



Healthcare-Associated Infections Annual Report

July 2021



COLORADO
Department of Public
Health & Environment

colorado.gov/cdphe/hai

Executive summary

Key findings

This report shows rates of healthcare-associated infections reported to the National Healthcare Safety Network by Colorado health care facilities in 2018, 2019, and 2020. Infection ratios and rates account for facility and patient characteristics and are compared to a national baseline. As there was no annual report published in 2020, this report highlights findings from 2019 and 2020.

During the COVID-19 pandemic in 2020, facilities did not have to report their data during the first half of the year, although many facilities did report. During the pandemic, patient populations and healthcare practices differed from previous years. These factors may make it more difficult to determine whether reported infection rates are better or worse than the national baseline, and year-to-year rate comparisons may be less accurate.

In 2019, overall rates of the following conditions were lower (better) than the national baseline: central-line associated bloodstream infections in acute care hospitals and *Clostridioides difficile* infections in acute care and long-term acute care hospitals. Overall rates of surgical site infections following knee replacement surgeries in ambulatory surgery centers were higher (worse) than the national baseline.

In 2020, overall rates of the following conditions were lower (better) than the national baseline: central line-associated bloodstream infections in acute care hospitals, *Clostridioides difficile* infections in acute care hospitals, long-term acute care hospitals, and inpatient rehabilitation facilities, access-related bloodstream infections in dialysis facilities, surgical site infections following colon surgery in inpatient acute care hospital settings, surgical site infections following breast surgeries in outpatient acute care hospital settings, and hernia surgeries in ambulatory surgery centers.

Overall rates for other conditions were similar to the national baseline or suppressed due to small numbers of events.

Facility-level rates are presented in detail.

Healthcare-associated infections (HAIs) are infections that patients get while being treated for other conditions in a hospital or other healthcare setting.

HAIs can devastate patients and families. People who have them may need more medicines and treatments, and they may not be able to work. This can cause financial stress. HAIs can cause pain, suffering and death.¹ This report contains data that Colorado healthcare facilities report to the Colorado Department of Public Health and Environment via the National Healthcare Safety Network (NHSN). It includes infections associated with surgeries, central lines, and dialysis treatment. It also includes *Clostridioides difficile* (*C. diff*) infections, caused by a kind of bacteria found in healthcare settings and the community.

This report does not have information on all HAIs, but people can use it as one sign of healthcare quality. People can compare infection rates between Colorado facilities and to national baselines, and look at the number of procedures performed as a measure of how much experience a facility has performing each procedure. Health-care facilities can use this data to target their infection prevention efforts.

The department works to reduce HAIs in Colorado through:

- Tracking and publishing HAI data.
- Guiding and assisting facilities on best practices for infection control.
- Validating HAI data.
- Observing facility practices.
- Working with partners on patient safety.

More information about healthcare-associated infections is on the department's [HAI web page](#).

Table 1A: Healthcare-Associated Infections Summary Table – Colorado, 2019

	No. of Facilities Reporting Data	No. of Facilities Better than National Baseline	No. of Facilities Same than National Baseline	No. of Facilities Worse than National Baseline	No. of Facilities for which Data Are Suppressed	Comparison: Colorado to National Baseline
Central Line-Associate Bloodstream Infections						
Acute Care Hospitals	53	7	22	0	24	Better
Adult and Pediatric Critical Care	45	2	23	0	20	Better
Neonatal Critical Care	20	0	6	0	14	Not Significant
Adult and Pediatric Inpatient Wards	51	4	21	0	26	Better
Inpatient Rehabilitation Wards ¹	11	0	0	0	11	Not Significant
Critical Access Hospitals	4	0	0	0	5	Suppressed ²
Inpatient Rehabilitation Facilities	6	0	0	0	6	Not Significant
Long-Term Acute Care Hospitals	7	0	5	0	2	--- ³
<i>Clostridioides difficile</i> Infections						
Acute Care Hospitals	53	17	30	0	6	Better
Inpatient Rehabilitation Facilities	6	0	6	0	0	Not Significant
Long-Term Acute Care Hospitals	7	3	4	0	0	Better
Dialysis Related Infections						
Access Related Bloodstream Infections	77	2	72	3	N/A	Not Significant
Surgical Site Infections at Acute Care Hospitals, Inpatient Procedures						
Breast Surgery	47	1	21	1	28	Not Significant

	No. of Facilities Reporting Data	No. of Facilities Better than National Baseline	No. of Facilities Same than National Baseline	No. of Facilities Worse than National Baseline	No. of Facilities for which Data Are Suppressed	Comparison: Colorado to National Baseline
Colon Surgery	50	2	37	2	10	Not Significant
Hip Replacement	52	1	29	2	20	Not Significant
Abdominal Hysterectomy	47	0	25	1	25	Not Significant
Knee Replacement	52	0	26	2	24	Not Significant
Surgical Site Infections at Acute Care Hospitals, Outpatient Procedures						
Breast Surgery	49	1	12	0	36	Not Significant
Colon Surgery	22	0	0	0	22	Suppressed ²
Hip Replacement	23	0	0	0	23	Suppressed ²
Abdominal Hysterectomy	39	0	0	0	39	Not Significant
Knee Replacement	31	0	2	0	29	Not Significant
Surgical Site Infections at Critical Access Hospitals, Inpatient Procedures						
Breast Surgery	6	0	0	0	18	Suppressed ²
Colon Surgery	11	0	1	0	17	Not Significant
Hip Replacement	17	0	0	0	20	Not Significant
Abdominal Hysterectomy	12	0	0	0	19	Not Significant
Knee Replacement	20	0	0	0	21	Not Significant
Surgical Site Infections at Critical Access Hospitals, Outpatient Procedures						
Breast Surgery	10	0	0	0	10	Suppressed ²
Colon Surgery	3	0	0	0	3	Suppressed ²
Hip Replacement	3	0	0	0	3	Suppressed ²

	No. of Facilities Reporting Data	No. of Facilities Better than National Baseline	No. of Facilities Same than National Baseline	No. of Facilities Worse than National Baseline	No. of Facilities for which Data Are Suppressed	Comparison: Colorado to National Baseline
Abdominal Hysterectomy	3	0	0	0	3	Suppressed ²
Knee Replacement	7	0	0	0	7	Suppressed ²
Surgical Site Infections at Ambulatory Surgery Centers						
Breast Surgery	32	0	5	1	26	Not Significant
Hip Replacement	20	--- ³	--- ³	--- ³	--- ³	--- ³
Abdominal Hysterectomy	5	--- ³	--- ³	--- ³	--- ³	--- ³
Knee Replacement	23	0	0	0	23	Worse
Hernia	35	0	2	1	32	Not Significant
Vaginal Hysterectomy	5	--- ³	--- ³	--- ³	--- ³	--- ³
<i>¹In acute care hospitals; ²Calculation of comparison is not available due to data suppression for one of the following reasons: procedure count was less than 20, less than 50 central line days were reported, or the predicted number of infections was less than one; ³National comparison models were not available at the time of this report.</i>						

Table 1B: Healthcare-Associated Infections Summary Table – Colorado, 2020

	No. of Facilities Reporting Data	No. of Facilities Better than National Baseline	No. of Facilities Same than National Baseline	No. of Facilities Worse than National Baseline	No. of Facilities for which Data Are Suppressed	Comparison: Colorado to National Baseline
Central Line-Associate Bloodstream Infections						
Acute Care Hospitals	53	2	27	2	22	Better
Adult and Pediatric Critical Care	45	2	23	3	17	Not Significant
Neonatal Critical Care	21	0	5	0	16	Not Significant
Adult and Pediatric Inpatient Wards	51	5	22	0	24	Better
Inpatient Rehabilitation Wards ¹	11	0	0	0	11	Not Significant
Critical Access Hospitals	4	0	0	0	5	Suppressed ²
Inpatient Rehabilitation Facilities	6	0	0	0	6	Not Significant
Long-Term Acute Care Hospitals	6	1	4	0	2	--- ³
<i>Clostridioides difficile</i> Infections						
Acute Care Hospitals	53	27	21	0	5	Better
Inpatient Rehabilitation Facilities	6	3	3	0	0	Better
Long-Term Acute Care Hospitals	6	2	4	0	1	Better
Dialysis Related Infections						
Access Related Bloodstream Infections	77	3	73	1	N/A	Better
Surgical Site Infections at Acute Care Hospitals, Inpatient Procedures						
Breast Surgery	47	0	17	0	34	Not Significant
Colon Surgery	49	5	36	1	9	Better

	No. of Facilities Reporting Data	No. of Facilities Better than National Baseline	No. of Facilities Same than National Baseline	No. of Facilities Worse than National Baseline	No. of Facilities for which Data Are Suppressed	Comparison: Colorado to National Baseline
Hip Replacement	52	1	29	1	21	Not Significant
Abdominal Hysterectomy	48	0	21	1	29	Not Significant
Knee Replacement	52	1	24	2	25	Not Significant
Surgical Site Infections at Acute Care Hospitals, Outpatient Procedures						
Breast Surgery	49	1	13	0	35	Better
Colon Surgery	13	0	0	0	13	Suppressed ²
Hip Replacement	35	0	0	0	35	Not Significant
Abdominal Hysterectomy	43	0	4	0	39	Not Significant
Knee Replacement	43	0	4	0	39	Not Significant
Surgical Site Infections at Critical Access Hospitals, Inpatient Procedures						
Breast Surgery	8	0	0	0	17	Suppressed ²
Colon Surgery	13	0	1	0	16	Not Significant
Hip Replacement	19	0	0	0	20	Not Significant
Abdominal Hysterectomy	11	0	0	0	17	Not Significant
Knee Replacement	20	0	1	0	20	Not Significant
Surgical Site Infections at Critical Access Hospitals, Outpatient Procedures						
Breast Surgery	9	0	0	0	9	Suppressed ²
Colon Surgery	2	0	0	0	2	Suppressed ²
Hip Replacement	4	0	0	0	4	Suppressed ²
Abdominal Hysterectomy	4	0	0	0	4	Suppressed ²

	No. of Facilities Reporting Data	No. of Facilities Better than National Baseline	No. of Facilities Same than National Baseline	No. of Facilities Worse than National Baseline	No. of Facilities for which Data Are Suppressed	Comparison: Colorado to National Baseline
Knee Replacement	9	0	0	0	9	Suppressed ²
Surgical Site Infections at Ambulatory Surgery Centers, Outpatient Procedures						
Breast Surgery	33	0	5	0	28	Not Significant
Hip Replacement	20	--- ³	--- ³	--- ³	--- ³	--- ³
Abdominal Hysterectomy	5	--- ³	--- ³	--- ³	--- ³	--- ³
Knee Replacement	24	0	0	0	24	Not Significant
Hernia	32	0	2	0	30	Better
Vaginal Hysterectomy	3	--- ³	--- ³	--- ³	--- ³	--- ³

¹In acute care hospitals; ²Calculation of comparison is not available due to data suppression for one of the following reasons: procedure count was less than 20, less than 50 central line days were reported, or the predicted number of infections was less than one; ³National comparison models were not available at the time of this report.

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This report fulfills reporting requirements set forth in the disclosure law and is the thirteenth annual report published by the department. The report presents information about HAI reporting requirements, processes and limitations; functions of implementing the disclosure law; and HAI data submitted by Colorado healthcare facilities on central line-associated bloodstream infections (CLABSIs), *Clostridioides difficile* infections, dialysis-related infections, and surgical site infections (SSIs). HAI data presented in this report are for the period Jan. 1, 2018 through Dec. 31, 2020.

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Introduction

Healthcare-associated infections (HAIs) are infections that patients acquire during treatment for other conditions within a health care setting. HAIs included in this report include infections associated with central lines (catheters/tubes placed in veins for treatment infusions), *Clostridioides difficile* (a bacterial found in healthcare settings), dialysis treatment, and surgeries. HAIs can be devastating to patients and families. They can cause significant financial burden due to additional treatments, procedures, and lost wages. HAIs can cause pain, suffering and death.¹ Recognizing the seriousness of HAIs, Colorado passed the HAI Disclosure Law in 2006, which was revised and updated in 2016 (Section 25-3-601, C.R.S.).² Administrative changes in 2016 included a change in reporting timeframe from fiscal to calendar year, and a change in the annual report submission date to the Colorado General Assembly from January 15 to July 15 of each year. Changes in 2016 also included a change to the definition of healthcare facility to include “all state licensed or certified facilities submitting data to the National Healthcare Safety Network (NHSN)”.³ This definition currently includes acute care hospitals, critical access hospitals, long-term acute care hospitals, inpatient rehabilitation facilities, ambulatory surgery centers, and dialysis facilities. It also may include additional facility types as they report to NHSN. These facility types are required to report designated HAI data as a condition of state licensure. Catheter-associated urinary tract infections and methicillin-resistant *Staphylococcus aureus* are reported per Board of Health requirements and are not included in this report.

The disclosure law mandates certain healthcare facilities report their HAI data to the Colorado Department of Public Health and Environment (CDPHE) through the National Healthcare Safety Network (NHSN), a national web-based surveillance and reporting system managed by the Centers for Disease Control and Prevention (CDC). The use of NHSN improves the validity of reported HAI data because facilities must use standard definitions and reporting rules. Reporting consistency allows us to compare Colorado facility HAI data to a national baseline.

The report presents information about HAI reporting requirements, processes, and limitations; the HAI disclosure law; and HAI data submitted by Colorado healthcare facilities on central line-associated bloodstream infections (CLABSI), *Clostridioides difficile*, dialysis-related infections, and selected surgical site infections (SSI). All data presented in this report were submitted for patients receiving treatment or having procedures during the 2018, 2019, and 2020 calendar years. A glossary of terms is available in Appendix A.

COVID-19: Of note, the COVID-19 pandemic likely affected facilities’ HAI data in a number of ways. Facilities were not required to report to NHSN during quarters 1 and 2 of 2020, although many facilities did report. Fewer data reported in 2020 may make it difficult to determine if facility HAI rates were better or worse than the national baseline, such that rates may more likely appear to be similar to baseline rates. In addition, the COVID-19 pandemic created changes in admission and care practices. Elective procedures were canceled during the spring of 2020, patients admitted to healthcare facilities were sicker, and healthcare facility spaces were repurposed to better care for COVID-19 patients. Changes in admission and care practices may have affected the reported HAI rates, making them better or worse than usual, and making year-to-year comparisons less accurate.

There was no HAI Annual Report published in 2020. This was because reporting deadlines for 2019 data were postponed, and resources were limited during the COVID-19 pandemic. Therefore, HAI data from 2019 and 2020 are published and highlighted for the first time here.

Healthcare-associated infections disclosure law

Implementing Colorado’s healthcare-associated infections (HAI) Disclosure Law involves four main functions, as described below:

1. Appointment of an HAI advisory committee.
2. Selection of conditions to be reported.
3. Oversight of data entered into the National Healthcare Safety Network (NHSN).
4. Public reporting of results by facility.

Committee members

Current Members (2021)

Melissa Broudy, RN, BSN, BA, MPH, CIC
Advisory Committee Co-Chair

Katie Cary, MPH, MT (ASCP), CIC
Advisory Committee Chair

Sara (Colvard) Diddy, MSN

Paul Hill, BS, MT (ACSP)

Christine Lentz, BS, MBA

Kimberly Montejano, RN

David Pflueger, MBA

Larissa Pisney, MD

Michelle Shockey, RN

Carolyn Valdez, MS

William Wright, MD

Past Members (2019, 2020)

Michael Houtari, JD

Ann Kokish, NHA
Advisory Committee Co-Chair

Tracy Flitcraft, BSN, RN

Michaela Halcomb, BSN, RN, CIC

Allison Lee Sabel-Soteres, MD, PhD

Heather Young, MD

Appointment and coordination of the HAI Advisory Committee

Colorado’s HAI disclosure law requires the department’s executive director to appoint an 11-member HAI Advisory Committee with the following composition:

- One representative from an urban hospital.
- One representative from a rural hospital
- One board-certified or board-eligible physician licensed in Colorado who is affiliated with a Colorado hospital or medical school and an active member of a national organization specializing in healthcare epidemiology or infection control
- Four infection control practitioners (one from a stand-alone ambulatory surgery center, one certified in infection control and epidemiology, one from a long-term care setting, and one other healthcare professional).
- One medical statistician or clinical microbiologist with an advanced degree.
- One representative from a health consumer organization
- One representative from a health insurer
- One purchaser of health insurance.

Role of the HAI Advisory Committee: The primary role of the Advisory Committee is to provide oversight and guidance to the Department for the collection, analysis, and publication of HAI data from health facilities according to C.R.S. 25-3-601-607. The Advisory Committee may advise the HAI&AR program on other issues as needed.

Selection of clinical metrics

The current HAI reporting metrics include infections related to central lines, *Clostridioides difficile* (*C. difficile*), outpatient dialysis treatment, and surgeries (Table 2). Central line-associated bloodstream infections (CLABSIs) are associated with the presence of an intravascular catheter (tube in a vein) that terminates at or close to the heart or in one of the great vessels (e.g., aorta, superior vena cava). Central lines, which may be temporary or permanent, are used to infuse fluids and medications, withdraw blood, or monitor fluid volume in patients. *C. difficile* infection is a diarrheal disease that generally occurs in patients exposed to healthcare and antibiotics. Dialysis-related infections include bloodstream infections related to the vascular access site. Because of frequent hospitalizations and weakened immune systems, dialysis patients are at high risk for infection. Surgeries for which surgical site infections (SSIs) are reported were selected based on their high volume and risk for infection.

In selecting metrics, the following factors were considered:⁴

- Impact - extent to which the infection affects the patient or family (disability, mortality and economic costs).
- Improvability - extent to which reporting infection improves practice to prevent the infection.
- Frequency - how often the infection occurs.
- Feasibility - ability for the data to be collected with minimal burden on the facilities.
- Functionality - extent to which the intended audience (patients, care providers and hospital administrators) can understand and apply the results.

Table 2: Colorado Healthcare-Associated Infection Reporting Metrics

Facility Type	Reported HAI	Reporting Hospital Unit(s)
Acute Care Hospitals	<ul style="list-style-type: none"> • Breast Surgical Site Infections (SSIs) • Colon SSIs • Hip Replacement SSIs • Knee Replacement SSIs • Abdominal Hysterectomy SSIs 	Inpatient and Attached Outpatient Operating Rooms
	<ul style="list-style-type: none"> • Central Line-Associated Bloodstream Infections (CLABSIs)¹ 	Adult and Pediatric Critical Care Units, Medical, Surgical, and Medical-Surgical Wards
		Neonatal Critical Care Units Level II/III and III
		Inpatient Rehabilitation Wards
<ul style="list-style-type: none"> • <i>Clostridioides difficile</i> infections² 	Facility-Wide Inpatient	
Critical Access Hospitals	<ul style="list-style-type: none"> • Breast SSIs • Colon SSIs • Hip and Knee Replacement SSIs • Abdominal Hysterectomy SSIs 	Inpatient and Outpatient Operating Rooms
	<ul style="list-style-type: none"> • CLABSIs 	Adult Critical Care Units
Long-Term Acute Care Hospitals	<ul style="list-style-type: none"> • CLABSIs 	All bedded inpatient locations
	<ul style="list-style-type: none"> • <i>Clostridioides difficile</i> infections 	Facility-Wide Inpatient
Inpatient Rehabilitation Facilities (Freestanding)	<ul style="list-style-type: none"> • CLABSIs 	All bedded inpatient locations
	<ul style="list-style-type: none"> • <i>Clostridioides difficile</i> infections 	Facility-Wide Inpatient

Facility Type	Reported HAI	Reporting Hospital Unit(s)
Ambulatory Surgery Centers	<ul style="list-style-type: none"> Breast SSIs Hernia Repair SSIs Hip and Knee Replacement SSIs Abdominal Hysterectomy SSIs Vaginal Hysterectomy SSIs 	All Outpatient Operating Rooms
Outpatient Dialysis Facilities	<ul style="list-style-type: none"> Dialysis Events 	All Outpatient Facilities

¹Stand-alone children’s hospitals report neonatal critical care data only.

²Excluding stand-alone children’s hospitals.

Oversight and validation of data

Colorado’s health care facilities grant the department access to data entered into NHSN, allowing the department to monitor, analyze and produce public reports. NHSN maintains stringent policies and rules to ensure data security, integrity, confidentiality and data sharing in strict accordance to federal laws.

Colorado’s HAI disclosure law requires health care facilities to report HAI data on a quarterly basis, and the department provides guidance and technical assistance to ensure the timely and accurate reporting of data. The department also performs systematic monitoring and selected validation of the HAI data submitted, which allows for the identification and correction of incomplete and incorrectly entered data. The department has completed data validation studies for abdominal hysterectomies in acute care hospitals (2016), central line-associated bloodstream infections in long-term acute care hospitals and inpatient rehabilitation facilities (2018), and dialysis-related infections (2018).

The HAI disclosure law also specifies requirements for health care facility employees who collect and report HAI data. These individuals must be certified in infection control and epidemiology⁵ or become certified within six months after becoming eligible to take the certification test as recommended by the Certification Board of Infection Control and Epidemiology, Inc., or its successor. These certification requirements do not apply to staff in hospitals with 50 or fewer beds, dialysis facilities, ambulatory surgery centers, or long-term care facilities.

Participating facilities

In 2019, 53 acute care hospitals, 20 critical access hospitals, one pediatric hospital, seven long-term acute care hospitals, six inpatient rehabilitation facilities, 57 ambulatory surgery centers, and 77 dialysis facilities reported healthcare-associated infection (HAI) data into the National Healthcare Safety Network (NHSN) accessible to the department. In 2020, 53 acute care hospitals, 21 critical access hospitals, one pediatric hospital, six long-term acute care hospitals, six inpatient rehabilitation facilities, 57 ambulatory surgery centers, and 77 dialysis facilities reported healthcare-associated infection (HAI) data into the National Healthcare Safety Network (NHSN) accessible to the department. **Table 3** shows the number of hospitals that report central line-associated bloodstream infections (CLABSIs) by type of care unit, and **Table 4** lists reportable surgical procedures and the numbers of hospitals and ambulatory surgery centers that report them.

Table 3: Healthcare Facilities and Units Reporting Central Line-Associated Bloodstream Infections – Colorado, 2019-2020

Unit/Type of Facility	No. of Facilities	
	2019	2020
Adult and Pediatric Critical Care in Acute Care Hospitals	53	53
Level II/III Neonatal Critical Care in Acute Care Hospitals	20	21
Wards in Acute Care Hospitals	51	51
Inpatient Rehabilitation Facilities	6	6
Inpatient Rehabilitation Wards in Acute Care Hospitals	11	11
Long-Term Acute Care Hospitals	7	6

Data source: National Healthcare Safety Network (NHSN) Database

Prepared by: Colorado Healthcare-Associated Infections and Antimicrobial Resistance Program, Colorado Department of Public Health and Environment.

Table 4: Healthcare Facilities Reporting Surgical Procedures by Procedure Type – Colorado, 2019-2020

Procedure Type	No. of Acute Care Hospitals		No. of Critical Access Hospitals		No. of Ambulatory Surgery Centers		No. of Facilities (Total)	
	2019	2020	2019	2020	2019	2020	2019	2020
Abdominal Hysterectomy	47	48	12	11	5	5	64	64
Breast Surgery	47	49	10	9	32	33	89	91
Colon Surgery	50	49	11	13	--- ¹	--- ¹	61	62
Hernia	--- ¹	--- ¹	--- ¹	--- ¹	35	32	35	32
Hip Replacement	52	52	17	19	20	20	89	91
Knee Replacement	52	52	20	20	23	24	95	96
Vaginal Hysterectomy	--- ¹	--- ¹	--- ¹	--- ¹	5	3	5	3

¹--- Facility types does not report these procedures.

Data source: National Healthcare Safety Network (NHSN) Database

Prepared by: Colorado Healthcare-Associated Infections and Antimicrobial Resistance Program, Colorado Department of Public Health and Environment.

Data format and cautions

Using these data

Consult with providers, facilities, insurers, reputable websites, and family and friends when making health care decisions. These data can be an indicator of health care quality. When using these data, keep in mind:

- Facilities that treat more severely ill patients may have higher infection rates regardless of their prevention efforts.
- Facilities find infections in different ways, and higher infection rates may be due to better surveillance practices, not poorer infection control practices.
- It can be challenging for facilities to identify all infections consistently using reporting definitions.
- Facilities self-report their infection data.

