



Washington State

**Annual
Healthcare-Associated
Infections
Report
2020**

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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 (ACH), which are hospitals that provide short-term, inpatient medical and surgical services for many different conditions and illnesses. ACHs 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.

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* (MRSA) bacteremia
- Surgical site infections (SSIs) related to colon surgeries (COLO) and abdominal hysterectomies (HYST)

This report summarizes HAI data reported to the 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 appropriate use of the system and guidance to track infections using a standardized methodology. For more information about NHSN, please visit: www.cdc.gov/nhsn.

The data for this report was downloaded from NHSN in October 2022. Changes made to the data after this date are not reflected in this report, and 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 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 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 hospitals licensed under chapter 70.41 RCW to report HAIs. [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. Starting in January 2020, the RCW required the WA DOH to align with CMS reporting categories and criteria.



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 are required to 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.

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 the SIR, please see [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. National data are provided as a metric for comparison and include hospitals that report data into NHSN.

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



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. 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 limits 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.

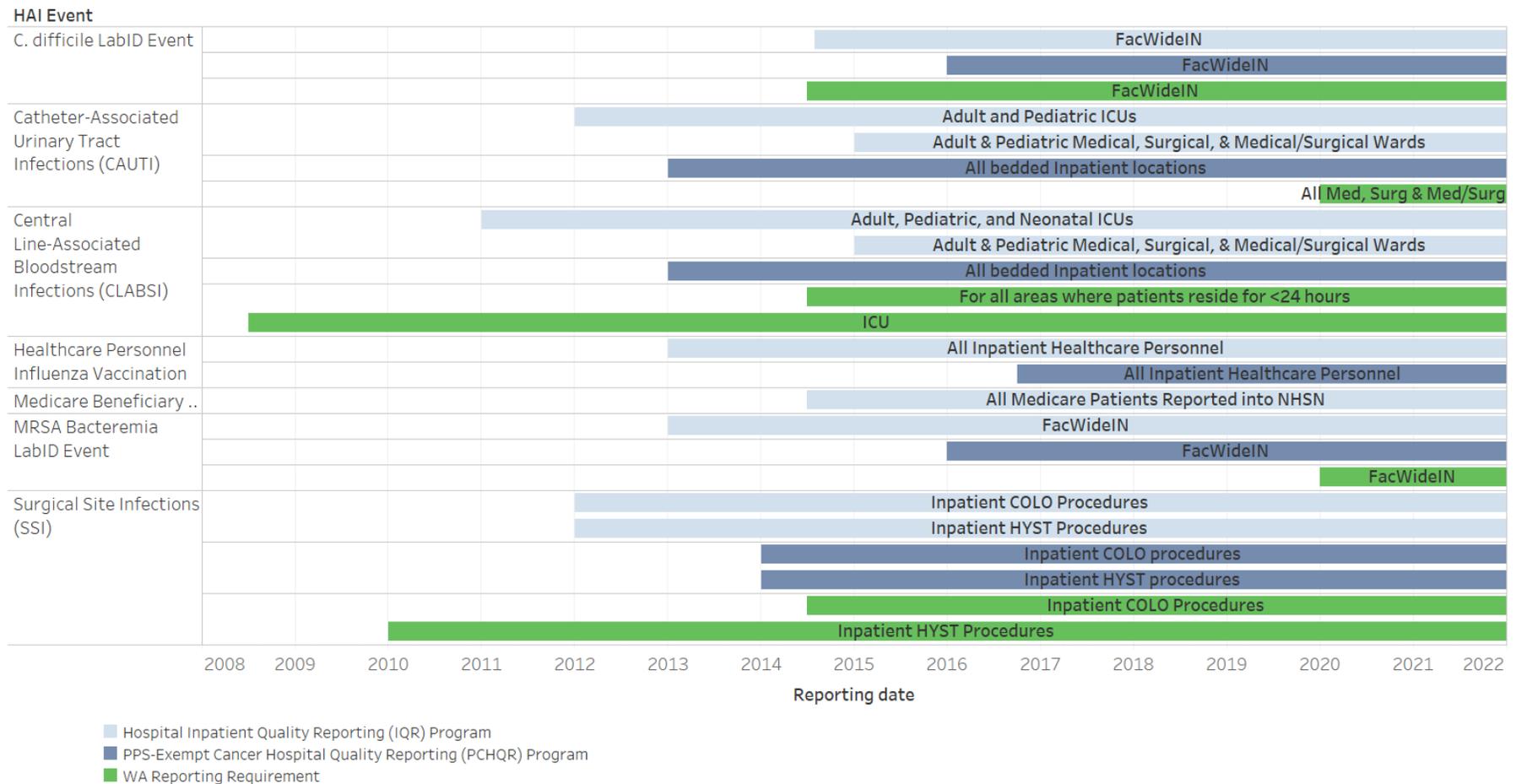
Hospital Performance Legend

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 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.

Hospital Infection Prevention teams perform robust surveillance for HAIs and continuously work to prevent HAIs in healthcare settings. The role of public health is to inform consumers and stakeholders of HAI metrics and collaborate with facilities to ensure systematic and reliable HAI surveillance.

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 standardized surveillance definitions.

The WA DOH publishes HAI data annually to provide information about the quality of hospital care in Washington and to monitor prevention progress, as compared to national averages and targets.

COVID-19 PANDEMIC

In March 2020, CMS announced exemptions from reporting requirements for HAIs to healthcare facilities from Quarter 1 and Quarter 2 of 2020 (January 1 to June 30). Additionally, CMS also made 2019 Quarter 4 data submission optional. The WA DOH aligned with the unprecedented CMS COVID-19 ruling to provide relief to Washington’s frontline workers. Some hospitals continued to report data to NHSN during this period.

At the beginning of the pandemic, there was a national shortage of personal protective equipment (PPE) supplies. As a result, in March 2020, the Governor issued an emergency proclamation prohibiting non-urgent, elective medical and dental procedures. The emergency proclamation ended in December 2020 and non-urgent, elective procedures were allowed. This ultimately decreased SSI incidence for reporting year 2020.

Since 2015, Washington hospitals have seen a steady decline in incidence for most HAIs. With an increase in hospitalizations due to COVID-19 infections, the incidence of most HAIs increased during reporting year 2020. Other contributing factors could be high hospital staff turnover rates, longer lengths of stay, and shortages of medical supplies. The exception being CDI and SSI, in which incidence was lower than previous years. Despite



the increase in incidence for most HAIs, the statewide incidence for all reportable HAIs continued to be lower (better) than the 2015 national baselines.

