infections less than 1; SIR cannot be calculated
☐	Observed similar to predicted (not statistically significant)

DID YOU KNOW?

CDI is estimated to cause half a million infections and 29,000 deaths in the US each year.



METHICILLIN-RESISTANT *STAPHYLOCOCCUS AUREUS* (MRSA)

Staphylococcus aureus (SA) are bacteria commonly found on the skin. Although these bacteria are generally harmless, they can cause infections ranging from pimples or boils to serious infections of internal organs. Most SA infections are minor and do not require treatment with antibiotics. However, more severe SA infections are often treated with antibiotics. Methicillin-resistant *Staphylococcus aureus* (MRSA) is a strain of SA that has become resistant to certain antibiotics, such as methicillin.

MRSA can spread within the community or in a healthcare setting, such as a hospital or long-term care facility. When MRSA is contracted in the healthcare setting, severe problems can manifest, such as bacteremia (bloodstream infections), pneumonia, and SSIs. If not properly treated, MRSA infections can result in sepsis or death.

MRSA bacteremia data are not required to be reported to WA DOH for 2019. However, hospitals following CMS guidelines are required to report HO of MRSA bacteremia to NHSN, therefore data for individual facilities are not available. According to NHSN, the onset of the infection is assigned based on the location that the specimen was collected, the date of specimen collection, and the date of admission to the facility. Table 8 shows the SIR for hospital-onset MRSA (HO-MRSA) for the state, with aggregated NHSN data, compared to national SIR.

The 2020 HHS HAI Action Plan target goal is 0.50. The 2019 SIR for HO-MRSA bacteremia events in Washington is 0.60. Between 2018 and 2019, the state SIR for MRSA events **increased by 4.4%. This increase is not statistically significant** ($p > 0.05$).

For more information, visit the CDC's webpage on [MRSA](#).

KEY POINTS

- ☑ Did not meet 2020 HHS HAI Action Plan target.
- ☑ Among the Washington ACHs with enough data to calculate a SIR, 3% had an SIR significantly higher than the national SIR (0.82).
- ☑ WA hospitals reported no significant change in MRSA bacteremia between 2018 and 2019.



State and National HO-MRSA Standardized Infection Ratios

Table 8 shows the SIR for the state, with aggregated NHSN data. The symbol in the performance column describes the state’s SIR compared to the national SIRs for MRSA for all acute care locations. The statewide SIR for HO-MRSA is significantly lower than the national SIR.

Table 8: HO-MRSA Bacteremia Standardized Infection Ratios 2019 State Summary

	Performance	Number of Events	Number Predicted	SIR	95% Confidence Interval
Facility-wide (State)	▼	108	180	0.60	0.50, 0.72
Facility-wide (National)	Reference	8,131	9,953	0.82	0.80, 0.84

▼	Statistically fewer (better) infections
▽	Fewer infections (not statistically significant)
▲	More infections (not statistically significant)
▲	Statistically more (worse) infections
◆	Number of predicted infections less than 1; SIR cannot be calculated
▬	Observed similar to predicted (not statistically significant)

DID YOU KNOW?

About 2 in every 100 people carry (are colonized with) MRSA, although most do not develop serious infections.



SURGICAL SITE INFECTIONS (SSI)

A surgical site infection (SSI) is an infection that occurs after a surgery was performed. Most surgeries do not result in an infection. However, there is a risk of SSI following any surgery. SSIs occur in 2% to 5% of patients undergoing inpatient surgery. SSI reporting focuses on certain types of surgeries because they are performed frequently or may have higher risk of infection. Hospital SSI rates are compared by the [type of surgical procedure](#).

These infections can spread in superficial skin layers, deep incisional layers (fascial and muscle), and into the organ/space areas. Nationally, two SSI types are reported by all or most ACHs in most states: abdominal hysterectomy and colon surgery infections. SSI reporting following inpatient colon and abdominal hysterectomy surgeries has been mandated in Washington State since 2012.

Colon Surgeries

Colon (large intestine or bowel) surgeries involve a surgical incision to access the intestinal cavity to make a repair on or remove part of the large intestine. Some colon repairs include removal of diseased or damaged colon (resection), attaching healthy parts of the colon together (anastomosis), or making an opening in the colon to remove waste (ostomy).