Data presented in this report include central line-associated bloodstream infections (CLABSIs), *Clostridioides difficile* (*C. difficile*) infections, dialysis-related infections, and surgical site infections (SSIs) in patients receiving medical care between Jan. 1, 2018 and Dec. 31, 2020. Two forms of healthcare-associated infection (HAI) data are presented: infection counts or rates that combine all Colorado facilities (aggregate data) and infection rates or counts for each individual facility (facility-specific data). The report further classifies HAI data by procedure and/or device so facilities can readily identify areas in need of process improvements and target infection prevention efforts.

Facility-specific data tables include the facility name, and for each facility, the number of infections and, depending on the type of infection, the patient line days (for CLABSIs), patient-days (for *C. difficile*), patient-months (for dialysis-related infections), or number of surgeries (for SSIs). Patient-days is a measure of the number of patients multiplied by the number of days they were in the facility; for example, if two patients each were in the facility for five days, the number of patient-days is 10. Patient-months is a similar measure multiplying the number of patients by the number of months of care.

National comparisons. National comparisons are shown for conditions and facility types when available through NHSN. National comparisons

using standardized infection ratios (SIRs) use the facility's observed and expected number of infections, denominator size, and a statistical test of difference. SIRs account for differences in patient populations and facility characteristics. The statistical test of difference, indicated by a p-value, describes the probability of observing a similar or greater difference between the infection rate and the national baseline rate even if, in truth, the rates were the same (i.e., a difference due to chance). A p-value of ≤ 0.05 is considered statistically significant. This is described in greater detail in Appendix B.

- If the SIR is less than one and the difference is statistically significant, the facility has significantly fewer HAI than expected and is designated as “better” than the national baseline.
- If the difference is statistically significant and the SIR is greater than one, the facility has significantly more infections than predicted and is designated as “worse” than the national baseline.
- If there is no significant difference between the facility's observed and predicted number of infections, regardless of the SIR, the facility is designated as “not significant” as the national baseline.

For dialysis events, including access-related bloodstream infection (ARB), unadjusted observed rates were compared to the national aggregate rate. This is because SIRs that account for facility and patient characteristics for ARB are not available. Instead of SIRs, crude infection rates are presented and a p-value is used to indicate the probability of observing a similar or greater

difference from the national aggregate rate if, in truth, the rates are the same (i.e., a difference due to chance). A p-value of ≤ 0.05 is considered statistically significant. This is described in detail in Appendix B.

- If the rate is lower than the national aggregate rate and the p-value is less than or equal to 0.05, the facility's infection rate is designated as "better."
- If the rate is higher than the national aggregate rate and the p-value is less than or equal to 0.05, the facility's infection rate is designated as "worse."
- If the p-value is greater than 0.05, the difference between the facility's rate and the national aggregate rate is not statistically significant, and the facility's infection rate is designated as "not significant."

Considerations and Limitations

The department and the Colorado HAI Advisory Committee recommend caution when drawing conclusions from these data for multiple reasons. For one, direct comparisons between facilities may not provide the most accurate assessment because infection rates are influenced by the types of patients treated. Facilities that treat higher volumes of severely ill patients may have higher infection rates regardless of their prevention efforts. While the NHSN system provides the best risk adjustment possible to account for this at present by using the SIR, there always will be patient risk factors that cannot be measured (e.g., individual ability to heal, smoking cessation days, severe suppression of the immune system) that contribute to infection risk. Additionally, a calculated SIR is not available for all conditions, and therefore additional caution should be applied when interpreting a comparison of rates, which are not adjusted for risk.

Second, rates may be influenced by differences in how facilities detect infections. The NHSN surveillance manuals are developed by CDC subject matter experts, and although the definitions and criteria are updated each year, they can be challenging to apply to patients with complicated medical histories. Additionally, facilities use different surveillance techniques to find infections. Some infection preventionists have more resources for surveillance, and may subsequently find and report more infections than other facilities. In those cases, higher infection rates may be based on better surveillance practices rather than poor infection control practices. It is noteworthy that ambulatory surgery centers traditionally report lower numbers of SSIs than hospitals, which may be due, in part, to reduced opportunity to conduct post-surgical follow-up with patients and surgeons.

Third, report users should note that facilities report their own data. Although data validation studies have been completed in past years for selected CLABSIs, SSIs, and dialysis-related infections, validation is not performed on every infection, nor on every condition reported each year.

Finally, the COVID-19 pandemic in 2020 likely influenced the rates of HAIs. Facilities did not have to report HAI data during quarters 1 and 2 of 2020, although many facilities did report. Admission and care practices also changed during 2020. Therefore, the HAI rates reported here may not be reflective of the norm, and may not be comparable to prior years.

We recommend conclusions regarding health care quality be made in conjunction with other quality indicators. Consumers should consult with doctors, health care facilities, health insurance carriers, health care websites from reputable sources (e.g., Hospital Compare, Colorado Hospital Report Card, Leap Frog), and with their families and friends before deciding where to receive care. Ideally, facilities will use the data in this report to target and improve infection prevention efforts, and consumers will use the data to make better-informed health care decisions.

Colorado State-Level Data

Aggregate central line-associated bloodstream infection data

Rates of central line-associated bloodstream infection (CLABSI) in acute care hospitals were lower (better) than the national baseline in 2019 and 2020 overall and in acute care hospital wards. The rate of CLABSI in adult and pediatric critical care units in acute care hospitals was lower (better) than the national baseline in 2019. Comparison of rates of CLABSI in critical access hospitals to the national baseline was not possible. Rates of CLABSI in inpatient rehabilitation facilities were similar to (not significantly different from) the national baseline in 2019 and 2020.

Central line-associated bloodstream infections (CLABSIs) are associated with specific intravascular catheters used to infuse fluids or medications, withdraw blood, or monitor fluid volume in patients. **Table 6** shows the statewide aggregate number of CLABSIs in acute care hospitals; among specific acute care hospital locations including critical care units, neonatal critical care units, general wards and inpatient rehabilitation wards within the hospitals; critical access hospitals; inpatient rehabilitation facilities; and long-term acute care hospitals in Colorado for the 2018, 2019, and 2020 calendar years.

Table 6: Central Line-Associated Bloodstream Infections in Healthcare Facilities by Facility/Unit Type – Colorado, Jan. 1, 2018 - Dec. 31, 2020

Facility/Unit Type	2018				2019				2020			
	No. of Central Line Days	No. of Infections	SIR	National Comparison	No. of Central Line Days	No. of Infections	SIR	National Comparison	No. of Central Line Days	No. of Infections	SIR	National Comparison
Acute Care Hospitals ¹	228,683	133	0.6	Better	223,946	127	0.6	Better	255,358	202	0.8	Better
Adult and Pediatric Critical Care ^{2,3}	99,673	71	0.7	Better	102,504	66	0.6	Better	131,540	140	1.0	Not Significant
Adult and Pediatric Inpatient Wards	115,352	45	0.4	Better	110,348	47	0.5	Better	114,053	54	0.5	Better
Inpatient Rehabilitation Ward ³	4,516	0	0.0	Not Significant	4,445	1	0.5	Not Significant	4,279	1	0.5	Not Significant
Neonatal Critical Care ³	13,658	17	0.9	Not Significant	11,094	14	0.9	Not Significant	9,765	8	0.6	Not Significant
Critical Access Hospitals	204	0	N/A	Suppressed ⁴	147	0	N/A	Suppressed ⁴	130	0	N/A	Suppressed ⁴
Inpatient Rehabilitation Facilities	3,662	0	0.0	Not Significant	4,522	0	0.0	Not Significant	6,036	1	0.3	Not Significant
Long-Term Acute Care Hospitals	24,280	15	N/A	--- ⁵	23,140	16	N/A	--- ⁵	22,258	18	N/A	--- ⁵

¹Excludes rehabilitation wards. Includes critical care, wards, and neonatal critical care; ²Excludes neonatal critical care units; ³In acute care hospitals; ⁴Calculation of comparison is not available due to data suppression for one of the following reasons: no. of central line days fewer than 50 or the predicted number of infections was less than one; ⁵--- National comparisons were not available for CLABSI within LTAC facilities.

The standardized infection ratio (SIR) is the quotient of the numbers of observed and predicted infections.

N/A, not applicable.

National comparisons based on data collected and reported by facilities participating in the National Healthcare Safety Network (NHSN) from January-December, 2020.

Data source: NHSN Database.

Prepared by: Colorado Healthcare-Associated Infections and Antimicrobial Resistance Program, Colorado Department of Public Health and Environment.

Aggregate *Clostridioides difficile* data

Rates of *C. difficile* in acute care hospitals and long-term acute care hospitals were lower (better) than the national baseline in 2019. Rates in acute care hospitals, inpatient rehabilitation facilities, and long-term acute care hospitals were lower (better) than the national baseline in 2020.

Clostridioides difficile (*C. difficile*) is a spore-forming bacterium that can cause symptoms ranging from bloating, diarrhea, fever and abdominal pain to life-threatening colon inflammation, sepsis and death. Table 7 shows statewide aggregate data for hospital-onset *C. difficile* in Colorado acute care hospitals, inpatient rehabilitation facilities, and long-term acute care hospitals for the 2018, 2019, and 2020 calendar years.

Table 7: *Clostridioides difficile* in Health Care Facilities by Facility Type – Colorado, Jan. 1, 2018 - Dec. 31, 2020

Facility Type	2018				2019				2020			
	No. of Patient Days	No. of Infections	SIR	National Comparison	No. of Patient Days	No. of Infections	SIR	National Comparison	No. of Patient Days	No. of Infections	SIR	National Comparison
Acute Care Hospitals	1,634,044	1,043	0.9	Better	1,692,257	630	0.6	Better	1,724,859	486	0.5	Better
Inpatient Rehabilitation Facilities	53,153	8	0.4	Better	61,584	13	0.7	Not Significant	66,225	5	0.2	Better
Long-Term Acute Care Hospitals	79,994	56	0.7	Better	79,764	44	0.6	Better	92,268	39	0.5	Better

The standardized infection ratio (SIR) is the quotient of the numbers of observed and predicted infections.

National comparisons based on data collected and reported by facilities participating in the National Healthcare Safety Network (NHSN) from January-December, 2020.

Data source: NHSN Database.

Prepared by: Colorado Healthcare-Associated Infections and Antimicrobial Resistance Program, Colorado Department of Public Health and Environment.

Aggregate dialysis infection data

In 2019, the overall rate of access related bloodstream infection (ARB) in dialysis facilities was similar to (not significantly different from) the national baseline. In 2020, the overall rate of ARB in dialysis facilities was lower (better) than the national baseline.

An access-related bloodstream infection (ARB) is the presence of bacteria in the blood, identified by a positive blood culture, with the source of the bacteria identified as the vascular access site (where needles for dialysis are inserted). Local access infections (LAI) are no longer reportable in Colorado as of 2019. **Table 8** shows statewide aggregate data for ARBs in Colorado outpatient dialysis facilities for the 2018, 2019, and 2020 calendar years. Risk adjustment using the SIR is not available for dialysis data, so unadjusted rates are presented.

Table 8: Dialysis-Related Infections in Outpatient Dialysis Facilities – Colorado, Jan. 1, 2018 - Dec. 31, 2020

Infection Type	2018				2019				2020			
	No. Patient Months	No. of Infections	Infection Rate	National Comparison	No. Patient Months	No. of Infections	Infection Rate	National Comparison	No. Patient Months	No. of Infections	Infection Rate	National Comparison
Access Related Bloodstream Infections	46,110	148	0.32	Not Significant	46,046	154	0.33	Not Significant	45,307	82	0.18	Better

Rates are per 100 patient-months. NOTE: These rates are not adjusted for risk.

National comparisons based on data collected and reported by facilities participating in the National Healthcare Safety Network (NHSN) from January-December, 2020.

Data include the following access types: fistula, graft, tunneled central line, and non-tunneled central line.

Data source: National Healthcare Safety Network (NHSN) Database.

Prepared by: Colorado Healthcare-Associated Infections and Antimicrobial Resistance Program, Colorado Department of Public Health and Environment.

Aggregate surgical site infection data

In 2019, overall rates of surgical site infection (SSI) following reported procedures in acute care hospitals for adult patients were similar to (not significantly different from) the national baseline. In 2020, rates of SSIs following inpatient colon surgeries and outpatient breast surgeries in acute care hospitals were lower (better) than the national baseline.

Surgical site infections (SSIs) are infections directly related to a surgical procedure. **Tables 9, 10, and 11** show the statewide aggregate number of SSIs for reportable procedures for the 2018, 2019, and 2020 calendar years. SSI data are presented for acute care hospitals, critical access hospitals and ambulatory surgical centers. SSIs in pediatric patients (age <18 on date of surgery) are not reportable in Colorado as of 2019.

Acute Care Hospitals (Table 9). In 2019, rates of SSIs in Colorado acute care hospitals were similar to (not significantly different from) the national baseline for inpatient and outpatient abdominal hysterectomies, breast surgeries, and knee replacement surgeries, and inpatient colon and hip replacement surgeries. In 2020, rates of SSIs in Colorado acute care hospitals were lower (better) than the national baseline for inpatient colon surgeries and outpatient breast surgeries, and were similar to (not significantly different from) the national baseline for inpatient and outpatient abdominal hysterectomies, hip replacement surgeries, and knee replacement surgeries, and inpatient breast surgeries.

Critical Access Hospitals (Table 10). In 2019 and 2020, rates of SSI in Colorado critical access hospitals were similar to the national baseline for inpatient abdominal hysterectomies, colon surgeries, hip replacement surgeries, and knee replacement surgeries. It was not possible to calculate rates of SSI for inpatient breast surgeries and all outpatient surgeries due to the low number of procedures performed.

Ambulatory surgery centers (Table 11). At the time of this report, national comparisons were available for breast surgeries, hernia surgeries, and knee replacements. In 2019, rates of SSIs following breast and hernia surgeries were similar to (not significantly different from) the national baseline and rates of SSIs following knee replacement surgeries were higher (worse) than the national baseline. In 2020, rates of SSIs following breast and hernia surgeries were lower (better) than the national baseline, and rates of SSIs following knee replacement surgeries were similar to (not significantly different from) the national baseline.

Comparison of the rates of SSI following abdominal and vaginal hysterectomy and hip replacement surgeries to the national baseline was not possible.

Table 9: Surgical Site Infections in Acute Care Hospitals – Colorado, Jan. 1, 2018 - Dec. 31, 2020

Procedure Type	2018				2019				2020			
	No. of Procedures	No. of Infections	SIR	National Comparison	No. of Procedures	No. of Infections	SIR	National Comparison	No. of Procedures	No. of Infections	SIR	National Comparison
Inpatient Surgeries												
Abdominal Hysterectomy	5,408	49	0.7	Better	5,937	70	0.9	Not Significant	4,822	66	1.0	Not Significant
Breast Surgery	4,364	69	1.0	Not Significant	4,103	68	1.0	Not Significant	3,100	41	0.8	Not Significant
Colon Surgery	5,123	223	0.9	Better	5,239	245	0.9	Not Significant	4,929	178	0.7	Better
Hip Replacement	11,727	109	1.0	Not Significant	11,793	130	1.2	Not Significant	10,317	95	0.9	Not Significant
Knee Replacement	17,332	109	1.1	Not Significant	16,954	113	1.1	Not Significant	13,752	85	1.0	Not Significant
Outpatient Surgeries												
Abdominal Hysterectomy	1,847	9	1.0	Not Significant	2,236	8	0.8	Not Significant	2,719	21	1.4	Not Significant
Breast Surgery	7,970	35	0.7	Not Significant	7,814	40	0.8	Not Significant	7,871	36	0.7	Better
Colon Surgery	47	0	N/A	Suppressed ¹	59	0	N/A	Suppressed ¹	26	0	N/A	Suppressed ¹
Hip Replacement	261	2	N/A	Suppressed ¹	317	0	N/A	Suppressed ¹	1,069	6	1.5	Not Significant
Knee Replacement	683	4	1.1	Not Significant	1,158	4	0.7	Not Significant	1,805	9	0.8	Not Significant

¹Calculation of comparison is not available due to data suppression for one of the following reasons: no. of procedures fewer than 20 or the predicted number of infections was less than one.

The standardized infection ratio (SIR) is the quotient of the numbers of observed and predicted infections.

N/A, not applicable.

National comparisons based on data collected and reported by facilities participating in the National Healthcare Safety Network (NHSN) from January-December, 2020.

Analysis includes adult patients >=18 years of age.

Data source: National Healthcare Safety Network (NHSN) Database.

Prepared by: Colorado Healthcare-Associated Infections and Antimicrobial Resistance Program, Colorado Department of Public Health and Environment.

Table 10: Surgical Site Infections in Critical Access Hospitals – Colorado, Jan. 1, 2018 - Dec. 31, 2020

Procedure Type	2018				2019				2020			
	No. of Procedures	No. of Infections	SIR	National Comparison	No. of Procedures	No. of Infections	SIR	National Comparison	No. of Procedures	No. of Infections	SIR	National Comparison
Inpatient Surgeries												
Abdominal Hysterectomy	89	1	0.6	Not Significant	97	2	1.2	Not Significant	69	1	0.8	Not Significant
Breast Surgery	34	1	N/A	Suppressed ¹	18	--- ¹	N/A	Suppressed ¹	26	0	N/A	Suppressed ¹
Colon Surgery	83	2	0.6	Not Significant	110	6	1.3	Not Significant	94	3	0.8	Not Significant
Hip Replacement	329	0	0.0	Better	265	6	2.4	Not Significant	363	7	1.9	Not Significant
Knee Replacement	570	1	0.3	Not Significant	559	6	1.7	Not Significant	668	3	0.7	Not Significant
Outpatient Surgeries												
Abdominal Hysterectomy	2	--- ¹	N/A	Suppressed ¹	10	--- ¹	N/A	Suppressed ¹	15	--- ¹	N/A	Suppressed ¹
Breast Surgery	107	1	N/A	Suppressed ¹	77	0	N/A	Suppressed ¹	88	0	N/A	Suppressed ¹
Colon Surgery	2	--- ¹	N/A	Suppressed ¹	4	--- ¹	N/A	Suppressed ¹	2	--- ¹	N/A	Suppressed ¹
Hip Replacement	2	--- ¹	N/A	Suppressed ¹	3	--- ¹	N/A	Suppressed ¹	21	0	N/A	Suppressed ¹
Knee Replacement	9	--- ¹	N/A	Suppressed ¹	7	--- ¹	N/A	Suppressed ¹	37	1	N/A	Suppressed ¹

¹Calculation of comparison is not available due to data suppression for one of the following reasons: no. of procedures fewer than 20 or the predicted number of infections was less than one.

The standardized infection ratio (SIR) is the quotient of the numbers of observed and predicted infections.

N/A, not applicable.

National comparisons based on data collected and reported by facilities participating in the National Healthcare Safety Network (NHSN) from January-December, 2020.

Analysis includes adult patients >=18 years of age.

Data source: National Healthcare Safety Network (NHSN) Database.

Prepared by: Colorado Healthcare-Associated Infections and Antimicrobial Resistance Program, Colorado Department of Public Health and Environment.

Table 11: Surgical Site Infections in Ambulatory Surgery Centers – Colorado, Jan. 1, 2018 - Dec. 31, 2020

Procedure Type	2018				2019				2020			
	No. of Procedures	No. of Infections	SIR	National Comparison	No. of Procedures	No. of Infections	SIR	National Comparison	No. of Procedures	No. of Infections	SIR	National Comparison
Outpatient Surgeries												
Abdominal Hysterectomy	85	1	N/A ¹	N/A ¹	408	2	N/A ¹	N/A ¹	378	0	N/A ¹	N/A ¹
Breast Surgery	5,394	7	0.5	Better	5,972	13	0.8	Not Significant	5,614	10	0.7	Not Significant
Hernia	4,853	7	0.7	Not Significant	5,587	12	1.1	Not Significant	4,791	2	0.2	Better
Hip Replacement	778	2	N/A ¹	N/A ¹	1,434	3	N/A ¹	N/A ¹	1,409	10	N/A ¹	N/A ¹
Knee Replacement	1,635	3	N/A	Suppressed ²	2,055	7	5.9	Worse	2,741	2	1.3	Not Significant
Vaginal Hysterectomy	66	0	N/A ¹	N/A ¹	69	0	N/A ¹	N/A ¹	31	0	N/A ¹	N/A ¹

¹Models for national comparisons were not available for this report; ²Calculation of comparison is not available due to data suppression for one of the following reasons: no. of procedures fewer than 20 or the predicted number of infections was less than one.

The standardized infection ratio (SIR) is the quotient of the numbers of observed and predicted infections.

N/A, not applicable.

National comparisons based on data collected and reported by facilities participating in the National Healthcare Safety Network (NHSN) from January-December, 2018.

Analysis includes adult patients >=18 years of age.

Data source: National Healthcare Safety Network (NHSN) Database.

Prepared by: Colorado Healthcare-Associated Infections and Antimicrobial Resistance Program, Colorado Department of Public Health and Environment.

Colorado Facility-Specific Data

Central line-associated bloodstream infections

Overview

Central line-associated bloodstream infections (CLABSIs) are infections in the blood associated with specific intravascular catheters or central lines. A central line is an intravascular catheter (tube in a vein or artery) that terminates at, or close to, the heart or in one of the great vessels (e.g., aorta, superior vena cava). A peripheral line is a similar tube in a vein or artery that does not enter a great vessel, is a smaller diameter tube, and is typically used for shorter periods of intravenous access. Both central lines and peripheral lines can be used to infuse fluids or medications, withdraw blood, or monitor fluid volume in patients. Central lines are typically placed when intravenous access is needed for longer time, larger volumes of fluids, or access for dialysis is needed. An umbilical catheter (a tube placed in the umbilical cord) is a central vascular catheter inserted through the umbilical artery or vein, typically used for infants. Central lines can be either permanent or temporary. Permanent lines are those that are tunneled under the skin before entering a great vessel. These can include certain dialysis lines and implanted catheters such as a port. Temporary lines are those that are not tunneled.

All patients with central lines are at risk for CLABSIs. However, certain groups are at higher risk for infection: the elderly, neonates, dialysis patients, patients with weak immune systems (e.g., cancer patients, transplant patients), patients with diabetes, and patients with burn injuries.⁹⁻¹¹

Based on the high incidence and potential severity of CLABSIs, in 2017 Colorado's HAI Advisory Committee recommended the addition of acute care hospital wards to Colorado reporting requirements for acute care hospitals (critical access hospitals and stand-alone children's hospitals exempt) for data collected since 2015; in 2018 the committee recommended inclusion of this data in the annual report.

Colorado requires that all adult and pediatric critical care units (CCUs) and selected wards (medical, surgical, medical/surgical, and rehabilitation) within acute care hospitals; neonatal critical care units (levels II/III, III, and IV); long-term acute care hospitals; and inpatient rehabilitation facilities report CLABSI data into the National Safety Healthcare Network (NHSN). Critical access hospitals report critical care unit data only. Stand-alone children's hospitals report neonatal critical care unit data only.

Tables included in this section are divided by facility type: **Table 12** shows acute care hospital CLABSI data with units combined; **Table 13** shows acute care hospital CLABSI data with location types (CCUs, wards, and neonatal critical care units) separated; **Table 14** shows CLABSI data from critical access hospital CCUs; **Table 15** shows CLABSI data from inpatient rehabilitation facilities; and **Table 16** shows CLABSI data from long-term acute care hospitals. All tables list reporting facilities number of central line days per year, number of CLABSI infections, standardized infection ratios (SIRs), and comparisons to the national baseline. The number of central line days is the total number of days a central line was in place for patients in the unit during the reporting period (for example, if three patients each had a central line for 10 days, the number of central line days is 30). Additional details are listed in Appendix B.

The three categories summarizing how a Colorado facility compares to the national infection baseline for that unit are:

- Statistically lower rate of infection than the national baseline (better).

- Statistically similar rate of infection to the national baseline (not significant).
- Statistically higher rate of infection than the national baseline (worse).

Data were suppressed if the predicted number of infections was less than one or fewer than 50 central-line days were reported in the calendar year.

Limitations

CDPHE does not perform data validation studies on every infection nor every condition reported yearly. For additional limitations, please see “Data format and cautions” section on page 16.

Central line-associated bloodstream infections in acute care hospitals

In 2019, overall rates of central line-associated bloodstream infection (CLABSI) in acute care hospitals were lower (better) than the national baseline. In 2020, rates of CLABSI were lower (better) than the national baseline.