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, which 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. 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. HHS has continued to include HAI reduction goals in the Healthy People 2030 national objectives for the next decade. Two HAI objectives in Healthy People 2030 are specific to nationally reportable HAIs and tracked by the WA DOH:

- “Reduce *C. diff* infections that people get in the hospital⁶”—target SIR goal of 0.70
- “Reduce MRSA bloodstream infections that people get in the hospital⁷”—target SIR goal of 0.50

PROGRESS TOWARDS NATIONAL TARGETS

Since 2015, there had been a downward trend in the incidence of most HAIs in Washington hospitals. All HAIs had SIRs below the NHSN baseline of 1.0, meaning there were fewer infections than predicted for each of the HAIs included in this report. However, the COVID-19 pandemic derailed progress for most HAIs. The SIRs were worse in 2020 compared to 2019 for:

- CLABSI
- MRSA bacteremia
- CAUTI

The SIR was better or remained the same in 2020 compared to 2019 for:

- CDI
- SSI – COLO and HYST



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: 0.94 to 0.75, respectively). The SIR for CDI was similar to the national SIR (SIR: 0.54 to 0.52, 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 below shows the progress made toward three different national goals:

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

Goals that were met in 2020 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 2020

2020 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	✓	✗	✗
CDI	✓	✗	✓
CLABSI	✓	✓	✗
MRSA LAB-ID	✓	✓	✗
SSI – COLO	✓	✓	✓
SSI – HYST	✓	✓	✓



CAUTI: Did Not Meet HHS Target Goal; No Improvement as Statewide SIR Increased to 0.94

CAUTI was made a reportable HAI in January 2020 when RCW 43.70.056 was updated to complement reporting requirements of HAIs to those of CMS. Previously, WA DOH did not have access to CAUTI SIRs by facility; WA DOH received aggregated state data. 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. During 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. Unfortunately, the COVID-19 pandemic deterred efforts to achieve the HHS HAI Action Plan 2020 target goal of 0.75. For reporting year 2020, the statewide SIR for CAUTI was 0.94, nearly approaching the 2015 NHSN baseline of 1.0.

CDI: Met HHS Target Goal; Improved as Statewide SIR Decreased to 0.54

Since 2015, the CDI SIRs have been on a downward trend; CDI incidence was reduced by 46.4%, the greatest decrease of any reportable HAI in Washington. The highest SIR was in 2015 at 1.12, since then there has been at least a 10% annual decrease in SIR. The most significant percent change was from 2017 to 2018, when there was a 20.2% decrease in CDI SIR. CDI SIR in 2020 was the lowest it has been at 0.54. During the COVID-19 pandemic, hospitals in Washington, as well as nationally, experienced lower incidence in CDI when compared to previous years. 2020 NHSN data revealed strong declines in CDI nationally, likely due to pandemic-related improvements in hospital settings, such as hand hygiene, personal protective equipment (PPE) practices, and environmental cleaning. Regardless of pandemic-related improvements, pre-pandemic efforts made by hospitals to reduce CDI incidence has been effective as Washington ACHs have successfully met, and exceeded for a second year in a row, the HHS HAI Action Plan 2020 target goal of 0.70 for CDI.

CLABSI: Did Not Meet HHS Target Goal; No Improvement as Statewide SIR Increased to 0.63

Similar to CDI, CLABSI incidence had been on the decline since 2015. From 2015 to 2019, there was a 40.2% reduction in SIR. Unfortunately, the downward trend did not continue into 2020. The statewide SIR for CLABSI increased by over 20%, from 0.52 in 2019 to 0.63 in 2020, surpassing the 2018 SIR of 0.61. This increase in SIR, although not statistically significant, was likely due to increased hospitalizations from COVID-19 and high acuity of patients. Despite the progress made pre-pandemic, Washington ACHs did not meet the HHS HAI Action Plan 2020 target goal of 0.50. The state average SIR CLABSI in 2020 was 0.63.



COLO: Met HHS Target Goal; Statewide SIR Remained Stable at 0.66

Despite the COVID-19 pandemic, the incidence of SSI following colon surgery (COLO) has remained stable for reporting year 2020. There was a statistically significant reduction of 23.3% in SIR between 2017 and 2018 (SIR: 0.86 to 0.66, respectively). In 2020, the SIR was 0.66, the same as it was in 2018 and 2019. The continued work to maintain the low incidence of COLO has resulted in Washington ACHs meeting and exceeding the HHS HAI Plan 2020 target goal of 0.70 for the third consecutive year.

HYST: Met HHS Target Goal; Improved as Statewide SIR Decreased to 0.43

During 2019, SSI-HYST had the most pronounced increase in incidence, with a 21.4% increase. In 2020, the Governor's Emergency Proclamation restricted non-urgent, elective procedures, reducing the total number of abdominal hysterectomies (HYST) performed and this SSI denominator. There has been a 44.2% reduction in SSI-HYST since the CDC updated the national baseline in 2015. Between 2019 and 2020, there was a 38% decrease in SIR, from 0.70 to 0.43, respectively. However, this decrease was not statistically significant. Washington ACHs met the HHS HAI Action Plan 2020 target goal of 0.70.

MRSA: Did Not Meet HHS Target Goal; No Improvement as Statewide SIR Increased to 0.72

MRSA bacteremia infection was made a reportable HAI in January 2020 when RCW 43.70.056 was updated to complement reporting requirements of HAIs to those of CMS. Previously, WA DOH did not have access to MRSA SIRs by facility; WA DOH received aggregated state data. The incidence of MRSA bacteremia increased between 2019 and 2020, with a 20.2% increase in SIR, from 0.60 to 0.72. MRSA incidence in Washington has been slightly increasing since 2017. This marked the third consecutive year with a non-significant increase in MRSA incidence, although the increase the last two years was not as pronounced (1.8% increase in 2018 and 7.1% increase in 2019). The COVID-19 pandemic likely contributed to the further increase seen in 2020 with more hospitalizations. Despite these challenges, the SIR for MRSA remains significantly lower than the national average. Unfortunately, despite efforts to reduce MRSA bacteremia incidence, Washington ACHs did not meet the HHS HAI Action Plan 2020 target goal of 0.50.



NEXT STEPS

While much progress has been made pre-pandemic, the COVID-19 pandemic has curtailed efforts made by Washington ACHs to reduce HAI incidence. The WA DOH HAI/AR Program continues to work with partner organizations, including the 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 who entrust their care to Washington hospitals.

Variations in occurrence of HAIs between hospitals depends on several factors, including infection prevention practices or policies, patient risk factors, and underlying conditions. Pre-pandemic, Washington was close to reaching the national HHS HAI Action Plan 2020 Target for each HAI. However, due to the challenges of the COVID-19 pandemic, Washington hospitals were not able to meet all the goals for 2020 HHS Targets; only the target goals for CDI, SSI- COLO and HYST were met. Increased hospitalization rates, longer length of stays, higher patient acuity, and longer, more frequent use of invasive devices made it more difficult to meet the target goals for CAUTI, CLABSI and MRSA bacteremia. 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.