SSIs from colon surgeries (SSI-COLO) can affect the tissue around the incision and cause a superficial infection (skin and subcutaneous tissue), or a deep infection in the muscles, connective tissues, or organs such as the gastrointestinal tract or in the intra-abdominal area.

Rectal operations, small bowel surgeries, gallbladder, or appendix removal, and non-surgical routine tests like colonoscopies are considered different types of procedures and are not included in this NHSN colon surgery category and are not tracked by the WA DOH.

The 2020 HHS HAI Action Plan target goal is 0.70. The 2019 SIR for SSIs related to colon surgeries in Washington is 0.66. Between 2018 and 2019, the state SIR for SSIs related to colon surgeries remained relatively the same, **with a slight (0.40%) decrease that is not statistically significant** ($p>0.05$). Table 9 lists SIRs for SSI-COLO for each ACH in Washington.



KEY POINTS

- ☑ Met 2020 HHS HAI Action Plan target.
- ☑ Among the Washington ACHs with enough data to calculate a SIR, 3% had an SIR significantly higher than the national SIR (0.85).
- ☑ WA hospitals reported no significant change in SSIs related to colon surgeries between 2018 and 2019.

Table 9: SSI Colon Standardized Infection Ratios by Facility

Facility Name	Performance	Number of Infections	Number Predicted	Number of Procedures	SIR	95% Confidence Interval
Capital Medical Center	▼	0	2.16	86	0.00	0.00, 1.39
Cascade Valley Hospital	▼	0	1.05	39	0.00	0.00, 2.85
Central Washington Hospital	▼	2	3.96	160	0.50	0.09, 1.67
CHI-FHS St. Anne Hospital	▼	0	2.00	82	0.00	0.00, 1.50
CHI-FHS St. Anthony Hospital	▼	0	1.48	57	0.00	0.00, 2.02
CHI-FHS St. Clare Hospital	◆	0	0.35	13	◆	N/A
CHI-FHS St. Francis Hospital	▬	2	2.00	81	1.00	0.17, 3.30
CHI-FHS St. Joseph Medical Center	▼	0	7.42	279	0.00	0.00, 0.40
Evergreen Health Kirkland	▬	4	3.67	154	1.09	0.35, 2.63
Evergreen Health Monroe	◆	1	0.54	19	◆	N/A
Grays Harbor Community Hospital	◆	1	0.42	16	◆	N/A
Harborview Medical Center	▲	12	5.38	145	2.23	1.21, 3.79



Facility Name	Performance	Number of Infections	Number Predicted	Number of Procedures	SIR	95% Confidence Interval
Island Hospital		0	0.71	30		N/A
Kadlec Regional Medical Center		2	6.35	238	0.32	0.05, 1.04
Legacy Health Salmon Creek		1	3.88	152	0.26	0.01, 1.27
Mid-Valley Hospital		0	0.23	9		N/A
MultiCare Auburn Medical Center		0	1.93	72	0.00	0.00, 1.55
MultiCare Deaconess Hospital		3	5.31	206	0.56	0.14, 1.54
MultiCare Good Samaritan		0	4.84	189	0.00	0.00, 0.62
MultiCare Tacoma General Hospital		4	5.39	196	0.74	0.24, 1.79
MultiCare Valley Hospital and Medical Center		1	2.31	90	0.43	0.02, 2.13
Northwest Hospital and Medical Center		0	2.80	106	0.00	0.00, 1.07
Olympic Medical Center		0	1.24	49	0.00	0.00, 2.41
Overlake Hospital Medical Center		5	6.36	272	0.79	0.29, 1.74
PeaceHealth Southwest Medical Center		2	5.88	219	0.34	0.06, 1.12
PeaceHealth St John Medical Center		2	1.60	56	1.25	0.21, 4.13
PeaceHealth St. Joseph Medical Center		5	6.04	237	0.83	0.30, 1.84
Providence Centralia Hospital		0	1.10	40	0.00	0.00, 2.72
Providence Holy Family Hospital		1	2.43	86	0.41	0.02, 2.03
Providence Regional Medical Center Everett		5	7.74	284	0.65	0.24, 1.43