Overview

Acute care hospitals report CLABSI data for adult and pediatric medical, surgical, and medical-surgical critical care units (CCUs), neonatal critical care units (NCCUs); medical, surgical, and medical-surgical wards; and rehabilitation wards within the facility. CCUs provide intensive medical care. Hospitals classify their CCUs by the type of patients cared for in the unit.³ NCCUs provide intensive medical care for premature and ill newborn babies. NCCUs are classified into four levels of increasingly complex care, levels I-IV. Level I and II units care for healthy newborns; they are not required to report healthcare-associated infections (HAIs). Colorado requires level II/III combined, level III, and level IV units to report CLABSI data. If a hospital unit does not separate infants receiving level II care from those receiving level III care, that NCCU is reported as a level II/III. In this report, level IV NCCUs are included within level III or level II/III, as per NHSN location mapping. Hospital wards are groups of rooms forming a division of a hospital, usually shared by patients who need a similar kind of care. Acute care hospitals are required to report CLABSIs from medical, surgical, and medical/surgical wards. Inpatient rehabilitation wards in hospitals care for patients who have lost function due to illness. The goal for these areas is to evaluate, treat and restore optimal functioning of the patients physically and mentally.

Results

Fifty-three acute care hospitals reported CLABSI data in 2019 and 2020. **Table 12** shows facility data for CLABSI attributed to CCUs, NCCUs, and wards combined into a single analysis (excluding inpatient rehabilitation wards). In 2019, seven acute care hospitals reported rates of CLABSI that were lower (better) than the national baseline. In 2020, two acute care hospitals reported rates of CLABSI that were lower (better) than the national baseline, and two acute care hospitals reported rates of CLABSI that were higher (worse) than the national baseline.

Table 13 shows facility-specific data for CLABSIs by unit type (CCUs, NCCUs, general wards, and inpatient rehabilitation wards) in acute care hospitals during the 2018, 2019, and 2020 calendar years. Forty-five acute care hospitals reported data from CCUs in 2019. Of these, two acute care hospitals reported rates of CLABSI that were lower (better) than the national baseline. Forty-five acute care hospitals reported data from CCUs in 2020. Of these, two acute care hospitals reported rates of CLABSI that were lower

(better) than the national baseline, and three acute care hospitals reported rates of CLABSI that were higher (worse) than the national baseline.

Twenty acute care hospitals reported data from NCCUs in 2019 (**Table 13**). None had CLABSI rates that were lower (better) or higher (worse) than the national baseline, although data were suppressed for most. Twenty-one acute care hospitals reported data from NCCUs in 2020. None had CLABSI rates that were lower (better) or higher (worse) than the national baseline, although data were suppressed for most.

Fifty-one acute care hospitals reported data from wards in 2019 (**Table 13**). Of these, four acute care hospitals reported rates of CLABSI that were lower (better) than the national baseline. Fifty-one acute care hospitals reported data from wards in 2020. Of these, five acute care hospitals reported rates that were lower (better) than the national baseline.

Table 12: Central Line-Associated Bloodstream Infections in Acute Care Hospitals Excluding Inpatient Rehabilitation Wards – Colorado, Jan. 1, 2018 - Dec. 31, 2020

Facility Name	2018				2019				2020			
	No. Central Line Days	No. of Infections	SIR	National Comparison	No. Central Line Days	No. of Infections	SIR	National Comparison	No. Central Line Days	No. of Infections	SIR	National Comparison
Animas Surgical Hospital	2	--- ¹	N/A	Suppressed ¹	19	--- ¹	N/A	Suppressed ¹	16	--- ¹	N/A	Suppressed ¹
Avista Adventist Hospital	826	2	N/A	Suppressed ¹	876	0	N/A	Suppressed ¹	985	0	N/A	Suppressed ¹
Banner Fort Collins Medical Center	230	0	N/A	Suppressed ¹	297	0	N/A	Suppressed ¹	358	0	N/A	Suppressed ¹
Boulder Community Foothills Hospital	5,414	4	1.1	Not Significant	4,677	1	0.3	Not Significant	4,470	4	1.3	Not Significant
Castle Rock Adventist Hospital	750	0	N/A	Suppressed ¹	1,043	0	N/A	Suppressed ¹	1,255	1	N/A	Suppressed ¹
Colorado Plains Medical Center	54	0	N/A	Suppressed ¹	121	0	N/A	Suppressed ¹	129	0	N/A	Suppressed ¹
Community Hospital	663	1	N/A	Suppressed ¹	1,132	1	N/A	Suppressed ¹	1,012	0	N/A	Suppressed ¹
Delta County Memorial Hospital	513	0	N/A	Suppressed ¹	584	0	N/A	Suppressed ¹	655	0	N/A	Suppressed ¹
Denver Health And Hospital Authority	10,229	11	1.0	Not Significant	9,850	5	0.5	Not Significant	13,219	10	0.7	Not Significant
Exempla Lutheran Medical Center	5,742	0	0.0	Better	5,828	6	1.3	Not Significant	5,456	4	0.9	Not Significant
Exempla Saint Joseph Hospital	8,458	4	0.4	Not Significant	7,543	5	0.6	Not Significant	6,907	17	2.2	Worse
Grandview Hospital	10	--- ¹	N/A	Suppressed ¹	45	--- ¹	N/A	Suppressed ¹	25	--- ¹	N/A	Suppressed ¹
Littleton Adventist Hospital	3,081	1	0.4	Not Significant	3,478	2	0.7	Not Significant	4,626	1	0.3	Not Significant
Longmont United Hospital	2,809	4	1.9	Not Significant	2,444	2	0.8	Not Significant	2,236	2	0.9	Not Significant
Longs Peak Hospital	1,706	1	1.0	Not Significant	1,876	2	1.7	Not Significant	1,883	1	0.9	Not Significant

Facility Name	2018				2019				2020			
	No. Central Line Days	No. of Infections	SIR	National Comparison	No. Central Line Days	No. of Infections	SIR	National Comparison	No. Central Line Days	No. of Infections	SIR	National Comparison
McKee Medical Center	618	0	N/A	Suppressed ¹	502	1	N/A	Suppressed ¹	806	0	N/A	Suppressed ¹
Medical Center Of The Rockies	12,768	0	0.0	Better	10,315	3	0.4	Not Significant	11,402	5	0.6	Not Significant
Memorial Health System	14,653	10	0.6	Not Significant	14,784	7	0.4	Better	16,511	11	0.6	Not Significant
Memorial Hospital North	1,808	0	0.0	Not Significant	1,900	0	0.0	Not Significant	3,238	1	0.3	Not Significant
Mercy Regional Medical Center	2,081	2	1.5	Not Significant	2,207	0	0.0	Not Significant	2,840	1	0.5	Not Significant
Montrose Memorial Hospital	620	0	N/A	Suppressed ¹	568	0	N/A	Suppressed ¹	1,036	0	N/A	Suppressed ¹
National Jewish Health	35	--- ¹	N/A	Suppressed ¹	98	0	N/A	Suppressed ¹	240	0	N/A	Suppressed ¹
North Colorado Medical Center	5,790	4	0.9	Not Significant	5,650	1	0.2	Better	8,026	4	0.5	Not Significant
North Suburban Medical Center	2,685	2	1.1	Not Significant	3,488	2	0.8	Not Significant	3,864	2	0.6	Not Significant
Ortho Colorado	53	0	N/A	Suppressed ¹	55	0	N/A	Suppressed ¹	50	0	N/A	Suppressed ¹
Parker Adventist Hospital	2,927	5	1.9	Not Significant	3,277	5	1.7	Not Significant	4,677	3	0.7	Not Significant
Parkview Medical Center	6,548	5	0.7	Not Significant	6,895	5	0.8	Not Significant	5,904	3	0.5	Not Significant
Penrose St. Francis Health Services	7,077	6	0.8	Not Significant	6,511	4	0.6	Not Significant	7,518	3	0.4	Not Significant
Platte Valley Medical Center	902	0	N/A	Suppressed ¹	426	0	N/A	Suppressed ¹	629	4	N/A	Suppressed ¹
Porter Adventist Hospital	6,789	5	0.9	Not Significant	5,618	7	1.5	Not Significant	5,591	3	0.7	Not Significant

Facility Name	2018				2019				2020			
	No. Central Line Days	No. of Infections	SIR	National Comparison	No. Central Line Days	No. of Infections	SIR	National Comparison	No. Central Line Days	No. of Infections	SIR	National Comparison
Poudre Valley Health System	9,418	1	0.1	Better	8,710	1	0.1	Better	8,376	5	0.6	Not Significant
Presbyterian/St Luke's Medical Center	12,061	12	0.8	Not Significant	12,822	7	0.4	Better	11,804	9	0.6	Not Significant
Rose Medical Center	3,929	1	0.2	Not Significant	4,217	4	0.9	Not Significant	4,314	6	1.3	Not Significant
Saint Anthony North Health Campus	4,169	3	0.8	Not Significant	4,530	4	1.0	Not Significant	5,532	5	1.0	Not Significant
SCL Health Good Samaritan Medical Center	4,985	2	0.6	Not Significant	3,980	1	0.4	Not Significant	4,599	8	2.5	Worse
Sky Ridge Medical Center	5,315	2	0.4	Not Significant	5,615	3	0.5	Not Significant	7,210	3	0.4	Not Significant
SLV Regional Medical Center	645	0	N/A	Suppressed ¹	666	1	N/A	Suppressed ¹	421	0	N/A	Suppressed ¹
St. Anthony Hospital	13,262	7	0.5	Better	12,162	8	0.6	Not Significant	14,527	6	0.4	Better
St. Anthony Summit Medical Center	92	0	N/A	Suppressed ¹	98	0	N/A	Suppressed ¹	75	0	N/A	Suppressed ¹
St. Francis Medical Center	2,902	4	1.1	Not Significant	3,706	4	1.0	Not Significant	3,003	1	0.3	Not Significant
St. Mary's Hospital	6,433	3	0.4	Not Significant	6,013	5	0.8	Not Significant	6,439	8	1.1	Not Significant
St. Mary Corwin Medical Center	665	2	N/A	Suppressed ¹	273	0	N/A	Suppressed ¹	411	1	N/A	Suppressed ¹
Sterling Regional Medcenter	140	0	N/A	Suppressed ¹	235	0	N/A	Suppressed ¹	327	0	N/A	Suppressed ¹
Swedish Medical Center	8,105	3	0.3	Better	8,382	2	0.2	Better	10,480	4	0.3	Better
The Medical Center of Aurora	11,064	6	0.5	Not Significant	10,264	4	0.4	Better	10,962	9	0.8	Not Significant

Facility Name	2018				2019				2020			
	No. Central Line Days	No. of Infections	SIR	National Comparison	No. Central Line Days	No. of Infections	SIR	National Comparison	No. Central Line Days	No. of Infections	SIR	National Comparison
UCHealth Broomfield Hospital	817	0	N/A	Suppressed ¹	1,655	0	N/A	Suppressed ¹	1,388	1	N/A	Suppressed ¹
UCHealth Greeley Hospital	N/A				937	0	N/A	Suppressed ¹	2,927	2	1.1	Not Significant
UCHealth Highlands Ranch Hospital	N/A				997	1	N/A	Suppressed ¹	3,644	4	1.8	Not Significant
UCHealth Yampa Valley Medical Center	130	0	N/A	Suppressed ¹	319	1	N/A	Suppressed ¹	234	0	N/A	Suppressed ¹
University Of Colorado Hospital	36,778	20	0.5	Better	34,584	21	0.6	Better	41,522	49	1.1	Not Significant
Vail Health Hospital	409	0	N/A	Suppressed ¹	182	0	N/A	Suppressed ¹	127	0	N/A	Suppressed ¹
Valley View Hospital	968	0	N/A	Suppressed ¹	1,037	0	N/A	Suppressed ¹	929	1	N/A	Suppressed ¹

¹Calculation of comparison is not available due to data suppression for one of the following reasons: no. central line days fewer than 50 or the predicted number of infections was less than one.

The standardized infection ratio (SIR) is the ratio of the numbers of observed and predicted infections.

N/A, not applicable.

National comparisons based on data collected and reported by facilities participating in the National Healthcare Safety Network (NHSN) from January-December, 2018.

Abbreviations: CCUs= critical care units (adult and pediatric medical, surgical, medical-surgical). Wards=all adult and pediatric medical, surgical, and medical-surgical wards.

Data source: NHSN Database.

Prepared by: Colorado Healthcare-Associated Infections and Antimicrobial Resistance Program, Colorado Department of Public Health and Environment.

Table 13: Central Line-Associated Bloodstream Infections in Acute Care Hospitals by Location Type – Colorado, Jan. 1, 2018 - Dec. 31, 2020

Facility Name	Unit Type	2018				2019				2020			
		No. Central Line Days	No. of Infections	SIR	National Comparison	No. Central Line Days	No. of Infections	SIR	National Comparison	No. Central Line Days	No. of Infections	SIR	National Comparison
Animas Surgical Hospital	Adult and Pediatric Inpatient Wards	2	--- ¹	N/A	Suppressed ¹	19	--- ¹	N/A	Suppressed ¹	16	--- ¹	N/A	Suppressed ¹
Avista Adventist Hospital	Adult and Pediatric Critical Care	371	1	N/A	Suppressed ¹	465	0	N/A	Suppressed ¹	639	0	N/A	Suppressed ¹
	Adult and Pediatric Inpatient Wards	374	0	N/A	Suppressed ¹	372	0	N/A	Suppressed ¹	306	0	N/A	Suppressed ¹
	Neonatal Critical Care	81	1	N/A	Suppressed ¹	39	--- ¹	N/A	Suppressed ¹	40	--- ¹	N/A	Suppressed ¹
Banner Fort Collins Medical Center	Adult and Pediatric Inpatient Wards	230	0	N/A	Suppressed ¹	297	0	N/A	Suppressed ¹	358	0	N/A	Suppressed ¹
Boulder Community Foothills Hospital	Adult and Pediatric Critical Care	2,184	0	0.0	Not Significant	1,895	0	0.0	Not Significant	1,981	4	2.7	Not Significant
	Adult and Pediatric Inpatient Wards	3,230	4	1.9	Not Significant	2,782	1	0.6	Not Significant	2,489	0	0.0	Not Significant
Castle Rock Adventist Hospital	Adult and Pediatric Critical Care	362	0	N/A	Suppressed ¹	518	0	N/A	Suppressed ¹	730	1	N/A	Suppressed ¹
	Adult and Pediatric Inpatient Wards	385	0	N/A	Suppressed ¹	524	0	N/A	Suppressed ¹	519	0	N/A	Suppressed ¹
	Neonatal Critical Care	3	--- ¹	N/A	Suppressed ¹	1	--- ¹	N/A	Suppressed ¹	6	--- ¹	N/A	Suppressed ¹
Children’s Hospital Colorado	Neonatal Critical Care	5,164	9	1.4	Not Significant	5,777	14	2.2		4,921	9	1.7	Not Significant

Facility Name	Unit Type	2018				2019				2020			
		No. Central Line Days	No. of Infections	SIR	National Comparison	No. Central Line Days	No. of Infections	SIR	National Comparison	No. Central Line Days	No. of Infections	SIR	National Comparison
Colorado Plains Medical Center	Adult and Pediatric Critical Care	17	--- ¹	N/A	Suppressed ¹	50	0	N/A	Suppressed ¹	20	--- ¹	N/A	Suppressed ¹
	Adult and Pediatric Inpatient Wards	37	--- ¹	N/A	Suppressed ¹	71	0	N/A	Suppressed ¹	109	0	N/A	Suppressed ¹
Community Hospital	Adult and Pediatric Critical Care	411	1	N/A	Suppressed ¹	523	0	N/A	Suppressed ¹	540	0	N/A	Suppressed ¹
	Adult and Pediatric Inpatient Wards	252	0	N/A	Suppressed ¹	609	1	N/A	Suppressed ¹	472	0	N/A	Suppressed ¹
Delta County Memorial Hospital	Adult and Pediatric Critical Care	275	0	N/A	Suppressed ¹	259	0	N/A	Suppressed ¹	343	0	N/A	Suppressed ¹
	Adult and Pediatric Inpatient Wards	238	0	N/A	Suppressed ¹	325	0	N/A	Suppressed ¹	312	0	N/A	Suppressed ¹
Denver Health And Hospital Authority	Adult and Pediatric Critical Care	3,712	7	1.5	Not Significant	3,435	3	0.7	Not Significant	5,911	6	0.8	Not Significant
	Adult and Pediatric Inpatient Wards	5,672	3	0.5	Not Significant	5,560	1	0.2	Better	6,482	3	0.5	Not Significant
	Inpatient Rehabilitation Ward	201	0	N/A	Suppressed ¹	41	---	N/A	Suppressed ¹	84	0	N/A	Suppressed ¹
	Neonatal Critical Care	845	1	0.9	Not Significant	855	1	1.0	Not Significant	826	1	1.0	Not Significant
Exempla Lutheran	Adult and Pediatric Critical Care	2,958	0	0.0	Not Significant	3,291	5	1.8	Not Significant	3,010	4	1.5	Not Significant

Facility Name	Unit Type	2018				2019				2020			
		No. Central Line Days	No. of Infections	SIR	National Comparison	No. Central Line Days	No. of Infections	SIR	National Comparison	No. Central Line Days	No. of Infections	SIR	National Comparison
Medical Center	Adult and Pediatric Inpatient Wards	2,647	0	0.0	Not Significant	2,471	1	0.5	Not Significant	2,363	0	0.0	Not Significant
	Neonatal Critical Care	137	0	N/A	Suppressed ¹	66	0	N/A	Suppressed ¹	83	0	N/A	Suppressed ¹
Exempla Saint Joseph Hospital	Adult and Pediatric Critical Care	3,338	1	0.3	Not Significant	3,687	2	0.5	Not Significant	4,114	12	2.6	Worse
	Adult and Pediatric Inpatient Wards	3,665	0	0.0	Better	2,845	1	0.4	Not Significant	1,791	4	2.3	Not Significant
	Neonatal Critical Care	1,455	3	1.5	Not Significant	1,011	2	1.6	Not Significant	1,002	1	0.7	Not Significant
Grandview Hospital	Adult and Pediatric Critical Care	0	--- ¹	N/A	Suppressed ¹	2	--- ¹	N/A	Suppressed ¹	14	--- ¹	N/A	Suppressed ¹
	Adult and Pediatric Inpatient Wards	10	--- ¹	N/A	Suppressed ¹	43	--- ¹	N/A	Suppressed ¹	11	--- ¹	N/A	Suppressed ¹
Littleton Adventist Hospital	Adult and Pediatric Critical Care	2,171	1	0.5	Not Significant	2,190	2	1.1	Not Significant	2,992	1	0.4	Not Significant
	Adult and Pediatric Inpatient Wards	751	0	N/A	Suppressed ¹	1,178	0	N/A	Suppressed ¹	1,529	0	0.0	Not Significant
	Inpatient Rehabilitation Ward	286	0	N/A	Suppressed ¹	N/A							
	Neonatal Critical Care	159	0	N/A	Suppressed ¹	110	0	N/A	Suppressed ¹	105	0	N/A	Suppressed ¹

Facility Name	Unit Type	2018				2019				2020			
		No. Central Line Days	No. of Infections	SIR	National Comparison	No. Central Line Days	No. of Infections	SIR	National Comparison	No. Central Line Days	No. of Infections	SIR	National Comparison
Longmont United Hospital	Adult and Pediatric Critical Care	2,360	4	2.2	Not Significant	2,442	2	0.8	Not Significant	2,233	2	0.9	Not Significant
	Adult and Pediatric Inpatient Wards	447	0	N/A	Suppressed ¹	N/A							
	Neonatal Critical Care	2	--- ¹	N/A	Suppressed ¹	2	--- ¹	N/A	Suppressed ¹	3	--- ¹	N/A	Suppressed ¹
Longs Peak Hospital	Adult and Pediatric Critical Care	502	0	N/A	Suppressed ¹	652	1	N/A	Suppressed ¹	809	1	N/A	Suppressed ¹
	Adult and Pediatric Inpatient Wards	1,204	1	N/A	Suppressed ¹	1,224	1	N/A	Suppressed ¹	1,074	0	N/A	Suppressed ¹
McKee Medical Center	Adult and Pediatric Inpatient Wards	618	0	N/A	Suppressed ¹	502	1	N/A	Suppressed ¹	806	0	N/A	Suppressed ¹
Medical Center Of The Rockies	Adult and Pediatric Critical Care	4,135	0	0.0	Better	4,458	1	0.3	Not Significant	5,103	3	0.8	Not Significant
	Adult and Pediatric Inpatient Wards	8,633	0	0.0	Better	5,857	2	0.5	Not Significant	6,299	2	0.5	Not Significant
	Inpatient Rehabilitation Ward	156	0	N/A	Suppressed ¹	N/A							
Memorial Health System	Adult and Pediatric Critical Care	6,322	5	0.7	Not Significant	7,225	3	0.4	Better	9,651	10	0.9	Not Significant
	Adult and Pediatric Inpatient Wards	6,082	3	0.5	Not Significant	6,663	2	0.3	Not Significant	6,779	1	0.2	Better

Facility Name	Unit Type	2018				2019				2020			
		No. Central Line Days	No. of Infections	SIR	National Comparison	No. Central Line Days	No. of Infections	SIR	National Comparison	No. Central Line Days	No. of Infections	SIR	National Comparison
	Inpatient Rehabilitation Ward	286	0	N/A	Suppressed ¹	324	0	N/A	Suppressed ¹	467	0	N/A	Suppressed ¹
	Neonatal Critical Care	2,249	2	0.6	Not Significant	896	2	1.7	Not Significant	81	0	N/A	Suppressed ¹
Memorial Hospital North	Adult and Pediatric Critical Care	N/A				118	0	N/A	Suppressed ¹	1,266	1	0.8	Not Significant
	Adult and Pediatric Inpatient Wards	1,808	0	0.0	Not Significant	1,782	0	0.0	Not Significant	1,972	0	0.0	Not Significant
Mercy Regional Medical Center	Adult and Pediatric Critical Care	1,408	2	N/A	Suppressed ¹	1,424	0	N/A	Suppressed ¹	2,119	1	0.7	Not Significant
	Adult and Pediatric Inpatient Wards	673	0	N/A	Suppressed ¹	783	0	N/A	Suppressed ¹	721	0	N/A	Suppressed ¹
Montrose Memorial Hospital	Adult and Pediatric Critical Care	253	0	N/A	Suppressed ¹	261	0	N/A	Suppressed ¹	481	0	N/A	Suppressed ¹
	Adult and Pediatric Inpatient Wards	367	0	N/A	Suppressed ¹	307	0	N/A	Suppressed ¹	555	0	N/A	Suppressed ¹
	Inpatient Rehabilitation Ward	36	--- ¹	N/A	Suppressed ¹	127	0	N/A	Suppressed ¹	69	0	N/A	Suppressed ¹
National Jewish Health	Adult and Pediatric Inpatient Wards	35	--- ¹	N/A	Suppressed ¹	98	0	N/A	Suppressed ¹	240	0	N/A	Suppressed ¹
North Colorado	Adult and Pediatric Critical Care	1,964	1	0.6	Not Significant	2,360	0	0.0	Not Significant	4,327	4	0.8	Not Significant

Facility Name	Unit Type	2018				2019				2020			
		No. Central Line Days	No. of Infections	SIR	National Comparison	No. Central Line Days	No. of Infections	SIR	National Comparison	No. Central Line Days	No. of Infections	SIR	National Comparison
Medical Center	Adult and Pediatric Inpatient Wards	3,826	3	1.0	Not Significant	3,290	1	0.3	Not Significant	3,699	0	0.0	Better
North Suburban Medical Center	Adult and Pediatric Critical Care	1,085	2	N/A	Suppressed ¹	1,494	1	0.9	Not Significant	1,505	1	0.7	Not Significant
	Adult and Pediatric Inpatient Wards	1,600	0	0.0	Not Significant	1,994	1	0.8	Not Significant	2,359	1	0.5	Not Significant
Ortho Colorado	Adult and Pediatric Inpatient Wards	53	0	N/A	Suppressed ¹	55	0	N/A	Suppressed ¹	50	0	N/A	Suppressed ¹
Parker Adventist Hospital	Adult and Pediatric Critical Care	1,317	3	2.3	Not Significant	1,355	4	3.0	Not Significant	2,454	2	0.8	Not Significant
	Adult and Pediatric Inpatient Wards	1,594	2	1.5	Not Significant	1,852	0	0.0	Not Significant	2,142	1	0.6	Not Significant
	Neonatal Critical Care	16	--- ¹	N/A	Suppressed ¹	70	1	N/A	Suppressed ¹	81	0	N/A	Suppressed ¹
Parkview Medical Center	Adult and Pediatric Critical Care	3,634	2	0.5	Not Significant	3,561	2	0.6	Not Significant	3,429	3	0.9	Not Significant
	Adult and Pediatric Inpatient Wards	2,914	3	1.1	Not Significant	3,334	3	1.0	Not Significant	2,475	0	0.0	Not Significant
	Inpatient Rehabilitation Ward	116	0	N/A	Suppressed ¹	336	0	N/A	Suppressed ¹	172	0	N/A	Suppressed ¹
Penrose St. Francis	Adult and Pediatric Critical Care	3,542	2	0.5	Not Significant	3,232	2	0.5	Not Significant	3,464	2	0.5	Not Significant