Figure 2. Healthcare-Associated Infections SIRs in Washington Hospitals, 2015-2020

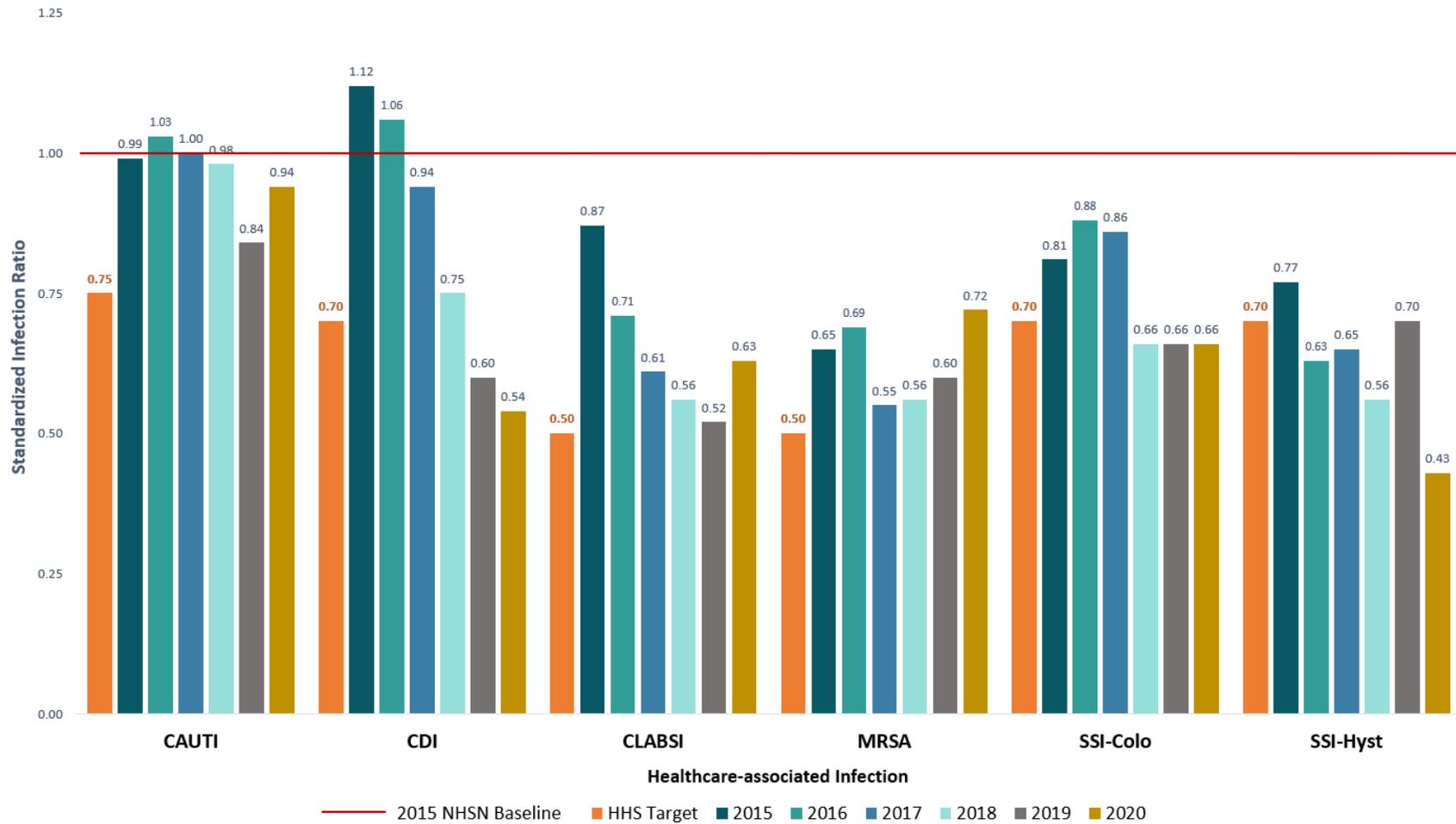


Figure 2 shows the state-wide SIR for each reportable HAI since the CDC updated the national baseline in 2015. Since 2015, there has been a general downtrend in HAI incidence, most notably for CLABSI, CDI, SSI-COLO, and CAUTI. In 2020 (gold bar), most HAIs increased or stayed the same, except for CDI and SSI-HYST. This is likely due to pandemic related challenges. 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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The WA DOH HAI/AR Program can be contacted at HAI@doh.wa.gov.



GLOSSARY

- ACH: Acute care hospital
- BSI: Bloodstream infection
- CAH: Critical access hospital
- CAUTI: Catheter-associated urinary tract infection
- CC: Critical care location
- 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
- PPE: Personal protective equipment
- 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. UTIs are the most common type of healthcare-associated infection reported to NHSN. 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 have urinary catheters placed 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.

CAUTI data are reportable to WA DOH for the first time after RCW 43.70.056 went into effect January 2020. Prior to the RCW revision, WA DOH received CAUTI data from CDC/NHSN as aggregated state data. Having these data reportable allows the HAI Epidemiology program within WA DOH to monitor prevention efforts and provide important information about the quality of hospital care in Washington.

Table 3 shows the SIR for each ACH in Washington that participants in CMS payment programs detailed in the reporting requirements section on page 3. Table 4 shows the state SIR compared to the national CAUTI SIR.

The 2020 HHS target goal was 0.75, while the 2020 SIR for CAUTI in all acute care locations in Washington was 0.94. Between 2019 and 2020, the state SIR for CAUTI **increased by 11.8%. However, this increase was not statistically significant** ($p>0.05$)

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

KEY POINTS

- ☑ Did not meet HHS target goal. No improvement as statewide SIR increased.
- ☑ Among the hospitals with enough data to calculate a SIR, 14% had a SIR significantly higher than the national SIR (0.75).



Table 3: CAUTI Standardized Infection Ratios by Facility

Facility Name	Performance	Number of Infections	Number Predicted	Catheter Days	SIR	95% Confidence Interval
Astria Toppenish Hospital		0	0.32	592		NA
Capital Medical Center		0	0.90	1,279		NA
Cascade Valley Hospital		0	0.47	884		NA
Central Washington Hospital		9	5.26	7,473	1.71	0.83, 3.14
CHI-FHS St. Anne Hospital		3	3.72	3,536	0.81	0.20, 2.19
CHI-FHS St. Anthony Hospital		1	4.88	4,790	0.20	0.01, 1.01
CHI-FHS St. Clare Hospital		1	3.21	3,153	0.31	0.02, 1.54
CHI-FHS St. Francis Hospital		2	6.39	6,248	0.31	0.05, 1.03
CHI-FHS St. Joseph Medical Center		11	22.53	12,289	0.49	0.26, 0.85
CHI-FHS St. Michael Medical Center		0	0.31	419		NA
Evergreen Health Kirkland		13	10.25	8,189	1.27	0.70, 2.11
Evergreen Health Monroe		1	0.48	946		NA
Grays Harbor Community Hospital		2	1.84	3,631	1.09	0.18, 3.59
Harborview Medical Center		71	57.67	24,583	1.23	0.97, 1.54
Island Hospital		0	0.58	1,152		NA
Kadlec Regional Medical Center		8	11	11,610	0.73	0.34, 1.38
Kaiser Permanente Central Hospital		0	0.10	199		NA
Legacy Health Salmon Creek		3	3.44	4,961	0.87	0.22, 2.37
MultiCare Allenmore Hospital		0	0.67	1,712		NA
MultiCare Auburn Medical Center		5	3.08	3,813	1.62	0.60, 3.60