Facility Name	Performance	Number of Infections	Number Predicted	Number of Procedures	SIR	95% Confidence Interval
Providence Sacred Heart Medical Center	▼	6	10.84	397	0.55	0.22, 1.15
Providence St. Mary Medical Center	▼	0	1.35	53	0.00	0.00, 2.21
Providence St. Peter's Hospital	▼	4	6.65	248	0.60	0.19, 1.45
Samaritan Hospital	◆	2	0.69	23	◆	N/A
Seattle Children's Hospital	◆	0	0.28	6	◆	N/A
Skagit Regional Hospital	▬	2	1.80	73	1.11	0.19, 3.67
Swedish Edmonds	▼	0	3.24	134	0.00	0.00, 0.92
Swedish Medical Center - Cherry Hill	◆	0	0.05	2	◆	N/A
Swedish Medical Center - First Hill	▲	15	13.12	504	1.14	0.66, 1.84
Swedish Medical Center - Issaquah	▬	3	2.24	83	1.34	0.34, 3.65
Trios Southridge Hospital	◆	0	0.86	34	◆	N/A
University of Washington Medical Center	▲	10	8.61	297	1.16	0.59, 2.07
Valley Medical Center	▼	2	5.22	199	0.38	0.06, 1.27
Virginia Mason Medical Center	▼	2	6.74	269	0.30	0.05, 0.98
Yakima Valley Memorial Hospital	▲	4	2.58	96	1.55	0.49, 3.75



State and National SSI Colon Standardized Infection Ratios

Table 10 shows the SIR for the state, with aggregated NHSN data. The symbol in the performance column describes the state’s SIR compared to the national SIRs for SSI-COLO in the specified care location. The statewide SIR for SSI-COLO is significantly lower than the national SIR.

Table 10: SSI Colon Standardized Infection Ratios 2019 State Summary

	Performance	Number of Infections	Number Predicted	Number of Procedures	SIR	95% Confidence Interval
State	▼	108	164	6,215	0.66	0.54, 0.79
National	Reference	7,256	8,482	327,573	0.86	0.84, 0.88

▼	Statistically fewer (better) infections
▽	Fewer infections (not statistically significant)
▲	More infections (not statistically significant)
▲	Statistically more (worse) infections
◆	Number of predicted infections less than 1; SIR cannot be calculated
▬	Observed similar to predicted (not statistically significant)

DID YOU KNOW?

SSI is the most expensive HAI type, with an estimated annual cost of \$3.3 billion.³



Abdominal Hysterectomies

Abdominal hysterectomy is a common surgical procedure in which the uterus is removed through an incision in the lower abdomen. SSIs from hysterectomies (SSI-HYST) can affect the area around the incision. This is a superficial infection, as the area affected is limited to the skin and subcutaneous tissue. Other more serious SSIs can result in a deep infection in the muscles or an infection affecting the reproductive tract in the area around the abdomen. A lower risk alternative to an abdominal hysterectomy is a vaginal hysterectomy.

The 2020 HHS HAI Action Plan target goal is 0.70. The 2019 SIR for SSIs related to abdominal hysterectomies in Washington is 0.70. Between 2018 and 2019, the state SIR for SSIs related to abdominal **increased by 14.3%. However, this increase is not statistically significant** ($p>0.05$).

Table 11 lists SIRs for SSI-HYST for each ACH in Washington.

For more information, visit the CDC's webpage on [SSI](#).

KEY POINTS

- Met 2020 HHS HAI Action Plan target.
- Among the Washington ACHs with enough data to calculate a SIR, 0% had an SIR significantly higher than the national SIR (0.98).
- WA hospitals reported no significant change