Facility Name	Unit Type	2018				2019				2020			
		No. Central Line Days	No. of Infections	SIR	National Comparison	No. Central Line Days	No. of Infections	SIR	National Comparison	No. Central Line Days	No. of Infections	SIR	National Comparison
Health Services	Adult and Pediatric Inpatient Wards	3,535	4	1.2	Not Significant	3,279	2	0.6	Not Significant	4,054	1	0.3	Not Significant
Platte Valley Medical Center	Adult and Pediatric Inpatient Wards	902	0	N/A	Suppressed ¹	426	0	N/A	Suppressed ¹	629	4	N/A	Suppressed ¹
Porter Adventist Hospital	Adult and Pediatric Critical Care	4,090	3	0.8	Not Significant	3,760	3	0.9	Not Significant	3,527	0	0.0	Better
	Adult and Pediatric Inpatient Wards	2,699	2	1.0	Not Significant	1,858	4	2.9	Not Significant	2,064	3	1.9	Not Significant
	Inpatient Rehabilitation Ward	396	0	N/A	Suppressed ¹	313	0	N/A	Suppressed ¹	1	--- ¹	N/A	Suppressed ¹
Poudre Valley Health System	Adult and Pediatric Critical Care	1,635	0	0.0	Not Significant	1,523	0	0.0	Not Significant	2,366	4	1.5	Not Significant
	Adult and Pediatric Inpatient Wards	6,983	1	0.1	Better	6,574	1	0.2	Better	5,601	1	0.2	Better
	Inpatient Rehabilitation Ward	239	0	N/A	Suppressed ¹	413	0	N/A	Suppressed ¹	304	0	N/A	Suppressed ¹
	Neonatal Critical Care	800	0	N/A	Suppressed ¹	613	0	N/A	Suppressed ¹	409	0	N/A	Suppressed ¹
Presbyterian /St Luke's Medical Center	Adult and Pediatric Critical Care	4,273	7	1.3	Not Significant	4,845	2	0.3	Not Significant	5,040	3	0.5	Not Significant
	Adult and Pediatric Inpatient Wards	3,226	1	0.3	Not Significant	3,598	2	0.6	Not Significant	2,487	2	0.9	Not Significant

Facility Name	Unit Type	2018				2019				2020			
		No. Central Line Days	No. of Infections	SIR	National Comparison	No. Central Line Days	No. of Infections	SIR	National Comparison	No. Central Line Days	No. of Infections	SIR	National Comparison
	Neonatal Critical Care	4,562	4	0.6	Not Significant	4,379	3	0.5	Not Significant	4,277	4	0.7	Not Significant
Rose Medical Center	Adult and Pediatric Critical Care	1,547	0	0.0	Not Significant	1,614	4	2.2	Not Significant	1,813	4	2.0	Not Significant
	Adult and Pediatric Inpatient Wards	2,186	1	0.5	Not Significant	2,341	0	0.0	Not Significant	2,323	2	0.9	Not Significant
	Neonatal Critical Care	196	0	N/A	Suppressed ¹	262	0	N/A	Suppressed ¹	178	0	N/A	Suppressed ¹
Saint Anthony North Health Campus	Adult and Pediatric Critical Care	1,865	2	1.1	Not Significant	1,658	2	1.2	Not Significant	2,698	5	1.9	Not Significant
	Adult and Pediatric Inpatient Wards	2,304	1	0.5	Not Significant	2,872	2	0.8	Not Significant	2,830	0	0.0	Not Significant
	Neonatal Critical Care	N/A							4	---	N/A	Suppressed ¹	
SCL Health Good Samaritan Medical Center	Adult and Pediatric Critical Care	1,606	1	0.8	Not Significant	1,176	1	N/A	Suppressed ¹	2,345	6	3.4	Worse
	Adult and Pediatric Inpatient Wards	3,379	1	0.5	Not Significant	2,804	0	0.0	Not Significant	2,254	2	1.4	Not Significant
Sky Ridge Medical Center	Adult and Pediatric Critical Care	2,157	1	0.4	Not Significant	2,308	1	0.4	Not Significant	3,421	3	0.8	Not Significant
	Adult and Pediatric Inpatient Wards	3,038	1	0.3	Not Significant	3,235	2	0.6	Not Significant	3,735	0	0.0	Better
	Neonatal Critical Care	120	0	N/A	Suppressed ¹	72	0	N/A	Suppressed ¹	54	0	N/A	Suppressed ¹

Facility Name	Unit Type	2018				2019				2020			
		No. Central Line Days	No. of Infections	SIR	National Comparison	No. Central Line Days	No. of Infections	SIR	National Comparison	No. Central Line Days	No. of Infections	SIR	National Comparison
SLV Regional Medical Center	Adult and Pediatric Critical Care	221	0	N/A	Suppressed ¹	292	1	N/A	Suppressed ¹	95	0	N/A	Suppressed ¹
	Adult and Pediatric Inpatient Wards	424	0	N/A	Suppressed ¹	374	0	N/A	Suppressed ¹	326	0	N/A	Suppressed ¹
St. Anthony Hospital	Adult and Pediatric Critical Care	6,477	4	0.5	Not Significant	5,309	5	0.8	Not Significant	7,655	5	0.6	Not Significant
	Adult and Pediatric Inpatient Wards	6,785	3	0.5	Not Significant	6,853	3	0.4	Not Significant	6,872	1	0.1	Better
	Inpatient Rehabilitation Ward	468	0	N/A	Suppressed ¹	548	0	N/A	Suppressed ¹	628	0	N/A	Suppressed ¹
St. Anthony Summit Medical Center	Adult and Pediatric Inpatient Wards	92	0	N/A	Suppressed ¹	98	0	N/A	Suppressed ¹	75	0	N/A	Suppressed ¹
St. Francis Medical Center	Adult and Pediatric Critical Care	737	1	N/A	Suppressed ¹	1,044	0	0.0	Not Significant	840	0	N/A	Suppressed ¹
	Adult and Pediatric Inpatient Wards	1,264	1	0.8	Not Significant	1,577	1	0.6	Not Significant	1,430	0	0.0	Not Significant
	Inpatient Rehabilitation Ward	347	0	N/A	Suppressed ¹	637	0	N/A	Suppressed ¹	584	0	N/A	Suppressed ¹
	Neonatal Critical Care	901	2	1.3	Not Significant	1,085	3	2.0	Not Significant	733	1	0.9	Not Significant
St. Mary's Hospital	Adult and Pediatric Critical Care	3,136	2	0.6	Not Significant	3,351	2	0.5	Not Significant	3,720	5	1.2	Not Significant

Facility Name	Unit Type	2018				2019				2020			
		No. Central Line Days	No. of Infections	SIR	National Comparison	No. Central Line Days	No. of Infections	SIR	National Comparison	No. Central Line Days	No. of Infections	SIR	National Comparison
	Adult and Pediatric Inpatient Wards	2,694	0	0.0	Not Significant	2,325	2	0.9	Not Significant	2,388	2	0.9	Not Significant
	Inpatient Rehabilitation Ward	476	0	N/A	Suppressed ¹	350	0	N/A	Suppressed ¹	542	0	N/A	Suppressed ¹
	Neonatal Critical Care	603	1	N/A	Suppressed ¹	337	1	N/A	Suppressed ¹	331	1	N/A	Suppressed ¹
St. Mary Corwin Medical Center	Adult and Pediatric Critical Care	484	2	N/A	Suppressed ¹	273	0	N/A	Suppressed ¹	411	1	N/A	Suppressed ¹
	Adult and Pediatric Inpatient Wards	181	0	N/A	Suppressed ¹	N/A							
Sterling Regional Medcenter	Adult and Pediatric Critical Care	59	0	N/A	Suppressed ¹	80	0	N/A	Suppressed ¹	108	0	N/A	Suppressed ¹
	Adult and Pediatric Inpatient Wards	81	0	N/A	Suppressed ¹	155	0	N/A	Suppressed ¹	219	0	N/A	Suppressed ¹
Swedish Medical Center	Adult and Pediatric Critical Care	4,491	0	0.0	Better	5,270	1	0.1	Better	6,975	3	0.3	Better
	Adult and Pediatric Inpatient Wards	3,494	2	0.6	Not Significant	3,057	1	0.3	Not Significant	3,429	1	0.3	Not Significant
	Inpatient Rehabilitation Ward	473	0	N/A	Suppressed ¹	391	0	N/A	Suppressed ¹	518	1	N/A	Suppressed ¹
	Neonatal Critical Care	120	1	N/A	Suppressed ¹	55	0	N/A	Suppressed ¹	76	0	N/A	Suppressed ¹

Facility Name	Unit Type	2018				2019				2020			
		No. Central Line Days	No. of Infections	SIR	National Comparison	No. Central Line Days	No. of Infections	SIR	National Comparison	No. Central Line Days	No. of Infections	SIR	National Comparison
The Medical Center of Aurora	Adult and Pediatric Critical Care	4,449	3	0.6	Not Significant	4,925	3	0.5	Not Significant	6,714	7	0.9	Not Significant
	Adult and Pediatric Inpatient Wards	6,566	3	0.5	Not Significant	5,283	1	0.2	Better	4,221	2	0.5	Not Significant
	Neonatal Critical Care	49	--- ¹	N/A	Suppressed ¹	56	0	N/A	Suppressed ¹	27	--- ¹	N/A	Suppressed ¹
UCHealth Broomfield Hospital	Adult and Pediatric Inpatient Wards	817	0	N/A	Suppressed ¹	1,655	0	N/A	Suppressed ¹	1,388	1	N/A	Suppressed ¹
UCHealth Greeley Hospital	Adult and Pediatric Critical Care	N/A				307	0	N/A	Suppressed ¹	1,232	2	N/A	Suppressed ¹
	Adult and Pediatric Inpatient Wards	N/A				630	0	N/A	Suppressed ¹	1,695	0	N/A	Suppressed ¹
UCHealth Highlands Ranch Hospital	Adult and Pediatric Critical Care	N/A				297	0	N/A	Suppressed ¹	1,531	4	3.9	Worse
	Adult and Pediatric Inpatient Wards	N/A				697	1	N/A	Suppressed ¹	2,077	0	0.0	Not Significant
	Neonatal Critical Care	N/A				3	--- ¹	N/A	Suppressed ¹	36	--- ¹	N/A	Suppressed ¹
UCHealth Yampa Valley Medical Center	Adult and Pediatric Critical Care	50	0	N/A	Suppressed ¹	41	---- ¹ --	N/A	Suppressed ¹	33	---- ¹ --	N/A	Suppressed ¹
	Adult and Pediatric Inpatient Wards	80	0	N/A	Suppressed ¹	272	1	N/A	Suppressed ¹	190	0	N/A	Suppressed ¹

Facility Name	Unit Type	2018				2019				2020			
		No. Central Line Days	No. of Infections	SIR	National Comparison	No. Central Line Days	No. of Infections	SIR	National Comparison	No. Central Line Days	No. of Infections	SIR	National Comparison
	Neonatal Critical Care	0	--- ¹	N/A	Suppressed ¹	6	--- ¹	N/A	Suppressed ¹	11	--- ¹	N/A	Suppressed ¹
University Of Colorado Hospital	Adult and Pediatric Critical Care	19,484	13	0.6	Better	18,962	13	0.6	Not Significant	23,399	29	1.1	Not Significant
	Adult and Pediatric Inpatient Wards	15,934	5	0.3	Better	14,446	7	0.5	Better	16,721	20	1.2	Not Significant
	Inpatient Rehabilitation Ward	1,036	0	N/A	Suppressed ¹	965	1	N/A	Suppressed ¹	910	0	N/A	Suppressed ¹
	Neonatal Critical Care	1,360	2	0.9	Not Significant	1,176	1	0.6	Not Significant	1,402	0	0.0	Not Significant
Vail Health Hospital	Adult and Pediatric Critical Care	78	0	N/A	Suppressed ¹	32	--- ¹	N/A	Suppressed ¹	22	--- ¹	N/A	Suppressed ¹
	Adult and Pediatric Inpatient Wards	331	0	N/A	Suppressed ¹	150	0	N/A	Suppressed ¹	105	0	N/A	Suppressed ¹
Valley View Hospital	Adult and Pediatric Critical Care	341	0	N/A	Suppressed ¹	355	0	N/A	Suppressed ¹	274	1	N/A	Suppressed ¹
	Adult and Pediatric Inpatient Wards	627	0	N/A	Suppressed ¹	682	0	N/A	Suppressed ¹	655	0	N/A	Suppressed ¹

¹Calculation of comparison is not available due to data suppression for one of the following reasons: no. central line days fewer than 50 or the predicted number of infections was less than one.

The standardized infection ratio (SIR) is the ratio of the numbers of observed and predicted infections.

N/A, not applicable.

National comparisons based on data collected and reported by facilities participating in the National Healthcare Safety Network (NHSN) from January-December, 2020.

Critical care are all adult and pediatric intensive care units.

Neonatal critical care units includes all levels II/III combined, III, and IV intensive care units for neonates.

Wards includes all adult and pediatric medical, surgical, and medical-surgical wards.

Inpatient rehabilitation wards are located within an acute care hospital.

Data source: NHSN Database.

Prepared by: Colorado Healthcare-Associated Infections and Antimicrobial Resistance Program, Colorado Department of Public Health and Environment.

Central line-associated bloodstream infections in critical access hospitals

Comparison of rates of central line-associated bloodstream infection (CLABSI) in critical access hospitals to the national baseline was not possible for 2018-2020.

Overview

Critical access hospitals are rural hospitals that maintain 24-hour emergency care services 7 days a week and have fewer than 25 inpatient beds. A detailed explanation of Centers for Medicare and Medicaid Services (CMS) and Colorado guidelines for facility classification, including critical access hospitals, are in Appendix C. Critical access hospitals are required to report CLABSIs that occur in critical care units (CCUs).

Results

Five critical access hospitals reported CCU data in 2019 and 2020 (Table 14). There were no reported CLABSIs. Central line use was relatively less frequent in critical access hospitals compared to acute care hospitals. Comparison of rates of CLABSI to the national baseline was not possible.

Table 14: Central Line-Associated Bloodstream Infections in Critical Care Units in Critical Access Hospitals – Colorado, Jan.1, 2018 - Dec. 31, 2020

Facility Name	2018				2019				2020			
	No. Central Line Days	No. of Infections	SIR	National Comparison	No. Central Line Days	No. of Infections	SIR	National Comparison	No. Central Line Days	No. of Infections	SIR	National Comparison
Arkansas Valley Regional Medical Center	65	0	N/A	Suppressed ¹	53	0	N/A	Suppressed ¹	30	--- ¹	N/A	Suppressed ¹
Aspen Valley Hospital	31	--- ¹	N/A	Suppressed ¹	4	--- ¹	N/A	Suppressed ¹	13	--- ¹	N/A	Suppressed ¹
Heart Of The Rockies Regional Medical Center	55	0	N/A	Suppressed ¹	39	--- ¹	N/A	Suppressed ¹	46	--- ¹	N/A	Suppressed ¹
Southwest Memorial Hospital	53	0	N/A	Suppressed ¹	51	0	N/A	Suppressed ¹	41	--- ¹	N/A	Suppressed ¹

¹Calculation of comparison is not available due to data suppression for one of the following reasons: no. central line days fewer than 50 or the predicted number of infections was less than one.

The standardized infection ratio (SIR) is the ratio of the numbers of observed and predicted infections.

N/A, not applicable.

National comparisons based on data collected and reported by facilities participating in the National Healthcare Safety Network (NHSN) from January-December, 2020.

For critical access hospitals only those CLABSI events that occurred within MICU/SICU=medical/surgical critical care are reported.

Data source: NHSN Database.

Prepared by: Colorado Healthcare-Associated Infections and Antimicrobial Resistance Program, Colorado Department of Public Health and Environment.

Central line-associated bloodstream infections in inpatient rehabilitation facilities and inpatient rehabilitation wards in acute care hospitals

In 2019 and 2020, overall rates of central line-associated bloodstream infection (CLABSI) in inpatient rehabilitation facilities were similar to (not significantly different from) the national baseline.

Overview

Inpatient rehabilitation facilities care for patients who have lost function due to acute or chronic pain, musculoskeletal problems, stroke, brain or spinal cord dysfunction, catastrophic events resulting in complete or partial paralysis or need rehabilitation for other reasons. The goal for these areas is to evaluate, treat and restore optimal functioning of the patients physically and mentally.

Inpatient rehabilitation facilities report infection data for patients with either permanent or temporary central lines. Permanent lines are those that are tunneled under the skin before entering a great vessel. These can include certain dialysis lines and implanted catheters such as a port. Temporary lines are those that are not tunneled, and their infection rates can be higher than permanent lines.

Results

Six inpatient rehabilitation facilities reported CLABSI data in 2019 and 2020 (Table 15). Comparison of rates of CLABSI to the national baseline was not possible.

Table 15: Central Line-Associated Bloodstream Infections in Standalone Inpatient Rehabilitation Facilities – Colorado, Jan. 1, 2018-Dec. 31, 2020

Facility Name	2018				2019				2020			
	No. Central Line Days	No. of Infections	SIR	National Comparison	No. Central Line Days	No. of Infections	SIR	National Comparison	No. Central Line Days	No. of Infections	SIR	National Comparison
Encompass Health Rehabilitation Hospital Of Colorado Springs	540	0	N/A	Suppressed ¹	726	0	N/A	Suppressed ¹	722	0	N/A	Suppressed ¹
Encompass Health Rehabilitation Hospital Of Littleton	687	0	N/A	Suppressed ¹	877	0	N/A	Suppressed ¹	1,493	0	N/A	Suppressed ¹
Northern Colorado Rehabilitation Hospital	678	0	N/A	Suppressed ¹	976	0	N/A	Suppressed ¹	1,127	0	N/A	Suppressed ¹
Spalding Rehabilitation Hospital	678	0	N/A	Suppressed ¹	459	0	N/A	Suppressed ¹	617	0	N/A	Suppressed ¹
Spalding Rehabilitation Hospital At PSL MC	979	0	N/A	Suppressed ¹	939	0	N/A	Suppressed ¹	1,323	0	N/A	Suppressed ¹
Vibra Rehabilitation Hospital Of Denver	100	0	N/A	Suppressed ¹	545	0	N/A	Suppressed ¹	754	1	N/A	Suppressed ¹

¹Calculation of comparison is not available due to data suppression for one of the following reasons: no. central line days fewer than 50 or the predicted number of infections was less than one.

The standardized infection ratio (SIR) is the ratio of the numbers of observed and predicted infections.

N/A, not applicable.

National comparisons based on data collected and reported by facilities participating in the National Healthcare Safety Network (NHSN) from January-December, 2020.

Data source: NHSN Database.

Prepared by: Colorado Healthcare-Associated Infections and Antimicrobial Resistance Program, Colorado Department of Public Health and Environment.

Central line-associated bloodstream infections in long-term acute care hospitals

Comparison of aggregate rates of central line-associated bloodstream infection (CLABSI) in long-term acute care hospitals to the national baseline were not possible in 2019-2020.

Overview

A long-term acute care hospital is a specialty care hospital that cares for patients with complex medical conditions requiring intense, specialized treatment for at least 25 days. These patients often transfer from critical care units in acute care and critical access hospitals. Patients in these facilities have a higher severity of illness often with multi-system complications posing a challenge for infection control.

Long-term acute care hospitals report infection data for patients with either permanent or temporary central lines. As previously noted, permanent lines are those that are tunneled and can include certain dialysis lines and implanted catheters such as a port. Temporary lines are those that are not tunneled. Permanent lines are commonly used in long-term acute care hospital patients and historically have had lower rates of infection than temporary lines.

Results

Seven long-term acute care hospitals reported data in 2019 (Table 16). Of these, five reported rates of CLABSI that were similar to (not significantly different from) the national baseline. Six long-term acute care hospitals reported data in 2020. Of these, one reported a CLABSI rate that was lower (better) than the national baseline, and four reported rates of CLABSI that were similar to (not significantly different from) the national baseline.

Table 16: Central Line-Associated Bloodstream Infections in Long-Term Acute Care Hospitals – Colorado, Jan. 1, 2018 - Dec. 31, 2019

Facility Name	2018				2019				2020			
	No. Central Line Days	No. of Infections	SIR	National Comparison	No. Central Line Days	No. of Infections	SIR	National Comparison	No. Central Line Days	No. of Infections	SIR	National Comparison
Advanced Care Hospital Of Northern Colorado	2,937	1	0.5	Not Significant	2,499	3	1.5	Not Significant	2,716	2	0.9	Not Significant
Craig Hospital	1,520	1	N/A	Suppressed ¹	1,500	1	N/A	Suppressed ¹	1,326	0	N/A	Suppressed ¹
Kindred Hospital-Denver South	1,735	0	0.0	Not Significant	539	0	N/A	Suppressed ¹	N/A			
Kindred Hospital Aurora	2,307	3	1.1	Not Significant	3,100	2	0.6	Not Significant	2,708	2	0.8	Not Significant
Kindred Hospital Denver	4,378	2	0.3	Not Significant	4,170	3	0.5	Not Significant	4,741	1	0.1	Better
Post Acute Medical Specialty Hospital Of Denver	7,854	4	0.4	Better	7,549	4	0.4	Not Significant	6,843	8	0.9	Not Significant
Vibra Hospital	3,549	4	0.6	Not Significant	3,783	3	0.5	Not Significant	3,924	5	0.8	Not Significant

¹Calculation of comparison is not available due to data suppression for one of the following reasons: no. central line days fewer than 50 or the predicted number of infections was less than one.

The standardized infection ratio (SIR) is the ratio of the numbers of observed and predicted infections.

N/A, not applicable.

National comparisons based on data collected and reported by facilities participating in the National Healthcare Safety Network (NHSN) from January-December, 2020.

Data source: NHSN Database.

Prepared by: Colorado Healthcare-Associated Infections and Antimicrobial Resistance Program, Colorado Department of Public Health and Environment.

Clostridioides difficile infections

Overview

Clostridioides difficile (*C. difficile*) is found in both health care and community settings. Prevention is a priority for public health. *C. difficile* is a spore-forming bacterium that can cause symptoms ranging from bloating, diarrhea, fever, and abdominal pain to life-threatening colon inflammation, sepsis and death. Risk factors for *C. difficile* infections include antibiotic exposure, proton pump inhibitors, gastrointestinal surgery/manipulation, advanced age, long length of stay in health care settings, immunocompromising conditions, and serious underlying diseases.¹³ *C. difficile* also may be acquired outside of hospitals in the community, and exposures to other types of health care are also risk factors.¹⁴ Although 94% of *C. difficile* infections are related to health care exposures, 75% of health care-associated *C. difficile* infections first show signs outside of hospitals.¹⁵

Based on the high incidence and potential severity of *C. difficile* infections, in 2015, Colorado’s HAI Advisory Committee recommended the addition of *C. difficile* to Colorado reporting requirements for acute care hospitals (critical access hospitals and stand-alone children’s hospitals are exempt) for data collected since 2013, and long-term acute care hospitals and inpatient rehabilitation facilities for data collected since 2015. Hospital-reported *C. difficile* data are classified as hospital-onset, community-onset, and community-onset healthcare facility-associated. Hospital-onset cases are characterized by laboratory-positive specimens collected more than three days after admission to the facility (i.e., on or after day four). Community-onset cases are characterized by laboratory-identified specimens collected in an outpatient location or an inpatient location on days one, two or three after admission to the hospital. Community-onset healthcare facility-associated cases are characterized by specimens collected from patients discharged from the facility four or fewer weeks prior to the current date of stool specimen collection. Data from outpatient locations are not included in this definition. Only laboratory-identified hospital-onset cases are presented in this report. Each table below lists the facility’s name, number of patient days, number of *Clostridium difficile* infections, and the standardized infection ratio (SIR) per year. A detailed explanation of how the SIR is calculated is in Appendix B. The three categories summarizing how a Colorado facility compares to the national infection baseline are:

- Statistically lower rate of infection than the national baseline (better).
- Statistically similar rate of infection to the national baseline (not significant).
- Statistically higher rate of infection than the national baseline (worse).

Data were suppressed if the predicted number of infections was less than one or the facility had fewer than 50 patient-days in the calendar year.