Facility Name	Performance	Number of Infections	Number Predicted	Catheter Days	SIR	95% Confidence Interval
MultiCare Covington Medical Center		2	0.24	438		NA
MultiCare Deaconess Hospital		9	9.25	9,550	0.97	0.48, 1.79
MultiCare Good Samaritan		9	11.19	11,388	0.80	0.39, 1.48
MultiCare Mary Bridge Hospital		0	0.45	658		NA
MultiCare Tacoma General Hospital		19	13.31	13,186	1.43	0.88, 2.19
MultiCare Valley Hospital and Medical Center		2	2.72	3,792	0.74	0.12, 2.43
Northwest Hospital and Medical Center		3	3.51	3,558	0.86	0.22, 2.33
Olympic Medical Center		0	2.19	2,901	0.00	0.00, 1.36
Overlake Hospital Medical Center		6	5.78	6,795	1.04	0.42, 2.16
PeaceHealth Southwest Medical Center		4	9.04	8,122	0.44	0.14, 1.07
PeaceHealth St John Medical Center		2	2.11	2,990	0.95	0.16, 3.13
PeaceHealth St. Joseph Medical Center		4	4.83	5,662	0.83	0.26, 2.00
Providence Centralia Hospital		4	2.24	3,163	1.79	0.57, 4.31
Providence Holy Family Hospital		7	3.34	4,767	2.10	0.92, 4.15
Providence Regional Medical Center Everett		16	27.34	21,616	0.58	0.35, 0.93
Providence Sacred Heart Medical Center		16	16.01	12,423	1.00	0.59, 1.59
Providence St. Mary Medical Center		9	3.08	4,419	2.92	1.42, 5.36
Providence St. Peter's Hospital		16	14.02	13,975	1.14	0.68, 1.81



Facility Name	Performance	Number of Infections	Number Predicted	Catheter Days	SIR	95% Confidence Interval
Samaritan Hospital		0	0.42	862		NA
Seattle Children's Hospital		2	6.01	4,495	0.33	0.06, 1.10
Skagit Regional Hospital		7	4.55	5,824	1.54	0.67, 3.04
Swedish Medical Center - Ballard		0	0.24	327		NA
Swedish Medical Center - Cherry Hill		14	11.52	6,849	1.22	0.69, 1.99
Swedish Medical Center - Edmonds		5	2.47	3,481	2.02	0.74, 4.49
Swedish Medical Center - First Hill		10	16.36	13,204	0.61	0.31, 1.09
Swedish Medical Center - Issaquah		0	2.59	3,662	0.00	0.00, 1.16
Trios Southridge Hospital		3	3.21	4,108	0.93	0.24, 2.54
University of Washington Medical Center		15	10.85	8,572	1.38	0.80, 2.23
Valley Medical Center		9	12.38	12,447	0.73	0.36, 1.33
Virginia Mason Medical Center		11	10.30	8,423	1.07	0.56, 1.86
Wenatchee Valley Medical Center		0	0.12	242		NA
Yakima Valley Memorial Hospital		1	7.80	6,226	0.13	0.01, 0.63

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



State and National CAUTI Standardized Infection Ratios

Table 4 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 4: CAUTI Standardized Infection Ratios 2020 State Summary

Facility Name	Performance	Number of Infections	Number Predicted	Catheter Days	SIR	95% Confidence Interval
All locations (State)		335	356.57	309,584	0.94	0.84, 1.04
Critical Care locations (State)		217	205.90	151,961	1.05	0.92, 1.20
Non-Critical Care locations (State)		118	150.67	157,623	0.78	0.65, 0.93
All locations (National)	Reference	19,738	26,177.03	22,893,319	0.75	0.74, 0.77
Critical Care Locations (National)	Reference	9,633	13,098.12	9,751,998	0.74	0.72, 0.75
Non-Critical Care Locations (National)	Reference	10,105	13,078.91	13,141,321	0.77	0.76, 0.79

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

DID YOU KNOW?

Most CAUTIs can be treated with antibiotics and/or by removing or changing the catheter.



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 allow access to a patient's bloodstream with a tip that ends near the heart. They are used to provide medicines, nutrients, 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 the patient is discharged from the hospital.

A serious infection can occur if bacteria enter the bloodstream through a central line, called Central Line-Associated Bloodstream Infection (CLABSI). CLABSIs typically causes 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. Table 5 lists SIRs for all locations combined in each ACH.

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 2020 HHS target goal for CLABSI was 0.50, while the 2020 SIR for CLABSI in all acute care locations in Washington was 0.63. Between 2019 and 2020, the state SIR for CLABSI **increased by 20.5%, however this increase was not statistically significant** ($p>0.05$). For more information, visit CDC's webpage on [CLABSI](#).

KEY POINTS

- ☑ Did not meet HHS target goal. No improvement as statewide SIR increased.
- ☑ Among the hospitals with enough data to calculate a SIR, 4% had a SIR significantly higher than the national SIR (0.86).



Table 5: CLABSI Standardized Infection Ratios by Facility

Facility Name	Performance	Number of Infections	Number Predicted	Device Days	SIR	95% Confidence Interval
Astria Toppenish Hospital		1	0.22	377		NA
Capital Medical Center		1	0.99	1,407		NA
Cascade Valley Hospital		0	0.41	672		NA
Central Washington Hospital		5	5.09	7,330	0.98	0.36, 2.18
CHI-FHS St. Anne Hospital		4	3.29	3,631	1.22	0.39, 2.94
CHI-FHS St. Anthony Hospital		0	4.52	5,043	0.00	0.00, 0.66
CHI-FHS St. Clare Hospital		0	2.51	2,719	0.00	0.00, 1.19
CHI-FHS St. Francis Hospital		4	4.91	5,342	0.81	0.26, 1.97
CHI-FHS St. Joseph Medical Center		4	16.50	14,211	0.24	0.08, 0.58
CHI-FHS St. Michael Medical Center		1	0.33	419		NA
Evergreen Health Kirkland		3	6.37	5,964	0.47	0.12, 1.28
Evergreen Health Monroe		0	0.12	198		NA
Grays Harbor Community Hospital		0	1.09	1,738	0.00	0.00, 2.76
Harborview Medical Center		39	26.12	18,897	1.49	1.08, 2.02
Island Hospital		0	0.27	455		NA
Kadlec Regional Medical Center		6	9.43	10,196	0.64	0.26, 1.32
Kaiser Permanente Central Hospital		0	0.05	93		NA
Legacy Health Salmon Creek		0	2.95	3,920	0.00	0.00, 1.02
MultiCare Allenmore Hospital		0	0.91	1,302		NA
MultiCare Auburn Medical Center		2	3.43	4,111	0.58	0.10, 1.93



Facility Name	Performance	Number of Infections	Number Predicted	Device Days	SIR	95% Confidence Interval
MultiCare Covington Medical Center		0	0.33	483		NA
MultiCare Deaconess Hospital		3	9.91	10,498	0.30	0.08, 0.82
MultiCare Good Samaritan		2	10.18	10,904	0.20	0.03, 0.65
MultiCare Mary Bridge Hospital		1	3.27	3,832	0.31	0.01, 1.51
MultiCare Tacoma General Hospital		8	18.40	17,836	0.44	0.20, 0.83
MultiCare Valley Hospital and Medical Center		4	1.89	2,790	2.11	0.67, 5.10
Northwest Hospital and Medical Center		1	3.39	3,820	0.30	0.01, 1.46
Olympic Medical Center		0	1.82	2,243	0.00	0.00, 1.65
Overlake Hospital Medical Center		5	7.00	8,703	0.71	0.26, 1.58
PeaceHealth Southwest Medical Center		1	8.48	8,960	0.12	0.01, 0.58
PeaceHealth St John Medical Center		1	1.7	2,446	0.59	0.03, 2.90
PeaceHealth St. Joseph Medical Center		3	6.99	8,983	0.43	0.11, 1.17
Providence Centralia Hospital		2	1.21	1,784	1.65	0.28, 5.46
Providence Holy Family Hospital		2	4.11	5,942	0.49	0.08, 1.61
Providence Regional Medical Center Everett		15	21.33	20,687	0.70	0.41, 1.13
Providence Sacred Heart Medical Center		4	23.32	20,538	0.17	0.05, 0.41
Providence St. Mary Medical Center		4	1.82	2,950	2.20	0.70, 5.31
Providence St. Peter's Hospital		8	15.70	16,696	0.51	0.24, 0.97
Samaritan Hospital		0	0.16	279		NA
Seattle Children's Hospital		23	28.78	20,768	0.80	0.52, 1.18