Table 11: SSI Hysterectomy Standardized Infection Ratios by Facility

Facility Name	Performance	Number of Infections	Number Predicted	Number of Procedures	SIR	95% Confidence Interval
Astria Toppenish Hospital		0	0.05	6		N/A
Capital Medical Center		1	0.27	36		N/A
Cascade Valley Hospital		0	0.01	1		N/A
Central Washington Hospital		2	0.83	108		N/A
CHI-FHS St. Anne Hospital		0	0.34	45		N/A
CHI-FHS St. Anthony Hospital		0	1.98	244	0.00	0.00, 1.51
CHI-FHS St. Clare Hospital		0	0.06	8		N/A
CHI-FHS St. Francis Hospital		1	0.61	81		N/A
CHI-FHS St. Joseph Medical Center		1	2.73	309	0.37	0.02, 1.80
Evergreen Health Kirkland		2	1.47	203	1.36	0.23, 4.50
Evergreen Health Monroe		0	0.01	1		N/A
Grays Harbor Community Hospital		0	0.06	6		N/A
Harborview Medical Center		0	0.14	17		N/A
Island Hospital		1	0.23	34		N/A
Kadlec Regional Medical Center		0	0.53	63		N/A
Legacy Health Salmon Creek		3	1.39	176	2.16	0.55, 5.89
Mid-Valley Hospital		0	0.02	3		N/A
MultiCare Auburn Medical Center		0	0.10	13		N/A
MultiCare Covington Medical Center		0	0.01	1		N/A



Facility Name	Performance	Number of Infections	Number Predicted	Number of Procedures	SIR	95% Confidence Interval
MultiCare Deaconess Hospital		0	0.25	32		N/A
MultiCare Good Samaritan		0	0.37	47		N/A
MultiCare Tacoma General Hospital		1	0.94	105		N/A
MultiCare Valley Hospital and Medical Center		0	0.66	79		N/A
Northwest Hospital and Medical Center		0	0.24	29		N/A
Olympic Medical Center		0	0.40	51		N/A
Overlake Hospital Medical Center		0	3.46	490	0.00	0.00, 0.87
PeaceHealth Southwest Medical Center		2	1.38	171	1.45	0.24, 4.78
PeaceHealth St John Medical Center		0	1.13	124	0.00	0.00, 2.64
PeaceHealth St. Joseph Medical Center		0	1.38	178	0.00	0.00, 2.17
Providence Centralia Hospital		0	0.41	47		N/A
Providence Holy Family Hospital		0	0.42	54		N/A
Providence Regional Medical Center Everett		1	4.60	572	0.22	0.01, 1.07
Providence Sacred Heart Medical Center		0	2.98	361	0.00	0.00, 1.00
Providence St. Mary Medical Center		0	0.80	89		N/A
Providence St. Peter's Hospital		0	2.43	280	0.00	0.00, 1.23
Samaritan Hospital		0	0.39	46		N/A
Skagit Regional Hospital		0	0.20	27		N/A



Facility Name	Performance	Number of Infections	Number Predicted	Number of Procedures	SIR	95% Confidence Interval
Swedish Edmonds		0	0.67	84		N/A
Swedish Medical Center - Ballard		1	0.09	14		N/A
Swedish Medical Center - First Hill		11	5.69	767	1.93	1.02, 3.36
Swedish Medical Center - Issaquah		2	0.98	133		N/A
Trios Southridge Hospital		0	0.08	10		N/A
University of Washington Medical Center		1	1.53	177	0.65	0.03, 3.23
Valley Medical Center		0	1.81	230	0.00	0.00, 1.66
Virginia Mason Medical Center		2	1.55	219	1.29	0.22, 4.27
Yakima Valley Memorial Hospital		0	0.32	39		N/A

DID YOU KNOW?

SSI extends hospital length of stay by 9.7 days, with an increased cost of hospitalization by more than \$20,000 per admission³



State and National SSI Hysterectomy Standardized Infection Ratios

Table 12 shows the SIR for the state, with aggregated NHSN data. The symbol in the performance column describes the state’s SIR compared to the national SIRs for SSI-HYST in the specified care location. The statewide SIR for SSI-HYST is significantly lower than the national SIR.

Table 12: SSI Hysterectomy Standardized Infection Ratios 2019 State Summary

	Performance	Number of Infections	Number Predicted	Number of Procedures	SIR	95% Confidence Interval
State	▼	33	47	5,938	0.70	0.49, 0.98
National	Reference	2,157	2,203	334,530	0.98	0.94, 1.02

▼	Statistically fewer (better) infections
▽	Fewer infections (not statistically significant)
▲	More infections (not statistically significant)
▲	Statistically more (worse) infections
◆	Number of predicted infections less than 1; SIR cannot be calculated
=	Observed similar to predicted (not statistically significant)



REFERENCES

1. Center for Disease Control and Prevention. HAI and Antibiotic Use Prevalence Survey. Available from: [HAI and Antibiotic Use Prevalence Survey | HAIC Activities | HAI | CDC](#)
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