Limitations

CDPHE does not perform data validation studies on every infection nor every condition reported yearly. Validation of *C. difficile* data was conducted in 2018 in long-term acute care hospitals and inpatient rehabilitation facilities. Additional information on previous validations of *C. difficile* data in health care facilities may be requested. For additional limitations, please see “Data format and cautions” section on page 16.

***Clostridioides difficile* infections in acute care hospitals**

In 2019 and 2020, overall rates of *Clostridioides difficile* infection in acute care hospitals were lower (better) than the national baseline.

Overview

Acute care hospitals report *C. difficile* data from inpatient locations, including observation patients housed in inpatient locations plus outpatient emergency departments and 24-hour observation locations. Critical access hospitals and stand-alone pediatric hospitals are exempt from reporting.

Results

Fifty-four acute care hospitals reported *C. difficile* data in 2019 (Table 17). Of these, 17 reported rates of infection that were lower (better) than the national baseline. Fifty-four acute care hospitals reported *C. difficile* data in 2020. Of these, 27 reported rates of infection that were lower (better) than the national baseline.

Table 17: *Clostridioides difficile* in Acute Care Hospitals – Colorado, Jan. 1, 2018 - Dec. 31, 2020

Facility Name	2018				2019				2020			
	No. Patient Days	No. of Infections	SIR	National Comparison	No. Patient Days	No. of Infections	SIR	National Comparison	No. Patient Days	No. of Infections	SIR	National Comparison
Animas Surgical Hospital	1,768	0	N/A	Suppressed ¹	1,111	0	N/A	Suppressed ¹	897	0	N/A	Suppressed ¹
Avista Adventist Hospital	11,925	2	0.3	Not Significant	13,578	5	0.7	Not Significant	11,887	2	0.3	Better
Banner Fort Collins Medical Center	4,077	0	N/A	Suppressed ¹	4,643	2	N/A	Suppressed ¹	3,909	1	0.6	Not Significant
Boulder Community Foothills Hospital	26,907	20	1.1	Not Significant	27,813	15	0.8	Not Significant	31,650	11	0.6	Better
Castle Rock Adventist Hospital	11,138	5	0.8	Not Significant	11,255	2	0.3	Not Significant	11,770	2	0.4	Not Significant
Colorado Plains Medical Center	2,611	1	0.5	Not Significant	2,328	0	0.0	Not Significant	2,492	0	0.0	Not Significant
Community Hospital	7,396	4	0.7	Not Significant	8,876	5	0.8	Not Significant	8,159	2	0.3	Not Significant
Delta County Memorial Hospital	4,835	3	1.0	Not Significant	4,779	2	0.9	Not Significant	5,124	4	0.9	Not Significant
Denver Health And Hospital Authority	102,669	75	0.8	Not Significant	97,439	47	0.6	Better	101,724	52	0.6	Better
Exempla Lutheran Medical Center	45,817	22	0.7	Not Significant	47,103	8	0.4	Better	52,672	9	0.4	Better
Exempla Saint Joseph Hospital	79,031	35	0.6	Better	85,601	11	0.3	Better	76,859	15	0.4	Better
Grandview Hospital	1,108	0	N/A	Suppressed ¹	2,255	0	N/A	Suppressed ¹	1,982	0	N/A	Suppressed ¹
Littleton Adventist Hospital	38,759	25	0.9	Not Significant	39,396	32	1.2	Not Significant	36,394	16	0.7	Not Significant
Longmont United Hospital	17,730	9	0.8	Not Significant	17,253	10	0.9	Not Significant	17,287	7	0.6	Not Significant

Facility Name	2018				2019				2020			
	No. Patient Days	No. of Infections	SIR	National Comparison	No. Patient Days	No. of Infections	SIR	National Comparison	No. Patient Days	No. of Infections	SIR	National Comparison
Longs Peak Hospital	10,009	7	0.9	Not Significant	12,776	4	0.7	Not Significant	13,598	5	1.0	Not Significant
McKee Medical Center	12,758	4	1.0	Not Significant	11,512	0	0.0	Better	13,484	0	0.0	Better
Medical Center Of The Rockies	46,525	34	0.9	Not Significant	47,379	15	0.5	Better	47,091	15	0.5	Better
Memorial Health System	83,638	42	0.7	Better	79,690	18	0.4	Better	78,499	21	0.5	Better
Memorial Hospital North	15,686	6	0.7	Not Significant	24,273	5	0.5	Not Significant	29,156	4	0.3	Better
Mercy Regional Medical Center	15,013	11	1.2	Not Significant	15,582	8	0.9	Not Significant	16,282	9	1.0	Not Significant
Montrose Memorial Hospital	6,913	3	0.4	Not Significant	6,614	7	1.3	Not Significant	6,723	5	0.9	Not Significant
National Jewish Health	196	0	N/A	Suppressed ¹	319	0	N/A	Suppressed ¹	472	0	N/A	Suppressed ¹
North Colorado Medical Center	65,248	11	0.4	Better	53,383	15	0.6	Better	47,853	13	0.6	Better
North Suburban Medical Center	26,827	12	0.7	Not Significant	29,068	1	0.1	Better	33,839	9	0.5	Better
Ortho Colorado	5,404	0	N/A	Suppressed ¹	6,128	0	N/A	Suppressed ¹	5,738	0	N/A	Suppressed ¹
Parker Adventist Hospital	28,405	18	1.0	Not Significant	29,070	19	1.0	Not Significant	29,935	13	0.7	Not Significant
Parkview Medical Center	68,304	49	1.1	Not Significant	73,016	44	0.9	Not Significant	72,034	32	0.7	Better
Penrose St. Francis Health Services	53,295	37	1.0	Not Significant	55,750	27	0.8	Not Significant	56,335	11	0.3	Better
Platte Valley Medical Center	11,355	5	1.3	Not Significant	11,888	1	0.3	Not Significant	12,589	1	0.2	Not Significant
Porter Adventist Hospital	31,933	25	1.2	Not Significant	36,025	14	0.6	Not Significant	42,438	10	0.4	Better

Facility Name	2018				2019				2020			
	No. Patient Days	No. of Infections	SIR	National Comparison	No. Patient Days	No. of Infections	SIR	National Comparison	No. Patient Days	No. of Infections	SIR	National Comparison
Poudre Valley Health System	52,525	26	0.7	Better	50,515	19	0.6	Better	47,425	11	0.4	Better
Presbyterian/St Luke's Medical Center	58,869	49	1.3	Not Significant	60,440	19	0.7	Not Significant	59,250	13	0.3	Better
Rose Medical Center	37,716	3	0.2	Better	36,719	5	0.3	Better	38,633	5	0.2	Better
Saint Anthony North Health Campus	19,021	18	1.3	Not Significant	23,875	5	0.4	Better	26,641	7	0.6	Not Significant
SCL Health Good Samaritan Medical Center	48,998	19	0.6	Better	45,907	4	0.2	Better	45,158	7	0.3	Better
Sky Ridge Medical Center	51,990	34	0.9	Not Significant	53,659	7	0.3	Better	52,822	8	0.3	Better
SLV Regional Medical Center	6,914	8	1.5	Not Significant	6,894	6	1.7	Not Significant	6,455	0	0.0	Better
St. Anthony Hospital	56,070	45	1.1	Not Significant	61,583	38	0.9	Not Significant	64,644	37	0.9	Not Significant
St. Anthony Summit Medical Center	3,792	0	N/A	Suppressed ¹	3,812	0	0.0	Not Significant	3,714	0	0.0	Not Significant
St. Francis Medical Center	23,635	8	0.5	Not Significant	29,928	16	0.8	Not Significant	34,673	3	0.1	Better
St. Mary's Hospital	64,134	27	0.6	Better	67,037	7	0.2	Better	61,780	3	0.1	Better
St. Mary Corwin Medical Center	12,647	10	1.9	Not Significant	8,999	1	0.2	Not Significant	8,952	1	0.3	Not Significant
Sterling Regional Medcenter	4,061	0	N/A	Suppressed ¹	3,808	0	N/A	Suppressed ¹	3,613	0	N/A	Suppressed ¹
Swedish Medical Center	89,134	50	0.8	Better	98,525	17	0.4	Better	100,172	30	0.5	Better
The Medical Center of Aurora	57,706	39	0.8	Not Significant	55,706	15	0.5	Better	59,144	16	0.5	Better
UCHealth Broomfield Hospital	1,267	0	N/A	Suppressed ¹	4,622	1	0.5	Not Significant	4,977	0	0.0	Not Significant

Facility Name	2018				2019				2020			
	No. Patient Days	No. of Infections	SIR	National Comparison	No. Patient Days	No. of Infections	SIR	National Comparison	No. Patient Days	No. of Infections	SIR	National Comparison
UCHealth Greeley Hospital	N/A				5,033	3	0.9	Not Significant	13,062	2	0.3	Better
UCHealth Highlands Ranch Hospital	N/A				6,264	1	0.2	Not Significant	18,609	3	0.2	Better
UCHealth Yampa Valley Medical Center	3,345	0	0.0	Not Significant	3,962	0	0.0	Not Significant	3,556	0	0.0	Not Significant
University Of Colorado Hospital	180,563	233	1.2	Worse	184,614	139	0.8	Better	184,426	65	0.5	Better
Vail Health Hospital	6,826	3	1.2	Not Significant	7,193	2	0.4	Not Significant	3,184	0	0.0	Not Significant
Valley View Hospital	12,113	5	0.5	Not Significant	11,396	7	0.9	Not Significant	9,280	5	0.7	Not Significant

¹Calculation of comparison is not available due to data suppression for one of the following reasons: no. patient days fewer than 50 or the predicted number of infections was less than one.

The standardized infection ratio (SIR) is the ratio of the numbers of observed and predicted infections.

N/A, not applicable.

National comparisons based on data collected and reported by facilities participating in the National Healthcare Safety Network (NHSN) from January-December, 2020.

Data source: NHSN Database.

Prepared by: Colorado Healthcare-Associated Infections and Antimicrobial Resistance Program, Colorado Department of Public Health and Environment.

***Clostridioides difficile* infections in inpatient rehabilitation facilities**

In 2019, the overall rate of *Clostridioides difficile* (*C. difficile*) in inpatient rehabilitation facilities was similar to (not significantly different from) the national baseline. The overall rate of *C. difficile* infection in inpatient rehabilitation facilities was lower (better) than the national baseline in 2020.

Overview

Inpatient rehabilitation facilities report facility-wide inpatient *C. difficile*.

Results

Six inpatient rehabilitation facilities reported *C. difficile* data in 2019 (Table 18). All reported rates of infection that were similar to (not significantly different from) the national baseline. Six inpatient rehabilitation facilities reported *C. difficile* data in 2020. Of these, three inpatient rehabilitation facilities reported rates of infection that were lower (better) than the national baseline.

Table 18: *Clostridioides difficile* in Inpatient Rehabilitation Facilities— Colorado, Jan. 1, 2018 - Dec. 31, 2020

Facility Name	2018				2019				2020			
	No. Patient Days	No. of Infections	SIR	National Comparison	No. Patient Days	No. of Infections	SIR	National Comparison	No. Patient Days	No. of Infections	SIR	National Comparison
Encompass Health Rehabilitation Hospital Of Colorado Springs	12,620	3	0.7	Not Significant	13,732	4	0.9	Not Significant	13,698	0	0.0	Better
Encompass Health Rehabilitation Hospital Of Littleton	11,272	1	0.2	Not Significant	13,064	1	0.2	Not Significant	15,181	1	0.2	Better
Northern Colorado Rehabilitation Hospital	12,896	0	0.0	Better	13,164	2	0.5	Not Significant	13,201	1	0.2	Not Significant
Spalding Rehabilitation Hospital	9,689	2	0.5	Not Significant	9,160	3	1.3	Not Significant	9,145	0	0.0	Better
Spalding Rehabilitation Hospital At PSL MC	4,569	2	1.1	Not Significant	4,638	2	1.4	Not Significant	4,762	1	0.6	Not Significant
Vibra Rehabilitation Hospital Of Denver	2,107	0	N/A	Suppressed ¹	7,826	1	0.5	Not Significant	10,238	2	0.7	Not Significant

¹Calculation of comparison is not available due to data suppression for one of the following reasons: no. patient days fewer than 50 or the predicted number of infections was less than one.

The standardized infection ratio (SIR) is the ratio of the numbers of observed and predicted infections.

N/A, not applicable.

National comparisons based on data collected and reported by facilities participating in the National Healthcare Safety Network (NHSN) from January-December, 2020.

Data source: NHSN Database.

Prepared by: Colorado Healthcare-Associated Infections and Antimicrobial Resistance Program, Colorado Department of Public Health and Environment.

***Clostridioides difficile* infections in long-term acute care hospitals**

Overall rates of *C. difficile* infection in long-term acute care hospitals were lower (better) than the national baseline in 2019 and 2020.

Overview

Long-term acute care hospitals report facility-wide inpatient *C. difficile* data.

Results

Seven long-term acute care hospitals reported *C. difficile* data in 2019 (Table 19). Of these, three reported rates of infection that were lower (better) than the national baseline. Six long-term acute care hospitals reported *C. difficile* data in 2020. Of these, two reported rates of infection that were lower (better) than the national baseline in 2020.

Table 19: *Clostridioides difficile* in Long-Term Acute Care Hospitals – Colorado, Jan. 1, 2018 - Dec. 31, 2020

Facility Name	2018				2019				2020			
	No. Patient Days	No. of Infections	SIR	National Comparison	No. Patient Days	No. of Infections	SIR	National Comparison	No. Patient Days	No. of Infections	SIR	National Comparison
Advanced Care Hospital Of Northern Colorado	5,900	3	0.8	Not Significant	5,971	3	0.7	Not Significant	5,978	4	0.9	Not Significant
Craig Hospital	28,493	13	0.6	Better	28,430	9	0.4	Better	28,987	4	0.2	Better
Kindred Hospital-Denver South	5,501	4	0.8	Not Significant	1,074	3	2.7	Not Significant	N/A			
Kindred Hospital Aurora	8,697	9	0.9	Not Significant	11,003	6	0.5	Better	12,546	9	0.7	Not Significant
Kindred Hospital Denver	9,588	20	1.5	Not Significant	11,198	13	1.0	Not Significant	14,538	4	0.3	Better
Post Acute Medical Specialty Hospital Of Denver	13,877	4	0.4	Better	11,155	8	1.0	Not Significant	16,569	9	0.7	Not Significant
Vibra Hospital	7,938	3	0.3	Better	10,933	2	0.2	Better	13,650	9	0.7	Not Significant

The standardized infection ratio (SIR) is the ratio of the numbers of observed and predicted infections.

N/A, not applicable.

National comparisons based on data collected and reported by facilities participating in the National Healthcare Safety Network (NHSN) from January-December, 2020.

Data source: NHSN Database.

Prepared by: Colorado Healthcare-Associated Infections and Antimicrobial Resistance Program, Colorado Department of Public Health and Environment.

Dialysis-related infections

In 2019, the overall rate of access related bloodstream infection (ARB) in dialysis facilities was similar to (not significantly different from) the national baseline. In 2020, the overall rate of ARB in dialysis facilities was lower (better) than the national baseline.

Overview

According to the National Institute of Diabetes and Digestive and Kidney Diseases, approximately 14 percent of the general population has chronic kidney disease in the United States since 2004. According to a 2015 report, 468,000 patients in the United States receive chronic dialysis treatment.¹²

Surveillance for dialysis-related infections in Colorado occurs within outpatient dialysis facilities only and excludes peritoneal and home dialysis. The outpatient dialysis facilities monitored may be dedicated stand-alone facilities, hospital-based, or affiliated units. The reporting of dialysis-related infections began in March 2010.

Dialysis facilities in Colorado monitor patients for three specific events that must be reported: 1) an outpatient start of an intravenous antibiotic, 2) a positive blood culture, or 3) pus, redness or increased swelling at the vascular access site. Data from these events are used to classify two types of dialysis-related infections: access-related bloodstream infections (ARBs) and local access infections (LAIs). An ARB, which poses more serious health implications and requires higher levels of care, is determined by the presence of a microorganism identified in a blood culture and identification of the source of infection as the vascular access site or is uncertain. LAIs are not included in the Colorado HAI Annual Report as of 2019.

Each table below lists the dialysis facility's name, number of dialysis patients who were dialyzed on the first two working days of a month (patient-months), numbers and rates of ARBs, and comparisons to the national rate. The infection rate used is the number of infections per 100 patient-months. It is important to note that this rate is not risk-adjusted (i.e., the rate does not account for differences in facility or patient characteristics). The three categories that indicate how a Colorado dialysis center's infection rates compare to national infection rates are:

- If the rate is lower than the national aggregate rate and the p-value is less than or equal to 0.05, the facility's infection rate is designated as "better."
- If the rate is higher than the national aggregate rate and the p-value is less than or equal to 0.05, the facility's infection rate is designated as "worse."
- If the p-value is greater than 0.05, the difference between the facility's rate and the national aggregate rate is not statistically significant, and the facility's infection rate is designated as "not significant."

Results

Seventy-nine dialysis facilities submitted data in 2019 (**Table 20**). Of these, two facilities reported ARB rates that were lower (better) than the national rate, three facilities reported ARB rates that were higher (worse) than the national rate, and the rest of the facilities reported rates similar to (not significantly different from) the national rate. Seventy-seven dialysis facilities submitted data in 2020. Of these, three facilities reported ARB rates that were lower (better) than the national rate, one facility reported an ARB rate that was higher (worse) than the national rate, and the rest reported rates similar to (not significantly different from) the national rate.

Limitations

Types of patients treated influence infection rates. There are patient risk factors that cannot be measured (e.g., severe suppression of the immune system) that contribute to infection risk. Unlike standardized infection ratios (SIRs) presented elsewhere in this report, rates in Tables 20 are not risk-adjusted. Caution should be applied when interpreting a comparison of rates. See Appendix C for a detailed discussion of SIRs and rates, as well as the section “Data format and cautions” on page 16. These findings, similar to all other findings in this report, should be considered in conjunction with clinicians, healthcare facilities, health insurance carriers, family, friends, and reputable health care websites prior to drawing conclusions regarding healthcare quality. Dialysis infections were validated in 2018.

Table 20: Access-Related Bloodstream Infections in Outpatient Dialysis Facilities – Colorado, Jan. 1, 2018 - Dec. 31, 2020

Facility Name	2018				2019				2020			
	No. Patient Months	No. of Infections	Infection Rate	National Comparison	No. Patient Months	No. of Infections	Infection Rate	National Comparison	No. Patient Months	No. of Infections	Infection Rate	National Comparison
Alamosa Dialysis	667	1	0.15	Not Significant	631	2	0.32	Not Significant	576	0	0.00	Not Significant
Arvada Dialysis Center	286	2	0.70	Not Significant	376	1	0.27	Not Significant	321	0	0.00	Not Significant
Aurora Dialysis Center	1,419	10	0.70	Not Significant	1,275	3	0.24	Not Significant	1,297	2	0.15	Not Significant
Belcaro Dialysis Center	542	3	0.55	Not Significant	537	4	0.74	Not Significant	441	0	0.00	Not Significant
Black Canyon Dialysis	330	1	0.30	Not Significant	311	1	0.32	Not Significant	332	1	0.30	Not Significant
Boulder Dialysis Center	293	0	0.00	Not Significant	269	2	0.74	Not Significant	177	0	0.00	Not Significant
Brighton Dialysis	603	1	0.17	Not Significant	486	0	0.00	Not Significant	470	0	0.00	Not Significant
Children's Hospital Colorado Kidney Center	117	2	1.71	Not Significant	76	2	2.63	Worse	73	1	1.37	Not Significant
Commerce City Dialysis	663	3	0.45	Not Significant	607	2	0.33	Not Significant	533	1	0.19	Not Significant
Cortez Dialysis Center	673	0	0.00	Not Significant	666	1	0.15	Not Significant	634	0	0.00	Not Significant
DCI, Grand Junction	385	0	0.00	Not Significant	440	4	0.91	Not Significant	458	0	0.00	Not Significant
DCI, Montrose	389	2	0.51	Not Significant	325	0	0.00	Not Significant	294	3	1.02	Not Significant
Denver Dialysis Center	713	6	0.84	Not Significant	680	2	0.29	Not Significant	635	0	0.00	Not Significant

Facility Name	2018				2019				2020			
	No. Patient Months	No. of Infections	Infection Rate	National Comparison	No. Patient Months	No. of Infections	Infection Rate	National Comparison	No. Patient Months	No. of Infections	Infection Rate	National Comparison
Denver Reception And Reception Center	171	0	0.00	Not Significant	157	0	0.00	Not Significant	178	0	0.00	Not Significant
Durango Dialysis Center	382	1	0.26	Not Significant	304	1	0.33	Not Significant	267	0	0.00	Not Significant
East Aurora Dialysis	1,119	7	0.63	Not Significant	1,070	3	0.28	Not Significant	977	1	0.10	Not Significant
Englewood Dialysis Center	367	1	0.27	Not Significant	563	5	0.89	Not Significant	719	1	0.14	Not Significant
FMC Canon City	392	0	0.00	Not Significant	439	2	0.46	Not Significant	436	1	0.23	Not Significant
FMC East Denver	1,287	9	0.70	Not Significant	1,106	6	0.54	Not Significant	1,104	8	0.72	Not Significant
FMC Fort Collins Dialysis	917	2	0.22	Not Significant	927	1	0.11	Not Significant	936	0	0.00	Better
FMC Greeley	1,015	1	0.10	Not Significant	1,007	1	0.10	Not Significant	993	1	0.10	Not Significant
FMC Loveland Dialysis	565	0	0.00	Not Significant	622	1	0.16	Not Significant	577	1	0.17	Not Significant
FMC North Greeley	545	0	0.00	Not Significant	571	0	0.00	Not Significant	648	0	0.00	Not Significant
FMC Pavilion Dialysis	1,077	2	0.19	Not Significant	1,217	0	0.00	Better	1,243	0	0.00	Better
FMC Pueblo South	1,015	1	0.10	Not Significant	1,055	3	0.28	Not Significant	998	0	0.00	Better
FMC Pueblo West Dialysis	302	0	0.00	Not Significant	325	0	0.00	Not Significant	358	0	0.00	Not Significant
FMC South Denver Dialysis	399	1	0.25	Not Significant	416	1	0.24	Not Significant	434	1	0.23	Not Significant

Facility Name	2018				2019				2020			
	No. Patient Months	No. of Infections	Infection Rate	National Comparison	No. Patient Months	No. of Infections	Infection Rate	National Comparison	No. Patient Months	No. of Infections	Infection Rate	National Comparison
FMC Stapleton Dialysis	630	2	0.32	Not Significant	698	1	0.14	Not Significant	718	1	0.14	Not Significant
FMC Lamar	286	0	0.00	Not Significant	248	0	0.00	Not Significant	243	0	0.00	Not Significant
Fort Collins Dialysis	78	0	0.00	Not Significant	168	0	0.00	Not Significant	228	1	0.44	Not Significant
Fresenius Rocky Mountain Dialysis	971	3	0.31	Not Significant	1,065	8	0.75	Not Significant	1,079	2	0.19	Not Significant
Grand Junction Dialysis Center	878	4	0.46	Not Significant	797	2	0.25	Not Significant	824	0	0.00	Not Significant
Greeley Dialysis	415	2	0.48	Not Significant	452	0	0.00	Not Significant	406	0	0.00	Not Significant
Heart Of The Rockies Regional Dialysis Center	154	0	0.00	Not Significant	178	0	0.00	Not Significant	155	2	1.29	Not Significant
Kidney Center Of Arvada	955	1	0.10	Not Significant	973	4	0.41	Not Significant	980	1	0.10	Not Significant
Kidney Center Of Frederick	113	1	0.88	Not Significant	182	2	1.10	Not Significant	227	2	0.88	Not Significant
Kidney Center Of Lafayette	717	1	0.14	Not Significant	642	1	0.16	Not Significant	632	2	0.32	Not Significant
Kidney Center Of Lakewood	761	3	0.39	Not Significant	853	1	0.12	Not Significant	757	0	0.00	Not Significant
Kidney Center Of Longmont	791	1	0.13	Not Significant	814	2	0.25	Not Significant	835	4	0.48	Not Significant
Kidney Center Of Northridge	363	0	0.00	Not Significant	352	2	0.57	Not Significant	408	1	0.25	Not Significant
Kidney Center Of The Rockies	80	2	2.50	Worse	128	2	1.56	Not Significant	118	0	0.00	Not Significant