Facility Name	Performance	Number of Infections	Number Predicted	Device Days	SIR	95% Confidence Interval
Skagit Regional Hospital		4	5.02	6,427	0.80	0.25, 1.92
Swedish Medical Center - Ballard		1	0.34	448		NA
Swedish Medical Center - Cherry Hill		6	7.56	7,770	0.79	0.32, 1.65
Swedish Medical Center - Edmonds		3	2.17	3,092	1.38	0.35, 3.76
Swedish Medical Center - First Hill		21	22.63	21,223	0.93	0.59, 1.39
Swedish Medical Center - Issaquah		4	2.46	3,598	1.62	0.52, 3.92
Trios Southridge Hospital		4	2.62	3,232	1.53	0.48, 3.68
University of Washington Medical Center		7	14.4	13,404	0.49	0.21, 0.96
Valley Medical Center		10	13.05	14,129	0.77	0.39, 1.37
Virginia Mason Medical Center		0	11.35	11,142	0.00	0.00, 0.26
Wenatchee Valley Medical Center		0	0.09	159		NA
Yakima Valley Memorial Hospital		0	4.42	4,213	0.00	0.00, 0.68

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



State and National CLABSI Standardized Infection Ratios

Table 6 shows the SIR, by the specified care location, 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. Overall, the statewide SIR for CLABSI is statistically significantly lower than the national SIR.

Table 6: CLABSI Standardized Infection Ratios 2020 State Summary

	Performance	Number of Infections	Number Predicted	Device Days	SIR	95% Confidence Interval
All Locations (State)	▼	217	345.43	348,004	0.63	0.55, 0.72
Critical Care Locations (State)	▼	140	164.84	148,719	0.85	0.72, 1.00
Non-Critical Care Locations (State)	▼	71	158.78	182,684	0.45	0.35, 0.56
Neonatal Critical Care Locations (State)	▼	6	21.81	16,601	0.28	0.11, 0.57
All Locations (National)	Reference	21,399	24,956.73	24,806,153	0.86	0.85, 0.87
Critical Care Locations (National)	Reference	10,668	9,715.14	9,011,299	1.10	1.08, 1.12
Non-Critical Care Locations (National)	Reference	9,770	13,608.30	14,613,166	0.72	0.70, 0.73
Neonatal Critical Care Locations (National)	Reference	961	1,633.27	1,181,688	0.59	0.55, 0.63

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

DID YOU KNOW?

About 30,100 CLABSI still occur in ICUs and wards of ACHs each year³.



CLOSTRIDIODES DIFFICILE (C. diff or CDI) LABORATORY IDENTIFIED (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. diff* to colonize in the gastro-intestinal 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 *C. diff* infection.

C. difficile infection can spread from person to person on contaminated equipment, and the hands of healthcare providers and visitors. Since the spore-forming bacteria can persist in the environment and resist some methods of cleaning and disinfection, *C. difficile* poses an infection prevention challenge in healthcare settings. During the COVID-19 pandemic, hospitals increased environmental cleaning, improved hand hygiene and PPE practices. This likely contributed to an overall decline in CDI incidence nationally.

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 7 lists SIRs for hospital-onset *Clostridioides difficile* infections (HO-CDI) for each ACH in Washington. Table 8 shows the SIR for the state compared to the national HO-CDI LabID SIR.

The 2020 HHS target goal was 0.70, while the 2020 SIR for HO-CDI LabID events in Washington was 0.54. Between 2019 and 2020, the state SIR for HO-CDI LabID events **decreased significantly by 10%** ($p < 0.05$).

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

KEY POINTS

- ☑ Met HHS target goal. Improved as statewide SIR decreased.
- ☑ Among the hospitals with enough data to calculate an SIR, 17% had an SIR significantly higher than the national SIR (0.52).



Table 7: HO-CDI Standardized Infection Ratios by Facility

Facility Name	Performance	Number of Events	Number Predicted	Patient Days	SIR	95% Confidence Interval
Astria Toppenish Hospital	▼	0	1.10	4,423	0.00	0.00, 2.73
Capital Medical Center	▼	2	6.79	11,859	0.30	0.05, 0.97
Cascade Valley Hospital	▼	0	1.90	6,199	0.00	0.00, 1.57
Central Washington Hospital	▼	26	28.58	45,692	0.91	0.61, 1.31
CHI-FHS St. Anne Hospital	▼	2	11.95	29,178	0.17	0.03, 0.55
CHI-FHS St. Anthony Hospital	▼	3	12.62	32,006	0.24	0.06, 0.65
CHI-FHS St. Clare Hospital	▼	2	12.03	32,758	0.17	0.03, 0.55
CHI-FHS St. Francis Hospital	▼	3	12.38	34,026	0.24	0.06, 0.66
CHI-FHS St. Joseph Medical Center	▼	15	49.42	103,727	0.30	0.18, 0.49
CHI-FHS St. Michael Medical Center	▬	1	1.74	9,097	0.57	0.03, 2.83
Evergreen Health Kirkland	▼	16	33.15	70,275	0.48	0.29, 0.77
Evergreen Health Monroe	▲	3	1.49	3,705	2.01	0.51, 5.48
Grays Harbor Community Hospital	▼	4	5.66	8,639	0.71	0.22, 1.71
Harborview Medical Center	▬	77	77.01	111,818	1.00	0.80, 1.24
Island Hospital	▼	0	2.65	7,435	0.00	0.00, 1.13
Kadlec Regional Medical Center	▼	17	34.5	67,351	0.49	0.3, 0.77
Kaiser Permanente Central Hospital	▼	1	2.76	11,370	0.36	0.02, 1.79
Legacy Health Salmon Creek	▼	10	34.8	57,439	0.29	0.15, 0.51
MultiCare Allenmore Hospital	▲	8	4.58	13,882	1.75	0.81, 3.31
MultiCare Auburn Medical Center	▼	6	19.99	30,607	0.30	0.12, 0.62