Facility Name	2018				2019				2020			
	No. Patient Months	No. of Infections	Infection Rate	National Comparison	No. Patient Months	No. of Infections	Infection Rate	National Comparison	No. Patient Months	No. of Infections	Infection Rate	National Comparison
Kidney Center Of Westminster	1,438	4	0.28	Not Significant	1,309	1	0.08	Not Significant	1,298	1	0.08	Not Significant
Kidney Center Of Wheat Ridge	358	2	0.56	Not Significant	347	1	0.29	Not Significant	362	1	0.28	Not Significant
Kidney Center On Main	311	2	0.64	Not Significant	303	2	0.66	Not Significant	280	1	0.36	Not Significant
Lakewood Crossing Dialysis	730	2	0.27	Not Significant	680	5	0.74	Not Significant	629	1	0.16	Not Significant
Lakewood Dialysis Center	905	4	0.44	Not Significant	939	2	0.21	Not Significant	893	1	0.11	Not Significant
Liberty Dialysis Colorado Springs Central	1,152	1	0.09	Not Significant	1,171	3	0.26	Not Significant	1,189	2	0.17	Not Significant
Liberty Dialysis Colorado Springs North	955	1	0.10	Not Significant	978	2	0.20	Not Significant	959	5	0.52	Not Significant
Liberty Dialysis Colorado Springs South	1,022	0	0.00	Better	1,007	5	0.50	Not Significant	1,000	6	0.60	Not Significant
Littleton Dialysis Center	719	2	0.28	Not Significant	688	3	0.44	Not Significant	634	0	0.00	Not Significant
Lonetree Dialysis Center	323	3	0.93	Not Significant	362	6	1.66	Worse	304	1	0.33	Not Significant
Longmont Dialysis Center	190	1	0.53	Not Significant	185	0	0.00	Not Significant	238	0	0.00	Not Significant
Loveland Central Dialysis	253	0	0.00	Not Significant	258	0	0.00	Not Significant	227	0	0.00	Not Significant
Lowry Dialysis Center	1,042	2	0.19	Not Significant	998	0	0.00	Better	814	0	0.00	Not Significant
Mesa County Dialysis	295	1	0.34	Not Significant	386	2	0.52	Not Significant	418	0	0.00	Not Significant

Facility Name	2018				2019				2020			
	No. Patient Months	No. of Infections	Infection Rate	National Comparison	No. Patient Months	No. of Infections	Infection Rate	National Comparison	No. Patient Months	No. of Infections	Infection Rate	National Comparison
Montbello Dialysis	232	2	0.86	Not Significant	258	3	1.16	Not Significant	429	5	1.17	Worse
North Colorado Springs Dialysis	468	0	0.00	Not Significant	427	2	0.47	Not Significant	437	0	0.00	Not Significant
North Metro Dialysis Center	618	4	0.65	Not Significant	563	1	0.18	Not Significant	525	1	0.19	Not Significant
Northeast Denver Dialysis	163	0	0.00	Not Significant	274	1	0.36	Not Significant	347	1	0.29	Not Significant
Northeastern Colorado Dialysis	522	0	0.00	Not Significant	553	1	0.18	Not Significant	554	1	0.18	Not Significant
Parker Dialysis Center	630	4	0.63	Not Significant	662	3	0.45	Not Significant	655	0	0.00	Not Significant
Parker Kidney Center LLC	567	0	0.00	Not Significant	547	3	0.55	Not Significant	625	0	0.00	Not Significant
Pikes Peak Dialysis Center	973	3	0.31	Not Significant	948	4	0.42	Not Significant	945	1	0.11	Not Significant
Platte Valley Dialysis	148	0	0.00	Not Significant	263	0	0.00	Not Significant	303	0	0.00	Not Significant
Printers Place Dialysis Center	545	1	0.18	Not Significant	490	4	0.82	Not Significant	367	1	0.27	Not Significant
Qualicenters, Walsenburg	258	0	0.00	Not Significant	280	0	0.00	Not Significant	257	1	0.39	Not Significant
Qualicenters, La Junta	450	0	0.00	Not Significant	389	2	0.51	Not Significant	456	0	0.00	Not Significant
Qualicenters, Pueblo	707	2	0.28	Not Significant	765	1	0.13	Not Significant	750	1	0.13	Not Significant
Red Hawk Dialysis	204	0	0.00	Not Significant	190	0	0.00	Not Significant	266	1	0.38	Not Significant

Facility Name	2018				2019				2020			
	No. Patient Months	No. of Infections	Infection Rate	National Comparison	No. Patient Months	No. of Infections	Infection Rate	National Comparison	No. Patient Months	No. of Infections	Infection Rate	National Comparison
Sable Dialysis	1,214	5	0.41	Not Significant	1,209	5	0.41	Not Significant	1,192	2	0.17	Not Significant
South West Denver Dialysis	383	3	0.78	Not Significant	416	2	0.48	Not Significant	402	0	0.00	Not Significant
The Kidney Center Of Bear Creek	526	3	0.57	Not Significant	464	0	0.00	Not Significant	484	2	0.41	Not Significant
Thornton Dialysis Center	853	3	0.35	Not Significant	874	5	0.57	Not Significant	900	1	0.11	Not Significant
Thornton Kidney Center	608	5	0.82	Not Significant	657	3	0.46	Not Significant	643	2	0.31	Not Significant
USRC Pueblo	715	1	0.14	Not Significant	655	0	0.00	Not Significant	674	4	0.59	Not Significant
West Hampden	461	2	0.43	Not Significant	580	0	0.00	Not Significant	626	1	0.16	Not Significant
West Lakewood Dialysis	500	7	1.40	Worse	537	8	1.49	Worse	506	0	0.00	Not Significant

Rates are per 100 patient-months. NOTE: These rates are not adjusted for risk.

National comparisons based on data collected and reported by facilities participating in the National Healthcare Safety Network (NHSN) from January-December, 2020.

National infection rate for all three years was 0.36 infections per patient-month.

Data include all access types.

Data source: NHSN Database.

Prepared by: Colorado Healthcare-Associated Infections and Antimicrobial Resistance Program, Colorado Department of Public Health and Environment.

Surgical-site infections

Overview

Surgical site infections (SSIs) are infections directly related to a surgical procedure. In a recent point prevalence survey of healthcare-associated infections (HAIs) in US hospitals, SSIs were the third most common HAI pathogen (approximately 16 percent).⁶ SSIs can lead to longer facility stays, additional treatment, and higher costs. Overall in the US, SSIs can cost consumers and health care payers from three to 10 billion dollars each year.¹

A surgical procedure involves at least one incision to a patient within an operating room (see Appendix A for the definition used by the National Healthcare Safety Network (NHSN)). Surgical procedures required for SSI reporting are selected based on several factors: (1) the volume of surgeries performed, (2) the variety of facilities at which the surgeries are performed, and (3) the association with increased SSIs. The surgeries monitored for SSI in Colorado include: breast surgeries (acute care hospitals, critical access hospitals, and ambulatory surgery centers), colon surgeries (acute care hospitals and critical access hospitals), hernia repairs (ambulatory surgery centers), hip replacement surgeries (acute care hospitals, critical access hospitals, and ambulatory surgery centers), abdominal hysterectomies (acute care hospitals, critical access hospitals, and ambulatory surgery centers), vaginal hysterectomies (ambulatory surgery centers), and knee replacements (acute care hospitals, critical access hospitals, and ambulatory surgery centers). Surgeries are performed as either inpatient or outpatient procedures. Surgical procedures and SSIs reported in Colorado include only adult patients (at least 18 years of age) for acute care hospitals and critical access hospitals. Surgical procedures reported by ambulatory surgery centers include patients of all ages. However, only adult data are presented in this report for ambulatory surgery centers as current NHSN analysis only includes adult patients.

In Colorado, three types of SSIs are reportable (superficial, deep, and organ space) for the surgery types listed above. See Appendix A for brief definitions. Each table presenting SSI data lists each facility in Colorado that performed the designated procedure, the number of procedures performed, and number of infections. Tables that list individual facilities (**Tables 21-27**) are divided by type of procedure, facility type, and inpatient or outpatient setting. All tables include the standardized infection ratio (SIR) and a comparison to national infection data, except for hip replacements, abdominal hysterectomies, and vaginal hysterectomies in ambulatory surgery centers, for which standardized infection ratio (SIR) values and national comparisons are not available.

Limitations

Table 21 (hip replacements), **Table 21** (abdominal hysterectomies), and **Table 23** (vaginal hysterectomies) include data from ambulatory surgery centers, and at the time of this report, no models with which to make national comparisons are available. In 2016, validation was performed for surgical site infections following abdominal hysterectomies in acute care hospitals.

Surgical-site infections following breast surgeries

In 2019 and 2020, overall rates of surgical site infection (SSI) following inpatient breast surgeries in acute care hospitals were similar to (not significantly different from) the national baseline. In 2019, the overall rate of SSI following outpatient breast surgeries in acute care hospitals was similar to (not significantly different from) the national baseline. In 2020, the overall rate of SSI following outpatient breast surgeries was lower (better) than the national baseline.

In 2019 and 2020, comparison of overall rates of SSI following inpatient and outpatient breast surgeries in critical access hospitals to the national baseline was not possible.

In 2019 and 2020, rates of SSI following breast surgeries in ambulatory surgery centers were similar to (not significantly different from) the national baseline.

Overview

Breast surgeries involve at least one incision to the breast skin in either male or female patients. Acute care hospitals, critical access hospitals, and ambulatory surgery centers report surgical site infections (SSIs) following breast procedures. There are 36 types of breast procedures that are reportable into the National Healthcare Safety Network (NHSN) and can include an open biopsy of the breast, local excision of a lesion of the breast, insertion and removal of breast implants and radical mastectomies, among others. Breast surgeries are monitored for 30 days for a superficial SSI and 90 days for all other SSIs. Further explanation of the three types of SSIs is available in Appendix A.

Acute care hospitals are facilities that primarily provide inpatient services including diagnostic, therapeutic, or rehabilitation services. Critical access hospitals are rural hospitals that maintain 24-hour emergency care services 7 days a week and have less than 25 inpatient beds. Ambulatory surgery centers are surgery centers that provide outpatient surgical procedures. A detailed explanation of Centers for Medicare and Medicaid Services (CMS) and Colorado guidelines for facility classification are in Appendix C.

All breast surgeries are reportable through NHSN to the state of Colorado for acute care hospitals, critical access hospitals, and ambulatory surgery centers. Data are presented by facility type and inpatient versus outpatient status. NHSN defines an inpatient operative procedure as a procedure on a patient whose date of admission to the health care facility and the date of discharge are different calendar days. An outpatient operative procedure occurs when a patient is admitted and discharged on the same calendar day.

The three categories summarizing how a Colorado facility compares to the national infection baseline are:

- Statistically lower rates of infection than the national baseline (better);
- Statistically similar rates of infection to the national baseline (not significant); or
- Statistically higher rates of infection than the national baseline (worse).

Data were suppressed if the predicted number of infections was less than one or the facility had fewer than 20 procedures in the calendar year.

Results: acute care hospitals

In 2019, 47 acute care hospitals reported inpatient breast surgeries (Table 21). Of these, one reported rates of SSI that were lower (better) than the national baseline, one reported rates of SSI that were higher (worse) than the national baseline, and 21 reported rates of SSI that were similar to (not significantly different from) the national baseline. In 2020, 47 acute care hospitals reported inpatient breast surgeries. Of these, 17 reported rates of SSI that were similar to (not significantly different from) the national baseline.

In 2019, 49 acute care hospitals reported outpatient breast surgeries. Of these, one reported a rate of SSI that was lower (better) than the national baseline and 12 reported rates of SSI that were similar to (not significantly different from) the national baseline. In 2020, 49 acute care hospitals reported outpatient breast surgeries. Of these, one reported a rate of SSI that was lower (better) than the national baseline, and 13 reported rates of SSI that were similar to (not significantly different from) the national baseline.

Results: critical access hospitals

In 2019, six critical access hospitals reported inpatient breast surgeries (Table 24). None reported SSIs, and comparison to the national baseline was not possible. In 2020, eight critical access hospitals reported breast surgeries. None reported SSIs, and comparison to the national baseline was not possible.

In 2019, 10 critical access hospitals reported outpatient breast surgeries. None reported SSIs and rates and comparison to the national baseline was not possible. In 2020, nine critical access hospitals reported outpatient breast surgeries. None reported SSIs, and comparison to the national baseline was not possible.

Results: ambulatory surgery centers

In 2019, 32 ambulatory surgical centers reported breast surgeries (Table 24). Of these, one reported a rate of SSI that was higher (worse) than the national baseline, and five reported rates of SSI that were similar to (not significantly different from) the national baseline. In 2020, 33 ambulatory surgical centers reported breast surgeries. Of these, five reported rates of SSIs that were similar to (not significantly different from) the national baseline.

Table 21: Surgical Site Infections Following Breast Surgeries – Colorado, Jan. 1, 2018 - Dec. 31, 2020

Facility Name	2018				2019				2020			
	No. of Procedures	No. of Infections	SIR	National Comparison	No. of Procedures	No. of Infections	SIR	National Comparison	No. of Procedures	No. of Infections	SIR	National Comparison
Acute Care Hospitals, Inpatient Procedures												
Animas Surgical Hospital	21	1	N/A	Suppressed ¹	20	0	N/A	Suppressed	6	--- ¹	N/A	Suppressed ¹
Avista Adventist Hospital	142	5	2.8	Worse	111	0	0.0	Not Significant	126	0	0.0	Not Significant
Banner Fort Collins Medical Center	6	--- ¹	N/A	Suppressed ¹	7	--- ¹	N/A	Suppressed	2	--- ¹	N/A	Suppressed ¹
Boulder Community Foothills Hospital	60	1	N/A	Suppressed ¹	81	3	2.9	Not Significant	88	2	1.5	Not Significant
Castle Rock Adventist Hospital	71	3	N/A	Suppressed ¹	63	1	N/A	Suppressed ¹	90	1	0.8	Not Significant
Colorado Plains Medical Center	1	--- ¹	N/A	Suppressed ¹	1	--- ¹	N/A	Suppressed	0	--- ¹	N/A	Suppressed ¹
Community Hospital	34	0	N/A	Suppressed ¹	68	2	1.9	Not Significant	42	1	N/A	Suppressed ¹
Delta County Memorial Hospital	22	0	N/A	Suppressed ¹	26	1	N/A	Suppressed	15	--- ¹	N/A	Suppressed ¹
Denver Health And Hospital Authority	43	1	0.9	Not Significant	54	1	0.7	Not Significant	48	0	0.0	Not Significant

Facility Name	2018				2019				2020			
	No. of Procedures	No. of Infections	SIR	National Comparison	No. of Procedures	No. of Infections	SIR	National Comparison	No. of Procedures	No. of Infections	SIR	National Comparison
Exempla Lutheran Medical Center	141	0	0.0	Not Significant	118	0	0.0	Not Significant	61	2	N/A	Suppressed ¹
Exempla Saint Joseph Hospital	503	3	0.3	Better	359	7	1.0	Not Significant	188	1	0.3	Not Significant
Grandview Hospital	0	--- ¹	N/A	Suppressed ¹	0	--- ¹	N/A	Suppressed	0	--- ¹	N/A	Suppressed ¹
Littleton Adventist Hospital	109	0	0.0	Not Significant	97	1	0.6	Not Significant	44	0	N/A	Suppressed ¹
Longmont United Hospital	58	1	N/A	Suppressed ¹	35	0	N/A	Suppressed ¹	72	0	0.0	Not Significant
Longs Peak Hospital	7	--- ¹	N/A	Suppressed ¹	11	--- ¹	N/A	Suppressed ¹	10	--- ¹	N/A	Suppressed ¹
McKee Medical Center	32	0	N/A	Suppressed ¹	69	2	N/A	Suppressed	50	0	N/A	Suppressed ¹
Medical Center Of The Rockies	83	3	2.1	Not Significant	93	2	0.9	Not Significant	75	2	1.6	Not Significant
Memorial Health System	23	0	N/A	Suppressed ¹	49	1	0.6	Not Significant	57	3	1.9	Not Significant
Memorial Hospital North	296	3	0.7	Not Significant	324	8	1.6	Not Significant	270	6	1.5	Not Significant
Mercy Regional Medical Center	52	0	N/A	Suppressed ¹	48	1	N/A	Suppressed ¹	52	0	N/A	Suppressed ¹

Facility Name	2018				2019				2020			
	No. of Procedures	No. of Infections	SIR	National Comparison	No. of Procedures	No. of Infections	SIR	National Comparison	No. of Procedures	No. of Infections	SIR	National Comparison
Montrose Memorial Hospital	18	--- ¹	N/A	Suppressed ¹	9	--- ¹	N/A	Suppressed	7	--- ¹	N/A	Suppressed ¹
North Colorado Medical Center	96	0	0.0	Not Significant	88	0	0.0	Not Significant	51	0	N/A	Suppressed ¹
North Suburban Medical Center	48	0	N/A	Suppressed ¹	43	0	N/A	Suppressed ¹	27	0	N/A	Suppressed ¹
Parker Adventist Hospital	50	2	N/A	Suppressed ¹	40	0	N/A	Suppressed ¹	18	--- ¹	N/A	Suppressed ¹
Parkview Medical Center	12	--- ¹	N/A	Suppressed ¹	7	--- ¹	N/A	Suppressed	25	0	N/A	Suppressed ¹
Penrose St. Francis Health Services	132	4	1.9	Not Significant	116	1	0.6	Not Significant	88	0	0.0	Not Significant
Platte Valley Medical Center	6	--- ¹	N/A	Suppressed ¹	2	--- ¹	N/A	Suppressed ¹	11	--- ¹	N/A	Suppressed ¹
Porter Adventist Hospital	24	0	N/A	Suppressed ¹	16	--- ¹	N/A	Suppressed	5	--- ¹	N/A	Suppressed ¹
Poudre Valley Health System	176	8	3.1	Worse	175	8	2.8	Worse	112	3	1.7	Not Significant

Facility Name	2018				2019				2020			
	No. of Procedures	No. of Infections	SIR	National Comparison	No. of Procedures	No. of Infections	SIR	National Comparison	No. of Procedures	No. of Infections	SIR	National Comparison
Presbyterian /St Luke's Medical Center	106	0	0.0	Not Significant	124	2	1.0	Not Significant	59	1	0.9	Not Significant
Rose Medical Center	449	5	0.8	Not Significant	387	1	0.2	Better	225	2	0.6	Not Significant
Saint Anthony North Health Campus	56	1	0.8	Not Significant	43	0	0.0	Not Significant	28	1	N/A	Suppressed ¹
SCL Health Good Samaritan Medical Center	127	2	1.2	Not Significant	70	0	0.0	Not Significant	92	0	0.0	Not Significant
Sky Ridge Medical Center	373	4	0.8	Not Significant	344	2	0.4	Not Significant	225	2	0.6	Not Significant
SLV Regional Medical Center	24	1	N/A	Suppressed ¹	9	--- ¹	N/A	Suppressed	11	--- ¹	N/A	Suppressed ¹
St. Anthony Hospital	184	2	0.8	Not Significant	141	0	0.0	Not Significant	111	1	0.6	Not Significant
St. Anthony Summit Medical Center	2	--- ¹	N/A	Suppressed ¹	0	--- ¹	N/A	Suppressed ¹	0	--- ¹	N/A	Suppressed ¹
St. Francis Medical Center	11	--- ¹	N/A	Suppressed ¹	28	0	N/A	Suppressed	31	1	N/A	Suppressed ¹
St. Mary's Hospital	89	2	1.7	Not Significant	82	1	0.8	Not Significant	57	0	N/A	Suppressed ¹

Facility Name	2018				2019				2020			
	No. of Procedures	No. of Infections	SIR	National Comparison	No. of Procedures	No. of Infections	SIR	National Comparison	No. of Procedures	No. of Infections	SIR	National Comparison
St. Mary Corwin Medical Center	40	1	N/A	Suppressed ¹	39	1	N/A	Suppressed ¹	34	1	N/A	Suppressed ¹
Sterling Regional Medcenter	3	--- ¹	N/A	Suppressed ¹	5	--- ¹	N/A	Suppressed	4	--- ¹	N/A	Suppressed ¹
Swedish Medical Center	134	1	0.5	Not Significant	85	3	2.1	Not Significant	46	0	N/A	Suppressed ¹
The Medical Center of Aurora	133	0	0.0	Not Significant	108	2	1.3	Not Significant	37	2	N/A	Suppressed ¹
UCHealth Broomfield Hospital	0	--- ¹	N/A	Suppressed ¹	0	--- ¹	N/A	Suppressed ¹	0	--- ¹	N/A	Suppressed ¹
UCHealth Greeley Hospital	N/A				0	--- ¹	N/A	Suppressed ¹	24	0	N/A	Suppressed ¹
UCHealth Highlands Ranch Hospital	N/A				17	--- ¹	N/A	Suppressed ¹	59	1	N/A	Suppressed ¹
UCHealth Yampa Valley Medical Center	6	--- ¹	N/A	Suppressed ¹	3	--- ¹	N/A	Suppressed	4	--- ¹	N/A	Suppressed ¹
University Of Colorado Hospital	307	15	2.2	Worse	411	14	1.7	Not Significant	368	7	1.0	Not Significant
Vail Health Hospital	29	0	N/A	Suppressed ¹	25	0	N/A	Suppressed ¹	9	--- ¹	N/A	Suppressed ¹

	2018				2019				2020			
Facility Name	No. of Procedures	No. of Infections	SIR	National Comparison	No. of Procedures	No. of Infections	SIR	National Comparison	No. of Procedures	No. of Infections	SIR	National Comparison
Valley View Hospital	24	0	N/A	Suppressed ¹	47	1	N/A	Suppressed ¹	35	0	N/A	Suppressed ¹
Acute Care Hospitals, Outpatient Procedures												
Animas Surgical Hospital	149	1	0.9	Not Significant	63	1	N/A	Suppressed ¹	86	1	N/A	Suppressed ¹
Avista Adventist Hospital	876	3	1.7	Not Significant	209	0	0.0	Not Significant	231	0	0.0	Not Significant
Banner Fort Collins Medical Center	21	0	N/A	Suppressed ¹	5	--- ¹	N/A	Suppressed ¹	3	--- ¹	N/A	Suppressed ¹
Boulder Community Foothills Hospital	94	1	N/A	Suppressed ¹	100	0	N/A	Suppressed ¹	73	1	N/A	Suppressed ¹
Castle Rock Adventist Hospital	321	0	0.0	Not Significant	395	1	0.5	Not Significant	345	1	0.5	Not Significant
Colorado Plains Medical Center	4	--- ¹	N/A	Suppressed ¹	2	--- ¹	N/A	Suppressed ¹	N/A			
Community Hospital	60	1	N/A	Suppressed ¹	99	0	N/A	Suppressed ¹	57	0	N/A	Suppressed ¹
Delta County Memorial Hospital	62	0	N/A	Suppressed ¹	59	0	N/A	Suppressed	60	0	N/A	Suppressed ¹
Denver Health And Hospital Authority	154	1	0.5	Not Significant	101	0	0.0	Not Significant	162	0	0.0	Not Significant

Facility Name	2018				2019				2020			
	No. of Procedures	No. of Infections	SIR	National Comparison	No. of Procedures	No. of Infections	SIR	National Comparison	No. of Procedures	No. of Infections	SIR	National Comparison
Exempla Lutheran Medical Center	346	0	0.0	Not Significant	316	4	2.3	Not Significant	312	0	0.0	Not Significant
Exempla Saint Joseph Hospital	495	1	0.3	Not Significant	338	4	1.7	Not Significant	286	4	1.6	Not Significant
Grandview Hospital	2	--- ¹	N/A	Suppressed ¹	N/A							
Littleton Adventist Hospital	214	0	0.0	Not Significant	265	1	0.4	Not Significant	362	0	0.0	Better
Longmont United Hospital	107	1	N/A	Suppressed ¹	248	0	0.0	Not Significant	169	0	0.0	Not Significant
Longs Peak Hospital	9	--- ¹	N/A	Suppressed ¹	19	--- ¹	N/A	Suppressed ¹	40	0	N/A	Suppressed ¹
Mckee Medical Center	71	0	N/A	Suppressed ¹	127	2	N/A	Suppressed ¹	181	0	N/A	Suppressed ¹
Medical Center Of The Rockies	133	1	N/A	Suppressed ¹	142	4	N/A	Suppressed ¹	93	1	N/A	Suppressed ¹
Memorial Health System	34	0	N/A	Suppressed ¹	35	2	N/A	Suppressed ¹	71	0	N/A	Suppressed ¹
Memorial Hospital North	228	0	0.0	Not Significant	658	4	1.2	Not Significant	712	2	0.7	Not Significant
Mercy Regional Medical Center	105	0	N/A	Suppressed ¹	120	1	N/A	Suppressed ¹	85	0	N/A	Suppressed ¹