Facility Name	Performance	Number of Events	Number Predicted	Patient Days	SIR	95% Confidence Interval
MultiCare Covington Medical Center	▲	3	1.84	6,045	1.64	0.42, 4.45
MultiCare Deaconess Hospital	▼	8	28.52	45,837	0.28	0.13, 0.53
MultiCare Good Samaritan	▼	18	51.7	79,335	0.35	0.21, 0.54
MultiCare Mary Bridge Hospital	▬	5	5.02	13,277	1.00	0.36, 2.21
MultiCare Tacoma General Hospital	▼	42	53.56	78,674	0.78	0.57, 1.05
MultiCare Valley Hospital and Medical Center	▼	3	9.46	21,388	0.32	0.08, 0.86
Northwest Hospital and Medical Center	▲	16	14.15	19,129	1.13	0.67, 1.80
Olympic Medical Center	▼	6	9.59	13,132	0.63	0.25, 1.30
Overlake Hospital Medical Center	▼	9	33.14	72,693	0.27	0.13, 0.50
PeaceHealth Southwest Medical Center	▼	15	45.23	81,623	0.33	0.19, 0.54
PeaceHealth St John Medical Center	▼	9	12.36	25,090	0.73	0.36, 1.34
PeaceHealth St. Joseph Medical Center	▼	16	30.82	58,119	0.52	0.31, 0.82
Providence Centralia Hospital	▼	2	9.79	21,430	0.20	0.03, 0.68
Providence Holy Family Hospital	▼	10	14.17	33,988	0.71	0.36, 1.26
Providence Regional Medical Center Everett	▼	19	79.61	160,483	0.24	0.15, 0.37
Providence Sacred Heart Medical Center	▼	21	71.09	140,064	0.30	0.19, 0.44
Providence St. Mary Medical Center	▼	7	8.43	20,993	0.83	0.36, 1.64
Providence St. Peter's Hospital	▼	20	58.76	98,738	0.34	0.21, 0.52
Samaritan Hospital	▼	0	2.00	9,509	0.00	0.00, 1.50
Seattle Cancer Care Alliance	▬	10	9.35	5,664	1.07	0.54, 1.91



Facility Name	Performance	Number of Events	Number Predicted	Patient Days	SIR	95% Confidence Interval
Seattle Children's Hospital	▲	35	27.04	79,664	1.29	0.92, 1.78
Shriners Hospitals for Children - Spokane	◆	0	0.17	1,451	◆	NA
Skagit Regional Hospital	▼	9	18.37	37,083	0.49	0.24, 0.90
Swedish Medical Center - Ballard	▼	0	2.91	13,609	0.00	0.00, 1.03
Swedish Medical Center - Cherry Hill	▼	7	19.94	45,046	0.35	0.15, 0.69
Swedish Medical Center - Edmonds	▼	3	21.39	40,085	0.14	0.04, 0.38
Swedish Medical Center - First Hill	▼	26	65.08	129,918	0.40	0.27, 0.58
Swedish Medical Center - Issaquah	▼	1	9.63	25,044	0.10	0.00, 0.51
Trios Health	◆	0	0.78	3,568	◆	NA
Trios Southridge Hospital	▼	4	8.53	18,970	0.47	0.15, 1.13
University of Washington Medical Center	▲	58	42.24	59,670	1.37	1.05, 1.76
Valley Medical Center	▼	46	52.90	80,305	0.87	0.64, 1.15
Virginia Mason Medical Center	▼	25	37.03	64,079	0.68	0.45, 0.98
Wenatchee Valley Medical Center	◆	0	0.25	1,080	◆	NA
Yakima Valley Memorial Hospital	▼	16	19.45	30,701	0.82	0.49, 1.31

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



State and National HO-CDI 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 CDI in all acute care locations combined. Overall, the statewide SIR for HO-CDI higher than the national SIR, but not statistically significant.

Table 8: HO-CDI Standardized Infection Ratios 2020 State Summary

	Performance	Number of Events	Number Predicted	Patient Days	SIR	95% Confidence Interval
All Locations (State)	⚖️	665	1,229.38	2,326,970	0.54	0.50, 0.58
All Locations (National)	Reference	40,562	78,365.08	131,335,743	0.52	0.51, 0.52

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

DID YOU KNOW?

One hospital-onset of *C. difficile* infection is estimated to cost \$12,675⁴.



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 LabID events are reportable to WA DOH for the first time after RCW 43.70.056 went into effect January 2020. Prior to the RCW revision, WA DOH received MRSA Bacteremia LabID data from CDC/NHSN as aggregated state data. Having these data reportable allows the HAI Epidemiology program within WA DOH to monitor prevention efforts and provide important information about the quality of hospital care in Washington.

Washington acute care hospitals are required to report HO of MRSA Bacteremia events 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 9 shows the SIR for each ACH in Washington that participants in CMS payment programs detailed in the reporting requirements section on page 3. Table 10 shows the SIR for the state compared to the national HO-MRSA LabID SIR.

The 2020 HHS target goal was 0.50, while the 2020 SIR for HO-MRSA LabID events in Washington was 0.72. Between 2019 and 2020, the state SIR for HO-MRSA LabID events **increased by 20.2%, however the increase was not statistically significant** ($p>0.05$).

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



KEY POINTS

- ☑ Did Not Meet HHS Target Goal; No Improvement as Statewide SIR Increased
- ☑ Among the hospitals with enough data to calculate an SIR, 3% had an SIR significantly higher than the national SIR (0.94).

Table 9: HO-MRSA LabID Standardized Infection Ratios by Facility

Facility Name	Performance	Number of Events	Number Predicted	Patient Days	SIR	95% Confidence Interval
Astria Toppenish Hospital		1	0.09	4,423		NA
Capital Medical Center		2	0.61	12,667		NA
Cascade Valley Hospital		0	0.15	6,359		NA
Central Washington Hospital		4	2.04	48,179	1.96	0.62, 4.74
CHI-FHS St. Anne Hospital		4	1.76	30,658	2.28	0.72, 5.49
CHI-FHS St. Anthony Hospital		1	2.06	32,006	0.49	0.02, 2.40
CHI-FHS St. Clare Hospital		1	2.85	32,758	0.35	0.02, 1.73
CHI-FHS St. Francis Hospital		3	1.89	35,990	1.59	0.41, 4.33
CHI-FHS St. Joseph Medical Center		3	11.58	115,548	0.26	0.07, 0.70
CHI-FHS St. Michael Medical Center		0	0.29	12,792		NA



Facility Name	Performance	Number of Events	Number Predicted	Patient Days	SIR	95% Confidence Interval
Evergreen Health Kirkland	▼	2	4.85	77,051	0.41	0.07, 1.36
Evergreen Health Monroe	◆	2	0.12	3,705	◆	NA
Grays Harbor Community Hospital	◆	1	0.46	8,639	◆	NA
Harborview Medical Center	▲	19	12.17	111,818	1.56	0.97, 2.39
Island Hospital	◆	0	0.19	8,104	◆	NA
Kadlec Regional Medical Center	▬	3	3.95	78,089	0.76	0.19, 2.06
Kaiser Permanente Central Hospital	◆	0	0.20	11,370	◆	NA
Legacy Health Salmon Creek	▼	0	2.78	62,639	0.00	0.00, 1.08
MultiCare Allenmore Hospital	◆	0	0.30	13,882	◆	NA
MultiCare Auburn Medical Center	▬	3	2.58	32,700	1.16	0.30, 3.16
MultiCare Covington Medical Center	◆	0	0.16	6,345	◆	NA
MultiCare Deaconess Hospital	▼	1	3.80	50,389	0.26	0.01, 1.30
MultiCare Good Samaritan	▼	3	4.72	83,946	0.64	0.16, 1.73
MultiCare Mary Bridge Hospital	◆	1	0.30	13,277	◆	NA
MultiCare Tacoma General Hospital	▬	9	8.08	98,174	1.11	0.54, 2.04
MultiCare Valley Hospital and Medical Center	▼	0	1.17	21,388	0.00	0.00, 2.56



Facility Name	Performance	Number of Events	Number Predicted	Patient Days	SIR	95% Confidence Interval
Northwest Hospital and Medical Center		2	0.91	20,260		NA
Olympic Medical Center		0	0.97	14,023		NA
Overlake Hospital Medical Center		2	3.90	76,036	0.51	0.09, 1.69
PeaceHealth Southwest Medical Center		6	5.71	86,521	1.05	0.43, 2.18
PeaceHealth St John Medical Center		3	1.42	26,926	2.11	0.54, 5.73
PeaceHealth St. Joseph Medical Center		2	3.48	63,779	0.58	0.10, 1.90
Providence Centralia Hospital		1	0.65	22,626		NA
Providence Holy Family Hospital		1	1.66	34,164	0.60	0.03, 2.97
Providence Regional Medical Center Everett		2	13.24	169,412	0.15	0.03, 0.50
Providence Sacred Heart Medical Center		5	14.41	156,565	0.35	0.13, 0.77
Providence St. Peter's Hospital		7	7.42	103,549	0.94	0.41, 1.87
Samaritan Hospital		0	0.17	9,509		NA
Seattle Cancer Care Alliance		0	0.37	5,664		NA
Seattle Children's Hospital		0	3.16	89,142	0.00	0.00, 0.95
Shriners Hospitals for Children - Spokane		0	0.02	1,451		NA
Skagit Regional Hospital		3	2.11	38,812	1.42	0.36, 3.87



Facility Name	Performance	Number of Events	Number Predicted	Patient Days	SIR	95% Confidence Interval
Swedish Medical Center - Ballard		0	0.50	14,335		NA
Swedish Medical Center - Cherry Hill		1	3.65	45,046	0.27	0.01, 1.35
Swedish Medical Center - Edmonds		1	2.18	42,555	0.46	0.02, 2.27
Swedish Medical Center - First Hill		10	14.39	158,776	0.70	0.35, 1.24
Swedish Medical Center - Issaquah		3	1.05	28,110	2.86	0.73, 7.78
Trios Health		0	0.09	4,468		NA
Trios Southridge Hospital		2	1.67	20,247	1.20	0.2, 3.96
University of Washington Medical Center		3	7.25	66,640	0.41	0.1, 1.13
Valley Medical Center		5	4.66	90,537	1.07	0.39, 2.38
Virginia Mason Medical Center		1	5.93	64,079	0.17	0.01, 0.83
Wenatchee Valley Medical Center		0	0.02	1,080		NA
Yakima Valley Memorial Hospital		2	2.46	33,732	0.81	0.14, 2.69

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



State and National HO-MRSA LabID 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 HO-MRSA LabID events for all acute care locations combined. The statewide SIR for HO-MRSA LabID was significantly lower than the national SIR.

Table 10: HO-MRSA LabID Standardized Infection Ratios 2020 State Summary

	Performance	Number of Events	Number Predicted	Patient Days	SIR	95% Confidence Interval
Facility-wide (State)		125	173.47	2,523,174	0.72	0.60, 0.86
Facility-wide (National)	Reference	8,775	9,328.83	142,407,357	0.94	0.92, 0.96

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

DID YOU KNOW?

Nationally, the rate of hospital-onset of MRSA cases increased 13% in 2020, compared to 2019, likely due to pandemic challenges⁵.



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. These infections can spread in superficial skin layers, deep incisional layers (fascial and muscle), and into the organ/space areas.

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](#). Nationally, two SSI types are reported by all or most ACHs in most states: abdominal hysterectomy and colon surgery infections. SSI reporting of following inpatient colon and abdominal hysterectomy surgeries has been mandated in Washington 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).

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 target goal was 0.70, while the 2020 SIR for SSIs following colon surgeries in Washington was 0.66. Between 2019 and 2020, the state SIR for SSIs following colon surgeries **has remained stable, although not statistically significant**. The state SIR for COLO has been 0.66 since 2018 ($p>0.05$). Tables 11 and 12 show SIRs for SSIs following colon surgeries in acute care hospitals in Washington.



KEY POINTS

- ☑ Met HHS target goal; Statewide SIR Remained Stable.
- ☑ Among the hospitals with enough data to calculate a SIR, 3% had a SIR significantly higher than the national SIR (0.81).

Table 11: SSI Colon Standardized Infection Ratios by Facility

Facility Name	Performance	Number of Infections	Number Predicted	Number of Procedures	SIR	95% Confidence Interval
Astria Toppenish Hospital	◆	0	0.03	1	◆	NA
Capital Medical Center	▼	0	1.69	64	0.00	0.00, 1.77
Cascade Valley Hospital	≡	2	1.05	39	1.91	0.32, 6.32
Central Washington Hospital	▼	6	3.53	137	1.70	0.69, 3.53
CHI-FHS St. Anne Hospital	▼	0	1.74	72	0.00	0.00, 1.73
CHI-FHS St. Anthony Hospital	▼	0	1.38	54	0.00	0.00, 2.17
CHI-FHS St. Clare Hospital	◆	1	0.55	20	◆	NA
CHI-FHS St. Francis Hospital	≡	1	1.86	72	0.54	0.03, 2.64
CHI-FHS St. Joseph Medical Center	▼	5	6.64	239	0.75	0.28, 1.67
CHI-FHS St. Michael Medical Center	◆	0	0.87	34	◆	NA
Evergreen Health Kirkland	▼	2	3.28	139	0.61	0.10, 2.02
Evergreen Health Monroe	◆	0	0.54	20	◆	NA
Grays Harbor Community Hospital	◆	0	0.21	8	◆	NA
Harborview Medical Center	▲	7	4.40	118	1.59	0.70, 3.15



Facility Name	Performance	Number of Infections	Number Predicted	Number of Procedures	SIR	95% Confidence Interval
Island Hospital		2	0.90	40		NA
Kadlec Regional Medical Center		0	6.84	254	0.00	0.00, 0.44
Legacy Health Salmon Creek		3	2.83	112	1.06	0.27, 2.89
Mid-Valley Hospital		0	0.29	11		NA
MultiCare Allenmore Hospital		0	0.60	22		NA
MultiCare Auburn Medical Center		0	1.52	58	0.00	0.00, 1.98
MultiCare Covington Medical Center		0	0.17	6		NA
MultiCare Deaconess Hospital		1	5.6	207	0.18	0.01, 0.88
MultiCare Good Samaritan		1	4.32	162	0.23	0.01, 1.14
MultiCare Mary Bridge Hospital		0	0.05	1		NA
MultiCare Tacoma General Hospital		3	6.45	237	0.47	0.12, 1.27
MultiCare Valley Hospital and Medical Center		1	2.60	98	0.38	0.02, 1.9
Northwest Hospital and Medical Center		0	1.26	49	0.00	0.00, 2.37
Olympic Medical Center		2	1.26	48	1.59	0.27, 5.24
Overlake Hospital Medical Center		2	5.88	235	0.34	0.06, 1.12
PeaceHealth Southwest Medical Center		3	4.55	167	0.66	0.17, 1.79
PeaceHealth St John Medical Center		1	1.33	47	0.75	0.04, 3.71
PeaceHealth St. Joseph Medical Center		7	5.91	225	1.19	0.52, 2.34
Providence Centralia Hospital		2	0.93	36		NA
Providence Holy Family Hospital		2	3.13	109	0.64	0.11, 2.11