Facility Name	2018				2019				2020			
	No. of Procedures	No. of Infections	SIR	National Comparison	No. of Procedures	No. of Infections	SIR	National Comparison	No. of Procedures	No. of Infections	SIR	National Comparison
Montrose Memorial Hospital	28	0	N/A	Suppressed ¹	35	0	N/A	Suppressed ¹	32	0	N/A	Suppressed ¹
North Colorado Medical Center	115	0	N/A	Suppressed ¹	148	0	N/A	Suppressed ¹	145	0	N/A	Suppressed ¹
North Suburban Medical Center	65	0	N/A	Suppressed ¹	50	0	N/A	Suppressed ¹	50	0	N/A	Suppressed ¹
Parker Adventist Hospital	95	0	N/A	Suppressed ¹	122	2	N/A	Suppressed ¹	59	0	N/A	Suppressed ¹
Parkview Medical Center	50	0	N/A	Suppressed ¹	14	--- ¹	N/A	Suppressed ¹	60	1	N/A	Suppressed ¹
Penrose St. Francis Health Services	357	2	1.1	Not Significant	336	0	0.0	Not Significant	274	1	0.5	Not Significant
Platte Valley Medical Center	21	0	N/A	Suppressed ¹	17	--- ¹	N/A	Suppressed ¹	26	0	N/A	Suppressed ¹
Porter Adventist Hospital	27	0	N/A	Suppressed ¹	14	--- ¹	N/A	Suppressed ¹	8	--- ¹	N/A	Suppressed ¹
Poudre Valley Health System	105	3	N/A	Suppressed ¹	110	1	N/A	Suppressed ¹	87	4	N/A	Suppressed ¹

Facility Name	2018				2019				2020			
	No. of Procedures	No. of Infections	SIR	National Comparison	No. of Procedures	No. of Infections	SIR	National Comparison	No. of Procedures	No. of Infections	SIR	National Comparison
Presbyterian /St Luke's Medical Center	180	0	N/A	Suppressed ¹	275	1	0.6	Not Significant	207	0	0.0	Not Significant
Rose Medical Center	1,202	2	0.3	Better	1,182	0	0.0	Better	1,118	3	0.4	Not Significant
Saint Anthony North Health Campus	75	1	N/A	Suppressed ¹	56	0	N/A	Suppressed ¹	94	0	N/A	Suppressed ¹
SCL Health Good Samaritan Medical Center	267	0	0.0	Not Significant	155	0	N/A	Suppressed ¹	90	1	N/A	Suppressed ¹
Sky Ridge Medical Center	281	6	2.9	Worse	361	5	2.0	Not Significant	529	1	0.3	Not Significant
SLC Regional Medical Center	13	--- ¹	N/A	Suppressed ¹	16	--- ¹	N/A	Suppressed ¹	21	0	N/A	Suppressed ¹
St. Anthony Hospital	151	0	N/A	Suppressed ¹	179	0	N/A	Suppressed ¹	145	0	N/A	Suppressed ¹
St. Anthony Summit Medical Center	20	0	N/A	Suppressed ¹	13	--- ¹	N/A	Suppressed ¹	4	--- ¹	N/A	Suppressed ¹
St. Francis Medical Center	95	0	N/A	Suppressed ¹	100	0	N/A	Suppressed ¹	94	0	N/A	Suppressed ¹
St. Mary's Hospital	90	1	N/A	Suppressed ¹	66	2	N/A	Suppressed ¹	55	1	N/A	Suppressed ¹

Facility Name	2018				2019				2020			
	No. of Procedures	No. of Infections	SIR	National Comparison	No. of Procedures	No. of Infections	SIR	National Comparison	No. of Procedures	No. of Infections	SIR	National Comparison
St. Mary Corwin Medical Center	78	1	N/A	Suppressed ¹	80	0	N/A	Suppressed ¹	73	0	N/A	Suppressed ¹
Sterling Regional Medcenter	17	--- ¹	N/A	Suppressed ¹	5	--- ¹	N/A	Suppressed ¹	26	0	N/A	Suppressed ¹
Swedish Medical Center	45	0	N/A	Suppressed ¹	97	1	N/A	Suppressed ¹	56	0	N/A	Suppressed ¹
The Medical Center of Aurora	65	1	N/A	Suppressed ¹	70	0	N/A	Suppressed ¹	44	1	N/A	Suppressed ¹
UCHealth Broomfield Hospital	15	--- ¹	N/A	Suppressed ¹	N/A				1	--- ¹	N/A	Suppressed ¹
UCHealth Greeley Hospital	N/A				8	--- ¹	N/A	Suppressed ¹	45	0	N/A	Suppressed ¹
UCHealth Highlands Ranch Hospital	N/A				109	1	N/A	Suppressed	378	4	1.6	Not Significant
UCHealth Yampa Valley Medical Center	47	0	N/A	Suppressed ¹	26	0	N/A	Suppressed ¹	27	0	N/A	Suppressed ¹
University Of Colorado Hospital	800	6	1.0	Not Significant	645	3	0.7	Not Significant	573	8	1.9	Not Significant
Vail Health Hospital	63	0	N/A	Suppressed ¹	123	0	N/A	Suppressed ¹	94	1	N/A	Suppressed ¹

Facility Name	2018				2019				2020			
	No. of Procedures	No. of Infections	SIR	National Comparison	No. of Procedures	No. of Infections	SIR	National Comparison	No. of Procedures	No. of Infections	SIR	National Comparison
Valley View Hospital	106	1	N/A	Suppressed ¹	91	0	N/A	Suppressed ¹	118	0	N/A	Suppressed ¹
Ambulatory Surgery Centers, Outpatient Procedures												
Aberdeen Ambulatory Surgical Center	342	0	0.0	Not Significant	448	0	0.0	Not Significant	375	0	0.0	Not Significant
Arete Surgical Center	N/A				47	0	N/A	Suppressed ¹	4	--- ¹	N/A	Suppressed ¹
Arkansas Valley Surgery Center	N/A				1	--- ¹	N/A	Suppressed ¹	2	--- ¹	N/A	Suppressed ¹
Ascent Surgery Center	423	0	0.0	Not Significant	408	0	N/A	Suppressed ¹	429	0	N/A	Suppressed ¹
Audubon ASC at St. Francis	N/A				3	--- ¹	N/A	Suppressed ¹	7	--- ¹	N/A	Suppressed ¹
Audubon Surgery Center	18	--- ¹	N/A	Suppressed ¹	12	--- ¹	N/A	Suppressed ¹	3	--- ¹	N/A	Suppressed ¹
Black Canyon Surgical Center	56	0	N/A	Suppressed ¹	6	--- ¹	N/A	Suppressed ¹	9	--- ¹	N/A	Suppressed ¹
Canyon View ASC, LLC	10	--- ¹	N/A	Suppressed ¹	12	---- ¹ --	N/A	Suppressed ¹	4	--- ¹	N/A	Suppressed ¹
Centrum Surgical Center	457	0	N/A	Suppressed ¹	318	0	N/A	Suppressed ¹	671	2	N/A	Suppressed ¹

Facility Name	2018				2019				2020			
	No. of Procedures	No. of Infections	SIR	National Comparison	No. of Procedures	No. of Infections	SIR	National Comparison	No. of Procedures	No. of Infections	SIR	National Comparison
Clear Creek Surgery Center	2	--- ¹	N/A	Suppressed ¹	N/A							
Coal Creek Ambulatory Surgery Center	30	0	N/A	Suppressed ¹	16	--- ¹	N/A	Suppressed ¹	24	0	N/A	Suppressed ¹
Crown Point Surgery Center	214	0	N/A	Suppressed ¹	159	0	N/A	Suppressed ¹	112	0	N/A	Suppressed ¹
Denver Midtown Surgical Center	77	0	N/A	Suppressed ¹	47	0	N/A	Suppressed ¹	50	0	N/A	Suppressed ¹
Denver Surgery Center	N/A				2	--- ¹	N/A	Suppressed ¹	6	--- ¹	N/A	Suppressed
Foothills Surgery Center	N/A				87	0	N/A	Suppressed ¹	72	2	N/A	Suppressed ¹
Grand Valley Surgical Center	362	2	1.7	Not Significant	415	0	0.0	Not Significant	375	1	N/A	Suppressed ¹
Harmony Surgery Center	367	1	0.7	Not Significant	474	0	0.0	Not Significant	532	1	0.5	Not Significant
Insight Surgery Center	313	0	N/A	Suppressed ¹	261	0	N/A	Suppressed ¹	209	0	N/A	Suppressed ¹
Kaiser Permanente Ambulatory Surgery Center	531	3	1.6	Not Significant	566	3	1.6	Not Significant	410	2	1.6	Not Significant

Facility Name	2018				2019				2020			
	No. of Procedures	No. of Infections	SIR	National Comparison	No. of Procedures	No. of Infections	SIR	National Comparison	No. of Procedures	No. of Infections	SIR	National Comparison
Kaiser Permanente Lone Tree Ambulatory Surgery	345	1	0.9	Not Significant	717	7	2.9	Worse	529	1	0.6	Not Significant
Mountain Vista Surgery Center	5	--- ¹	N/A	Suppressed ¹	7	--- ¹	N/A	Suppressed ¹	19	--- ¹	N/A	Suppressed ¹
Musculoskeletal Surgery Center	85	0	N/A	Suppressed ¹	68	0	N/A	Suppressed ¹	49	0	N/A	Suppressed ¹
Park Meadows Outpatient Surgery LLC	558	0	0.0	Not Significant	556	1	0.6	Not Significant	600	0	0.0	Not Significant
Parkwest Surgery Center	1	--- ¹	N/A	Suppressed ¹	N/A							
Peak One Surgery Center	1	--- ¹	N/A	Suppressed ¹	N/A				1	--- ¹	N/A	Suppressed ¹
Red Rocks Surgery Center, LLC	66	0	N/A	Suppressed ¹	36	0	N/A	Suppressed ¹	44	0	N/A	Suppressed ¹
Rose Surgical Center	170	0	N/A	Suppressed ¹	224	0	N/A	Suppressed ¹	203	0	N/A	Suppressed ¹
Sky Ridge Surgical Center	188	0	N/A	Suppressed ¹	200	0	N/A	Suppressed ¹	150	0	N/A	Suppressed ¹
Skyline Surgery Center	354	0	N/A	Suppressed ¹	247	0	N/A	Suppressed ¹	288	0	N/A	Suppressed ¹

Facility Name	2018				2019				2020			
	No. of Procedures	No. of Infections	SIR	National Comparison	No. of Procedures	No. of Infections	SIR	National Comparison	No. of Procedures	No. of Infections	SIR	National Comparison
Summit View Surgery Center	63	0	N/A	Suppressed ¹	43	0	N/A	Suppressed ¹	34	0	N/A	Suppressed
Surgery Center At Kissing Camels, LLC	N/A				87	0	N/A	Suppressed ¹	110	1	N/A	Suppressed ¹
Surgery Center Of Colorado , LLC	N/A				225	0	N/A	Suppressed ¹	187	0	N/A	Suppressed ¹
Surgery Center Of Fort Collins	2	--- ¹	N/A	Suppressed ¹	N/A							
Surgery Center Of The Rockies	167	0	N/A	Suppressed ¹	203	1	N/A	Suppressed	96	0	N/A	Suppressed ¹
Surgical Center Of The Rockies	177	0	N/A	Suppressed ¹	12	--- ¹	N/A	Suppressed ¹	N/A			
The Surgery Center At Lutheran	9	--- ¹	N/A	Suppressed ¹	65	0	N/A	Suppressed ¹	8	--- ¹	N/A	Suppressed ¹
Vail Valley Surgery Center Edwards	1	--- ¹	N/A	Suppressed ¹	N/A				2	--- ¹	N/A	Suppressed ¹
Critical Access Hospitals, Inpatient Procedures												
Arkansas Valley Regional Medical Center	0	--- ¹	N/A	Suppressed ¹	0	--- ¹	N/A	Suppressed ¹	0	--- ¹	N/A	Suppressed ¹

Facility Name	2018				2019				2020			
	No. of Procedures	No. of Infections	SIR	National Comparison	No. of Procedures	No. of Infections	SIR	National Comparison	No. of Procedures	No. of Infections	SIR	National Comparison
Aspen Valley Hospital	9	--- ¹	N/A	Suppressed ¹	4	--- ¹	N/A	Suppressed ¹	8	--- ¹	N/A	Suppressed ¹
Colorado Canyons Hospital & Medical Center	0	--- ¹	N/A	Suppressed ¹	1	--- ¹	N/A	Suppressed ¹	1	--- ¹	N/A	Suppressed ¹
East Morgan County Hospital	2	--- ¹	N/A	Suppressed ¹	0	--- ¹	N/A	Suppressed ¹	0	--- ¹	N/A	Suppressed ¹
Estes Park Health	0	--- ¹	N/A	Suppressed ¹	N/A							
Grand River Medical Center	6	--- ¹	N/A	Suppressed ¹	0	--- ¹	N/A	Suppressed ¹	1	--- ¹	N/A	Suppressed ¹
Gunnison Valley Hospital	0	--- ¹	N/A	Suppressed ¹	0	--- ¹	N/A	Suppressed ¹	0	--- ¹	N/A	Suppressed ¹
Heart Of The Rockies Regional Medical Center	11	--- ¹	N/A	Suppressed ¹	5	--- ¹	N/A	Suppressed ¹	6	--- ¹	N/A	Suppressed ¹
Melissa Memorial Hospital	4	--- ¹	N/A	Suppressed ¹	0	--- ¹	N/A	Suppressed ¹	0	--- ¹	N/A	Suppressed ¹
Mt. San Rafael Hospital	0	--- ¹	N/A	Suppressed ¹	0	--- ¹	N/A	Suppressed ¹	0	--- ¹	N/A	Suppressed ¹
Pagosa Springs Medical Center	0	--- ¹	N/A	Suppressed ¹	0	--- ¹	N/A	Suppressed ¹	0	--- ¹	N/A	Suppressed ¹

Facility Name	2018				2019				2020			
	No. of Procedures	No. of Infections	SIR	National Comparison	No. of Procedures	No. of Infections	SIR	National Comparison	No. of Procedures	No. of Infections	SIR	National Comparison
Pikes Peak Regional Hospital	0	--- ¹	N/A	Suppressed ¹	0	--- ¹	N/A	Suppressed ¹	0	--- ¹	N/A	Suppressed ¹
Pioneers Medical Center	0	--- ¹	N/A	Suppressed ¹	N/A							
Prowers Medical Center	0	--- ¹	N/A	Suppressed ¹	0	--- ¹	N/A	Suppressed ¹	0	--- ¹	N/A	Suppressed ¹
Southwest Memorial Hospital	1	--- ¹	N/A	Suppressed ¹	2	--- ¹	N/A	Suppressed ¹	5	--- ¹	N/A	Suppressed ¹
Spanish Peaks Regional Health Center	0	--- ¹	N/A	Suppressed ¹	0	--- ¹	N/A	Suppressed ¹	N/A			
St. Thomas More Hospital	1	--- ¹	N/A	Suppressed ¹	5	--- ¹	N/A	Suppressed ¹	1	--- ¹	N/A	Suppressed ¹
The Memorial Hospital	N/A				0	--- ¹	N/A	Suppressed ¹	1	--- ¹	N/A	Suppressed ¹
Wray Community District Hospital	0	--- ¹	N/A	Suppressed ¹	1	--- ¹	N/A	Suppressed ¹	3	--- ¹	N/A	Suppressed ¹
Yuma District Hospital	0	--- ¹	N/A	Suppressed ¹	0	--- ¹	N/A	Suppressed ¹	0	--- ¹	N/A	Suppressed ¹
Critical Access Hospitals, Outpatient Procedures												
Aspen Valley Hospital	24	0	N/A	Suppressed ¹	32	0	N/A	Suppressed ¹	25	0	N/A	Suppressed ¹

Facility Name	2018				2019				2020			
	No. of Procedures	No. of Infections	SIR	National Comparison	No. of Procedures	No. of Infections	SIR	National Comparison	No. of Procedures	No. of Infections	SIR	National Comparison
Colorado Canyons Hospital & Medical Center	14	--- ¹	N/A	Suppressed ¹	N/A				10	--- ¹	N/A	Suppressed ¹
East Morgan County Hospital	12	--- ¹	N/A	Suppressed ¹	8	--- ¹	N/A	Suppressed ¹	4	--- ¹	N/A	Suppressed ¹
Estes Park Health	3	--- ¹	N/A	Suppressed ¹	N/A							
Grand River Medical Center	16	--- ¹	N/A	Suppressed ¹	8	--- ¹	N/A	Suppressed ¹	12	--- ¹	N/A	Suppressed ¹
Heart Of The Rockies Regional Medical Center	16	--- ¹	N/A	Suppressed ¹	8	--- ¹	N/A	Suppressed ¹	15	--- ¹	N/A	Suppressed ¹
Melissa Memorial Hospital	1	--- ¹	N/A	Suppressed ¹	N/A							
Pagosa Springs Medical Center	N/A				2	--- ¹	N/A	Suppressed ¹	1	--- ¹	N/A	Suppressed ¹
Pikes Peak Regional Hospital	N/A				2	--- ¹	N/A	Suppressed ¹	N/A			
Southwest Memorial Hospital	14	--- ¹	N/A	Suppressed ¹	5	--- ¹	N/A	Suppressed ¹	10	--- ¹	N/A	Suppressed ¹

Facility Name	2018				2019				2020			
	No. of Procedures	No. of Infections	SIR	National Comparison	No. of Procedures	No. of Infections	SIR	National Comparison	No. of Procedures	No. of Infections	SIR	National Comparison
Spanish Peaks Regional Health Center	N/A				1	--- ¹	N/A	Suppressed ¹	N/A			
St. Thomas More Hospital	5	--- ¹	N/A	Suppressed ¹	10	--- ¹	N/A	Suppressed ¹	10	--- ¹	N/A	Suppressed ¹
Wray Community District Hospital	N/A								1	--- ¹	N/A	Suppressed ¹
Yuma District Hospital	2	--- ¹	N/A	Suppressed ¹	1	--- ¹	N/A	Suppressed ¹	N/A			

¹Calculation of comparison is not available due to data suppression for one of the following reasons: no. of procedures fewer than 20 or the predicted number of infections was less than one.

The standardized infection ratio (SIR) is the quotient of the numbers of observed and predicted infections.

N/A, not applicable.

National comparisons based on data collected and reported by facilities participating in the National Healthcare Safety Network (NHSN) from January-December, 2020.

Analysis includes adult patients >=18 years of age.

Data source: NHSN Database.

Prepared by: Colorado Healthcare-Associated Infections and Antimicrobial Resistance Program, Colorado Department of Public Health and Environment.

Surgical-site infections following colon surgeries

In 2020, the overall rate of surgical site infection (SSI) following inpatient colon surgeries at acute care hospitals was similar to (not significantly different from) the national baseline. In 2020, the overall rate of SSI following inpatient colon surgeries at acute care hospitals was lower (better) than the national baseline.

In 2019 and 2020, overall rates of surgical site infection (SSI) following inpatient colon surgeries at critical access hospitals were similar to the national baseline.

Overview

Colon procedures involve surgery of the large intestines. The intestines, which are muscular tubes that extend from the end of the stomach to the rectum, carry food, products of digestion and bacteria that help break down food in the digestive process. Since the intestines house bacteria, colon surgeries have a high risk for contamination and infection. Colon surgeries are monitored for 30 days for all SSIs. Further explanation of the three types of SSIs is available in Appendix A.

Colorado facilities that are required to report colon surgeries include acute care hospitals and critical access hospitals. Acute care hospitals are facilities that primarily provide inpatient services including diagnostic, therapeutic, or rehabilitation services. Critical access hospitals are rural hospitals that maintain 24-hour emergency care services 7 days a week and have less than 25 inpatient beds. A detailed explanation of facility classification are in Appendix C.

All colon surgeries at acute care hospitals and critical access hospitals are reportable through the National Healthcare Safety Network (NHSN) to the state of Colorado. Data are presented by facility type and inpatient versus outpatient status. NHSN defines an inpatient operative procedure as a procedure on a patient whose date of admission to the health care facility and the date of discharge are different calendar days. An outpatient operative procedure occurs when a patient is admitted and discharged in the same calendar day.

A detailed explanation of how the SIR is calculated is in Appendix B. The three categories summarizing how a Colorado facility compares to the national infection baseline are:

- Statistically lower rates of infection than the national baseline (better);
- Statistically similar rates of infection to the national baseline (not significant); or
- Statistically higher rates of infection than the national baseline (worse).

Data were suppressed if the predicted number of infections was less than one or the facility performed fewer than 20 procedures in the calendar year.

Results: acute care hospitals

Fifty acute care hospitals reported data on inpatient colon surgeries in 2019 (Table 22). Of these, two acute care hospitals reported rates of SSI that were lower (better) than the national baseline, two reported rates of SSI that were higher (worse) than the national baseline, and 37 reported rates of SSI that were similar to (not significantly different from) the national baseline. Forty-nine acute care hospitals reported data on inpatient colon surgeries in 2020. Of these, five reported rates of SSI that were

lower (better) than the national baseline, one reported rates of SSI that were higher (worse) than the national baseline, and 35 reported rates of SSI that were similar to (not significantly different from) the national baseline.

Twenty-two acute care hospitals reported data on outpatient colon surgeries in 2019. Comparisons to the national baseline were not possible. Fourteen acute care hospitals reported data on outpatient colon surgeries in 2020. Comparisons to the national baseline were not possible.

Results: critical access hospitals

Eleven critical access hospitals reported inpatient colon surgeries in 2019 (**Table 22**). Of these, one reported a rate of SSI that was similar to (not significantly different from) the national baseline. Thirteen critical access hospitals reported inpatient colon surgeries in 2020. Of these, one reported a rate of SSI that was similar to (not significantly different from) the national baseline.

Three critical access hospitals reported outpatient colon surgeries in 2019. No infections were reported, and comparison of rates of SSI to the national baseline was not possible. Two critical access hospitals reported outpatient colon surgeries in 2020. No infections were reported, and comparison of rates of SSI to the national baseline was not possible.