Facility Name	Performance	Number of Infections	Number Predicted	Number of Procedures	SIR	95% Confidence Interval
Providence Regional Medical Center Everett	▼	6	8.08	287	0.74	0.30, 1.54
Providence Sacred Heart Medical Center	▼	5	11.64	415	0.43	0.16, 0.95
Providence St. Mary Medical Center	▼	0	1.46	53	0.00	0.00, 2.05
Providence St. Peter's Hospital	▼	3	6.39	225	0.47	0.12, 1.28
Samaritan Hospital	◆	0	0.81	29	◆	NA
Seattle Children's Hospital	◆	0	0.17	4	◆	NA
Skagit Regional Hospital	▲	4	2.84	116	1.41	0.45, 3.39
Swedish Medical Center - Cherry Hill	◆	0	0.05	2	◆	NA
Swedish Medical Center - Edmonds	▼	2	3.93	156	0.51	0.09, 1.68
Swedish Medical Center - First Hill	▲	12	10.85	413	1.11	0.60, 1.88
Swedish Medical Center - Issaquah	▼	0	2.1	79	0.00	0.00, 1.43
Trios Southridge Hospital	◆	0	0.92	33	◆	NA
University of Washington Medical Center	▼	3	4.44	144	0.68	0.17, 1.84
Valley Medical Center	▼	3	4.56	166	0.66	0.17, 1.79
Virginia Mason Medical Center	▼	5	7.2	276	0.70	0.26, 1.54
Yakima Valley Memorial Hospital	≡	2	2.51	97	0.80	0.13, 2.63



State and National SSI Colon 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-COLO. The state-wide SIR for SSI-COLO is significantly lower than the national SIR.

Table 12: SSI Colon Standardized Infection Ratios 2020 State Summary

	Performance	Number of Infections	Number Predicted	Number of Procedures	SIR	95% Confidence Interval
State	▼	102	154.66	5739	0.66	0.54, 0.80
National	Reference	6,094	7,524.64	282,436	0.81	0.79, 0.83

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



Abdominal Hysterectomies

Abdominal hysterectomy is a common surgical procedure in which the uterus is removed through an incision in the lower abdomen. 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 target goal is 0.70, while the 2020 SIR for SSIs following abdominal hysterectomies in Washington was 0.43. Between 2019 and 2020, the state SIR for SSIs following abdominal hysterectomies **decreased by 38.2%. However, this decrease was not statistically significant** ($p>0.05$). This decrease was likely due to the COVID-19 pandemic and the Governor's Emergency Proclamation prohibiting non-urgent elective surgeries in the beginning of 2020.

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

KEY POINTS

- ☑ Met HHS Target Goal; Improved as Statewide SIR Decreased to 0.43
- ☑ Among the hospitals with enough data to calculate an SIR, 0% had an SIR significantly higher than the national SIR (0.89).



Table 13: 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	0.06	8		NA
Capital Medical Center		0	0.24	28		NA
Cascade Valley Hospital		0	0.01	2		NA
Central Washington Hospital		1	0.86	105		NA
CHI-FHS St. Anne Hospital		0	0.23	28		NA
CHI-FHS St. Anthony Hospital		0	1.35	167	0.00	0.00, 2.22
CHI-FHS St. Clare Hospital		0	0.08	11		NA
CHI-FHS St. Francis Hospital		0	0.27	37		NA
CHI-FHS St. Joseph Medical Center		0	1.67	186	0.00	0.00, 1.79
CHI-FHS St. Michael Medical Center		0	0.66	86		NA
Evergreen Health Kirkland		0	1.21	159	0.00	0.00, 2.48
Grays Harbor Community Hospital		0	0.01	1		NA
Harborview Medical Center		1	0.12	16		NA
Island Hospital		0	0.20	26		NA
Kadlec Regional Medical Center		0	0.70	79		NA
Legacy Health Salmon Creek		1	0.32	34		NA
MultiCare Allenmore Hospital		0	0.02	3		NA
MultiCare Auburn Medical Center		1	0.11	15		NA
MultiCare Covington Medical Center		0	0.01	1		NA
MultiCare Deaconess Hospital		0	0.50	65		NA



Facility Name	Performance	Number of Infections	Number Predicted	Number of Procedures	SIR	95% Confidence Interval
MultiCare Good Samaritan		1	0.40	51		NA
MultiCare Tacoma General Hospital		0	0.72	83		NA
MultiCare Valley Hospital and Medical Center		0	0.41	50		NA
Northwest Hospital and Medical Center		0	0.02	3		NA
Olympic Medical Center		0	0.41	47		NA
Overlake Hospital Medical Center		1	2.54	366	0.39	0.02, 1.94
PeaceHealth Southwest Medical Center		3	1.29	156	2.33	0.59, 6.33
PeaceHealth St John Medical Center		0	0.98	105		NA
PeaceHealth St. Joseph Medical Center		2	1.18	156	1.69	0.28, 5.60
Providence Centralia Hospital		0	0.40	48		NA
Providence Holy Family Hospital		0	0.42	46		NA
Providence Regional Medical Center Everett		0	3.29	388	0.00	0.00, 0.91
Providence Sacred Heart Medical Center		0	2.64	320	0.00	0.00, 1.14
Providence St. Mary Medical Center		0	0.57	63		NA
Providence St. Peter's Hospital		2	2.18	250	0.92	0.15, 3.03
Samaritan Hospital		0	0.32	37		NA
Seattle Children's Hospital		0	0.01	1		NA
Skagit Regional Hospital		0	0.12	14		NA
Swedish Medical Center - Ballard		0	0.06	6		NA
Swedish Medical Center - Edmonds		0	0.37	53		NA



Facility Name	Performance	Number of Infections	Number Predicted	Number of Procedures	SIR	95% Confidence Interval
Swedish Medical Center - First Hill		2	4.77	602	0.42	0.07, 1.38
Swedish Medical Center - Issaquah		0	0.69	96		NA
Trios Southridge Hospital		0	0.03	5		NA
University of Washington Medical Center		1	0.71	79		NA
Valley Medical Center		0	1.33	164	0.00	0.00, 2.26
Virginia Mason Medical Center		0	1.24	165	0.00	0.00, 2.42
Yakima Valley Memorial Hospital		0	0.23	26		NA



State and National SSI Hysterectomy Standardized Infection Ratios

Table 14 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. The state-wide SIR for SSI-HYST is significantly lower than the national SIR.

Table 14: SSI Hysterectomy Standardized Infection Ratios 2020 State Summary

	Performance	Number of Infections	Number Predicted	Number of Procedures	SIR	95% Confidence Interval
State		16	36.85	4554	0.43	0.26, 0.69
National	Reference	1,547	1,733.82	254,938	0.89	0.85, 0.94

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

DID YOU KNOW?

About half of SSIs are preventable by application of evidence-based strategies⁸.



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