Table 22: Surgical Site Infections Following Colon Surgeries – Colorado, Jan. 1, 2018 - Dec. 31, 2020

Facility Name	2018				2019				2020			
	No. of Procedures	No. of Infections	SIR	National Comparison	No. of Procedures	No. of Infections	SIR	National Comparison	No. of Procedures	No. of Infections	SIR	National Comparison
Acute Care Hospitals, Inpatient Procedures												
Animas Surgical Hospital	1	--- ¹	N/A	Suppressed ¹	1	--- ¹	N/A	Suppressed ¹	2	--- ¹	N/A	Suppressed ¹
Avista Adventist Hospital	39	1	0.6	Not Significant	68	3	0.9	Not Significant	41	0	0.0	Not Significant
Banner Fort Collins Medical Center	7	--- ¹	N/A	Suppressed ¹	22	0	0.0	Not Significant	23	1	0.8	Not Significant
Boulder Community Foothills Hospital	105	5	1.3	Not Significant	112	4	1.1	Not Significant	119	3	1.0	Not Significant
Castle Rock Adventist Hospital	27	0	0.0	Not Significant	38	1	0.6	Not Significant	40	1	0.6	Not Significant
Colorado Plains Medical Center	5	--- ¹	N/A	Suppressed ¹	1	--- ¹	N/A	Suppressed ¹	6	--- ¹	N/A	Suppressed ¹
Community Hospital	49	1	0.6	Not Significant	69	7	2.4	Worse	46	4	1.9	Not Significant
Delta County Memorial Hospital	50	0	0.0	Not Significant	33	1	0.8	Not Significant	43	0	0.0	Not Significant
Denver Health And Hospital Authority	121	5	0.6	Not Significant	126	4	0.5	Not Significant	118	3	0.4	Not Significant

Facility Name	2018				2019				2020			
	No. of Procedures	No. of Infections	SIR	National Comparison	No. of Procedures	No. of Infections	SIR	National Comparison	No. of Procedures	No. of Infections	SIR	National Comparison
Exempla Lutheran Medical Center	143	3	0.5	Not Significant	135	5	0.9	Not Significant	100	4	0.8	Not Significant
Exempla Saint Joseph Hospital	251	9	0.6	Not Significant	246	17	1.3	Not Significant	206	5	0.4	Better
Grandview Hospital	0	--- ¹	N/A	Suppressed ¹	0	--- ¹	N/A	Suppressed ¹	0	--- ¹	N/A	Suppressed ¹
Littleton Adventist Hospital	108	1	0.2	Not Significant	91	1	0.2	Not Significant	109	1	0.2	Better
Longmont United Hospital	80	0	0.0	Better	69	2	0.6	Not Significant	64	0	0.0	Not Significant
Longs Peak Hospital	55	3	0.9	Not Significant	71	6	1.8	Not Significant	62	5	2.0	Not Significant
McKee Medical Center	58	1	0.3	Not Significant	62	2	0.7	Not Significant	46	0	0.0	Not Significant
Medical Center Of The Rockies	181	17	1.8	Worse	182	8	0.9	Not Significant	191	6	0.6	Not Significant
Memorial Health System	250	10	0.7	Not Significant	323	21	1.1	Not Significant	320	13	0.7	Not Significant
Memorial Hospital North	66	3	0.9	Not Significant	88	5	1.1	Not Significant	87	4	0.8	Not Significant
Mercy Regional Medical Center	41	1	0.6	Not Significant	40	0	0.0	Not Significant	42	1	0.6	Not Significant

Facility Name	2018				2019				2020			
	No. of Procedures	No. of Infections	SIR	National Comparison	No. of Procedures	No. of Infections	SIR	National Comparison	No. of Procedures	No. of Infections	SIR	National Comparison
Montrose Memorial Hospital	32	1	0.7	Not Significant	34	3	2.3	Not Significant	31	1	0.8	Not Significant
North Colorado Medical Center	123	16	2.9	Worse	128	7	1.0	Not Significant	116	2	0.3	Better
North Suburban Medical Center	64	2	0.7	Not Significant	63	1	0.4	Not Significant	62	4	1.2	Not Significant
Parker Adventist Hospital	129	2	0.3	Not Significant	120	1	0.2	Better	95	1	0.2	Not Significant
Parkview Medical Center	163	9	1.0	Not Significant	203	6	0.6	Not Significant	173	3	0.4	Not Significant
Penrose St. Francis Health Services	256	10	0.8	Not Significant	220	10	1.0	Not Significant	247	7	0.6	Not Significant
Platte Valley Medical Center	96	4	1.1	Not Significant	97	1	0.3	Not Significant	58	2	0.9	Not Significant
Porter Adventist Hospital	47	3	1.6	Not Significant	57	4	1.6	Not Significant	95	6	1.3	Not Significant
Poudre Valley Health System	138	8	1.3	Not Significant	143	15	2.4	Worse	144	6	1.0	Not Significant

Facility Name	2018				2019				2020			
	No. of Procedures	No. of Infections	SIR	National Comparison	No. of Procedures	No. of Infections	SIR	National Comparison	No. of Procedures	No. of Infections	SIR	National Comparison
Presbyterian/St Luke's Medical Center	124	6	1.0	Not Significant	95	2	0.4	Not Significant	98	12	2.3	Worse
Rose Medical Center	178	1	0.2	Better	177	4	0.6	Not Significant	155	10	1.9	Not Significant
Saint Anthony North Health Campus	71	3	0.8	Not Significant	66	3	0.8	Not Significant	60	2	0.6	Not Significant
SCL Health Good Samaritan Medical Center	199	14	1.5	Not Significant	261	11	1.0	Not Significant	202	5	0.6	Not Significant
Sky Ridge Medical Center	251	2	0.2	Better	235	1	0.1	Better	261	12	0.9	Not Significant
SLV Regional Medical Center	33	5	2.9	Worse	27	3	2.2	Not Significant	9	--- ¹	N/A	Suppressed ¹
St. Anthony Hospital	192	2	0.2	Better	179	4	0.5	Not Significant	171	3	0.3	Better
St. Anthony Summit Medical Center	11	--- ¹	N/A	Suppressed ¹	9	--- ¹	N/A	Suppressed ¹	5	--- ¹	N/A	Suppressed ¹
St. Francis Medical Center	77	2	0.6	Not Significant	76	3	0.9	Not Significant	83	3	0.7	Not Significant
St. Mary's Hospital	172	2	0.2	Better	180	8	0.9	Not Significant	166	0	0.0	Better

Facility Name	2018				2019				2020			
	No. of Procedures	No. of Infections	SIR	National Comparison	No. of Procedures	No. of Infections	SIR	National Comparison	No. of Procedures	No. of Infections	SIR	National Comparison
St. Mary Corwin Medical Center	36	1	0.5	Not Significant	42	2	1.1	Not Significant	36	1	0.5	Not Significant
Sterling Regional Medcenter	6	--- ¹	N/A	Suppressed ¹	11	--- ¹	N/A	Suppressed ¹	9	--- ¹	N/A	Suppressed ¹
Swedish Medical Center	330	16	1.1	Not Significant	287	15	1.2	Not Significant	258	8	0.7	Not Significant
The Medical Center of Aurora	111	2	0.4	Not Significant	105	4	0.8	Not Significant	109	8	1.6	Not Significant
UCHealth Broomfield Hospital	0	--- ¹	N/A	Suppressed ¹	1	--- ¹	N/A	Suppressed ¹	0	--- ¹	N/A	Suppressed ¹
UCHealth Greeley Hospital	N/A				18	--- ¹	N/A	Suppressed ¹	53	1	0.4	Not Significant
UCHealth Highlands Ranch Hospital	N/A				10	--- ¹	N/A	Suppressed ¹	44	4	1.8	Not Significant
UCHealth Yampa Valley Medical Center	16	--- ¹	N/A	Suppressed ¹	16	--- ¹	N/A	Suppressed ¹	15	--- ¹	N/A	Suppressed ¹
University Of Colorado Hospital	546	48	1.2	Not Significant	503	43	1.1	Not Significant	416	20	0.7	Not Significant
Vail Health Hospital	8	--- ¹	N/A	Suppressed ¹	12	--- ¹	N/A	Suppressed ¹	4	--- ¹	N/A	Suppressed ¹

Facility Name	2018				2019				2020			
	No. of Procedures	No. of Infections	SIR	National Comparison	No. of Procedures	No. of Infections	SIR	National Comparison	No. of Procedures	No. of Infections	SIR	National Comparison
Valley View Hospital	46	2	1.0	Not Significant	35	2	1.4	Not Significant	53	2	0.8	Not Significant
Acute Care Hospitals, Outpatient Procedures												
Boulder Community Foothills Hospital	3	--- ¹	N/A	Suppressed ¹	10	--- ¹	N/A	Suppressed ¹	1	--- ¹	N/A	Suppressed ¹
Castle Rock Adventist Hospital	N/A				1	--- ¹	N/A	Suppressed ¹	N/A			
Community Hospital	N/A								1	--- ¹	N/A	Suppressed ¹
Exempla Lutheran Medical Center	1	--- ¹	N/A	Suppressed ¹	N/A							
Exempla Saint Joseph Hospital	N/A				3	--- ¹	N/A	Suppressed ¹	N/A			
Littleton Adventist Hospital	1	--- ¹	N/A	Suppressed ¹	N/A							
McKee Medical Center	1	--- ¹	N/A	Suppressed ¹	N/A							
Medical Center Of The Rockies	N/A				1	--- ¹	N/A	Suppressed ¹	2	--- ¹	N/A	Suppressed ¹
Memorial Health System	3	--- ¹	N/A	Suppressed ¹	3	--- ¹	N/A	Suppressed ¹	5	--- ¹	N/A	Suppressed ¹

Facility Name	2018				2019				2020			
	No. of Procedures	No. of Infections	SIR	National Comparison	No. of Procedures	No. of Infections	SIR	National Comparison	No. of Procedures	No. of Infections	SIR	National Comparison
Memorial Hospital North	N/A				2	--- ¹	N/A	Suppressed ¹	N/A			
Montrose Memorial Hospital	1	--- ¹	N/A	Suppressed ¹	1	--- ¹	N/A	Suppressed ¹	N/A			
North Colorado Medical Center	N/A				3	--- ¹	N/A	Suppressed ¹	1	--- ¹	N/A	Suppressed ¹
Parker Adventist Hospital	1	--- ¹	N/A	Suppressed ¹	1	--- ¹	N/A	Suppressed ¹	N/A			
Parkview Medical Center	4	--- ¹	N/A	Suppressed ¹	N/A							
Platte Valley Medical Center	N/A				1	--- ¹	N/A	Suppressed ¹	1	--- ¹	N/A	Suppressed ¹
Porter Adventist Hospital	N/A				1	--- ¹	N/A	Suppressed ¹	N/A			
Poudre Valley Health System	3	--- ¹	N/A	Suppressed ¹	1	--- ¹	N/A	Suppressed ¹	1	--- ¹	N/A	Suppressed ¹
Presbyterian/St Luke's Medical Center	2	--- ¹	N/A	Suppressed ¹	1	--- ¹	N/A	Suppressed ¹	3	--- ¹	N/A	Suppressed ¹
Rose Medical Center	1	--- ¹	N/A	Suppressed ¹	5	--- ¹	N/A	Suppressed ¹	N/A			

Facility Name	2018				2019				2020			
	No. of Procedures	No. of Infections	SIR	National Comparison	No. of Procedures	No. of Infections	SIR	National Comparison	No. of Procedures	No. of Infections	SIR	National Comparison
SCL Health Good Samaritan Medical Center	N/A				1	--- ¹	N/A	Suppressed ¹	1	--- ¹	N/A	Suppressed ¹
Sky Ridge Medical Center	4	--- ¹	N/A	Suppressed ¹	3	--- ¹	N/A	Suppressed ¹	2	--- ¹	N/A	Suppressed ¹
SLV Regional Medical Center	N/A				1	--- ¹	N/A	Suppressed ¹	N/A			
St. Anthony Hospital	2	--- ¹	N/A	Suppressed ¹	N/A							
St. Anthony Summit Medical Center	1	--- ¹	N/A	Suppressed ¹	N/A							
St. Mary Corwin Medical Center	1	--- ¹	N/A	Suppressed ¹	1	--- ¹	N/A	Suppressed ¹	N/A			
Swedish Medical Center	7	--- ¹	N/A	Suppressed ¹	12	--- ¹	N/A	Suppressed ¹	5	--- ¹	N/A	Suppressed ¹
The Medical Center of Aurora	1	--- ¹	N/A	Suppressed ¹	1	--- ¹	N/A	Suppressed ¹	N/A			
UCHealth Greeley Hospital	N/A				N/A				1	--- ¹	N/A	Suppressed ¹

Facility Name	2018				2019				2020			
	No. of Procedures	No. of Infections	SIR	National Comparison	No. of Procedures	No. of Infections	SIR	National Comparison	No. of Procedures	No. of Infections	SIR	National Comparison
UCHealth Yampa Valley Medical Center	1	--- ¹	N/A	Suppressed ¹	N/A				2	--- ¹	N/A	Suppressed ¹
University Of Colorado Hospital	8	--- ¹	N/A	Suppressed ¹	3	--- ¹	N/A	Suppressed ¹	N/A			
Valley View Hospital	N/A				3	--- ¹	N/A	Suppressed ¹	N/A			
Critical Access Hospitals, Inpatient Procedures												
Arkansas Valley Regional Medical Center	0	--- ¹	N/A	Suppressed ¹	0	--- ¹	N/A	Suppressed ¹	0	--- ¹	N/A	Suppressed ¹
Aspen Valley Hospital	6	--- ¹	N/A	Suppressed ¹	4	--- ¹	N/A	Suppressed ¹	9	--- ¹	N/A	Suppressed ¹
East Morgan County Hospital	0	--- ¹	N/A	Suppressed ¹	0	--- ¹	N/A	Suppressed ¹	3	--- ¹	N/A	Suppressed ¹
Estes Park Health	4	--- ¹	N/A	Suppressed ¹	1	--- ¹	N/A	Suppressed ¹	0	--- ¹	N/A	Suppressed ¹
Grand River Medical Center	5	--- ¹	N/A	Suppressed ¹	8	--- ¹	N/A	Suppressed ¹	5	--- ¹	N/A	Suppressed ¹
Gunnison Valley Hospital	3	--- ¹	N/A	Suppressed ¹	5	--- ¹	N/A	Suppressed ¹	1	--- ¹	N/A	Suppressed ¹

Facility Name	2018				2019				2020			
	No. of Procedures	No. of Infections	SIR	National Comparison	No. of Procedures	No. of Infections	SIR	National Comparison	No. of Procedures	No. of Infections	SIR	National Comparison
Heart Of The Rockies Regional Medical Center	23	0	N/A	Suppressed ¹	17	--- ¹	N/A	Suppressed ¹	12	--- ¹	N/A	Suppressed ¹
Melissa Memorial Hospital	0	--- ¹	N/A	Suppressed ¹	0	--- ¹	N/A	Suppressed ¹	0	--- ¹	N/A	Suppressed ¹
Middle Park Medical Center	N/A				1	--- ¹	N/A	Suppressed ¹	1	--- ¹	N/A	Suppressed ¹
Mt. San Rafael Hospital	0	--- ¹	N/A	Suppressed ¹	0	--- ¹	N/A	Suppressed ¹	5	--- ¹	N/A	Suppressed ¹
Pagosa Springs Medical Center	3	--- ¹	N/A	Suppressed ¹	0	--- ¹	N/A	Suppressed ¹	1	--- ¹	N/A	Suppressed ¹
Pikes Peak Regional Hospital	0	--- ¹	N/A	Suppressed ¹	11	--- ¹	N/A	Suppressed ¹	10	--- ¹	N/A	Suppressed ¹
Pioneers Medical Center	0	--- ¹	N/A	Suppressed ¹	N/A							
Prowers Medical Center	2	--- ¹	N/A	Suppressed ¹	4	--- ¹	N/A	Suppressed ¹	1	--- ¹	N/A	Suppressed ¹
Southwest Memorial Hospital	6	--- ¹	N/A	Suppressed ¹	5	--- ¹	N/A	Suppressed ¹	8	--- ¹	N/A	Suppressed ¹
St. Thomas More Hospital	31	1	0.7	Not Significant	52	2	0.9	Not Significant	36	1	0.6	Not Significant

Facility Name	2018				2019				2020			
	No. of Procedures	No. of Infections	SIR	National Comparison	No. of Procedures	No. of Infections	SIR	National Comparison	No. of Procedures	No. of Infections	SIR	National Comparison
The Memorial Hospital	N/A				2	--- ¹	N/A	Suppressed ¹	2	--- ¹	N/A	Suppressed ¹
Wray Community District Hospital	0	--- ¹	N/A	Suppressed ¹	0	--- ¹	N/A	Suppressed ¹	0	--- ¹	N/A	Suppressed ¹
Yuma District Hospital	0	--- ¹	N/A	Suppressed ¹	0	--- ¹	N/A	Suppressed ¹	N/A			
Critical Access Hospitals, Outpatient Procedures												
East Morgan County Hospital	N/A				1	--- ¹	N/A	Suppressed ¹	N/A			
Grand River Medical Center	N/A				2	--- ¹	N/A	Suppressed ¹	N/A			
Melissa Memorial Hospital	1	--- ¹	N/A	Suppressed ¹	N/A							
Mt. San Rafael Hospital	N/A				1	--- ¹	N/A	Suppressed ¹	N/A			
Pikes Peak Regional Hospital	N/A				1	--- ¹	N/A	Suppressed ¹	N/A			
Prowers Medical Center	N/A				1	--- ¹	N/A	Suppressed ¹	N/A			
St. Thomas More Hospital	1	--- ¹	N/A	Suppressed ¹	N/A							

Facility Name	2018				2019				2020			
	No. of Procedures	No. of Infections	SIR	National Comparison	No. of Procedures	No. of Infections	SIR	National Comparison	No. of Procedures	No. of Infections	SIR	National Comparison

¹Calculation of comparison is not available due to data suppression for one of the following reasons: no. of procedures fewer than 20, or the predicted number of infections was less than one.

The standardized infection ratio (SIR) is the quotient of the numbers of observed and predicted infections.

N/A, not applicable.

National comparisons based on data collected and reported by facilities participating in the National Healthcare Safety Network (NHSN) from January-December, 2020.

Analysis includes adult patients >=18 years of age.

Data source: NHSN Database.

Prepared by: Colorado Healthcare-Associated Infections and Antimicrobial Resistance Program, Colorado Department of Public Health and Environment.

Surgical-site infections following hernia repairs

In 2019, the overall rate of surgical site infection (SSI) following hernia surgeries in ambulatory surgical centers was similar to (not significantly different from) the national baseline. In 2020, the overall rate of SSI following hernia surgeries in ambulatory surgical centers was lower (better) than the national baseline.

Overview

A hernia procedure involves the repair of a hernia, which is a bulging of internal organs or tissues that protrude through an abnormal opening in the muscle wall. Hernia procedures reportable to the National Healthcare Safety Network (NHSN) include inguinal, femoral, umbilical or anterior abdominal wall repairs. Hernia repairs are monitored for 30 days for superficial SSIs and 90 days for all other SSIs. The three types of SSIs are further described in Appendix A.

SSIs following hernia repairs are reportable by ambulatory surgery centers. Ambulatory surgery centers are surgery centers that provide outpatient surgical procedures. An outpatient operative procedure occurs when a patient is admitted and discharged in the same calendar day. A detailed explanation of facility classification are in Appendix C.

A detailed explanation of how the SIR is calculated is in Appendix B. The three categories summarizing how a Colorado facility compares to the national infection baseline are:

- Statistically lower rates of infection than the national baseline (better);
- Statistically similar rates of infection to the national baseline (not significant); or
- Statistically higher rates of infection than the national baseline (worse).

Data were suppressed if the predicted number of infections was less than one or the facility performed less than 20 procedures in the calendar year or.

Results

Thirty-five ambulatory surgery centers reported hernia repairs in 2019 (**Table 23**). Of these, two reported rates of SSI that were similar to (not significantly different from) the national baseline, and one reported a rate of SSI that was higher (worse) than the national baseline. Thirty-one ambulatory surgery centers reported hernia repairs in 2020. Of these, two reported rates of SSIs that were similar to (not significantly different from) the national baseline.

Table 23: Surgical Site Infections Following Hernia Procedures – Colorado, Jan. 1, 2018 - Dec. 31, 2020

Facility Name	2018				2019				2020			
	No. of Procedures	No. of Infections	SIR	National Comparison	No. of Procedures	No. of Infections	SIR	National Comparison	No. of Procedures	No. of Infections	SIR	National Comparison
Ambulatory Surgery Centers, Outpatient Procedures												
Aberdeen Ambulatory Surgical Center	25	0	N/A	Suppressed ¹	2	--- ¹	N/A	Suppressed ¹	1	--- ¹	N/A	Suppressed ¹
Arkansas Valley Surgery Center	57	0	N/A	Suppressed ¹	73	0	N/A	Suppressed ¹	86	0	N/A	Suppressed ¹
Audubon ASC at St. Francis	436	0	N/A	Suppressed ¹	494	1	N/A	Suppressed ¹	341	0	N/A	Suppressed ¹
Black Canyon Surgical Center	93	0	N/A	Suppressed ¹	37	1	N/A	Suppressed ¹	90	0	N/A	Suppressed ¹
Canyon View ASC, LLC	133	0	N/A	Suppressed ¹	112	1	N/A	Suppressed ¹	42	0	N/A	Suppressed ¹
Castle Rock Surgicenter	5	--- ¹	N/A	Suppressed ¹	6	--- ¹	N/A	Suppressed ¹	N/A			
Centrum Surgical Center	8	--- ¹	N/A	Suppressed ¹	20	0	N/A	Suppressed ¹	31	0	N/A	Suppressed ¹
Children's North Surgery Center	178	0	N/A	Suppressed ¹	95	0	N/A	Suppressed ¹	N/A			
Clear Creek Surgery Center	371	0	N/A	Suppressed ¹	422	1	1.0	Not Significant	389	0	N/A	Suppressed ¹

Facility Name	2018				2019				2020			
	No. of Procedures	No. of Infections	SIR	National Comparison	No. of Procedures	No. of Infections	SIR	National Comparison	No. of Procedures	No. of Infections	SIR	National Comparison
Crown Point Surgery Center	343	0	N/A	Suppressed ¹	146	0	N/A	Suppressed ¹	74	0	N/A	Suppressed ¹
Denver Midtown Surgical Center	71	0	N/A	Suppressed ¹	69	0	N/A	Suppressed ¹	64	0	N/A	Suppressed ¹
Denver Surgery Center	N/A				50	0	N/A	Suppressed ¹	208	0	N/A	Suppressed ¹
Foothills Surgery Center	N/A				300	0	N/A	Suppressed ¹	279	0	N/A	Suppressed ¹
Grand Valley Surgical Center	165	1	N/A	Suppressed ¹	122	0	N/A	Suppressed ¹	126	0	N/A	Suppressed ¹
Harmony Surgery Center	435	2	N/A	Suppressed ¹	514	0	N/A	Suppressed ¹	546	0	N/A	Suppressed ¹
Harvard Park Surgery Center	31	0	N/A	Suppressed ¹	39	0	N/A	Suppressed ¹	53	0	N/A	Suppressed ¹
Insight Surgery Center	5	--- ¹	N/A	Suppressed ¹	5	--- ¹	N/A	Suppressed ¹	6	--- ¹	N/A	Suppressed ¹
Kaiser Permanente Ambulatory Surgery Center	493	1	0.8	Not Significant	740	1	0.6	Not Significant	583	0	0.0	Not Significant

Facility Name	2018				2019				2020			
	No. of Procedures	No. of Infections	SIR	National Comparison	No. of Procedures	No. of Infections	SIR	National Comparison	No. of Procedures	No. of Infections	SIR	National Comparison
Kaiser Permanente Lone Tree Ambulatory Surgery	367	2	1.9	Not Significant	672	6	3.9	Worse	544	2	1.4	Not Significant
Lincoln Surgery Center	1	--- ¹	N/A	Suppressed ¹	N/A							
Midvalley Ambulatory Surgery Center	2	--- ¹	N/A	Suppressed ¹	4	--- ¹	N/A	Suppressed ¹	2	--- ¹	N/A	Suppressed ¹
Mile High Surgicenter, LLC	101	0	N/A	Suppressed ¹	108	0	N/A	Suppressed ¹	78	0	N/A	Suppressed ¹
Mountain Vista Surgery Center	20	0	N/A	Suppressed ¹	24	0	N/A	Suppressed ¹	24	0	N/A	Suppressed ¹
Musculoskeletal Surgery Center	4	--- ¹	N/A	Suppressed ¹	20	0	N/A	Suppressed ¹	28	0	N/A	Suppressed ¹
North Suburban Surgery Center	48	0	N/A	Suppressed ¹	19	--- ¹	N/A	Suppressed ¹	N/A			
Park Ridge Surgery Center	N/A								3	--- ¹	N/A	Suppressed ¹
Parkwest Surgery Center	N/A				1	--- ¹	N/A	Suppressed ¹	N/A			
Peak One Surgery Center	59	0	N/A	Suppressed ¹	58	0	N/A	Suppressed ¹	43	0	N/A	Suppressed ¹

Facility Name	2018				2019				2020			
	No. of Procedures	No. of Infections	SIR	National Comparison	No. of Procedures	No. of Infections	SIR	National Comparison	No. of Procedures	No. of Infections	SIR	National Comparison
Pueblo Surgery Center	9	--- ¹	N/A	Suppressed ¹	14	--- ¹	N/A	Suppressed ¹	14	--- ¹	N/A	Suppressed ¹
Red Rocks Surgery Center, LLC	159	0	N/A	Suppressed ¹	115	0	N/A	Suppressed ¹	47	0	N/A	Suppressed ¹
Rocky Mountain Surgery Center	282	0	N/A	Suppressed ¹	291	0	N/A	Suppressed ¹	231	0	N/A	Suppressed ¹
Rose Surgical Center	237	0	N/A	Suppressed ¹	283	0	N/A	Suppressed ¹	229	0	N/A	Suppressed ¹
Sky Ridge Surgical Center	188	0	N/A	Suppressed ¹	174	0	N/A	Suppressed ¹	193	0	N/A	Suppressed ¹
Skyline Surgery Center	192	1	N/A	Suppressed ¹	256	0	N/A	Suppressed ¹	172	0	N/A	Suppressed ¹
Summit View Surgery Center	265	0	N/A	Suppressed ¹	242	1	N/A	Suppressed ¹	235	0	N/A	Suppressed ¹
Surgery Center At Cherry Creek	1	--- ¹	N/A	Suppressed ¹	N/A							
Surgery Center Of Fort Collins	3	--- ¹	N/A	Suppressed ¹	N/A							
Surgery Center Of The Rockies	53	0	N/A	Suppressed ¹	59	0	N/A	Suppressed ¹	28	0	N/A	Suppressed ¹

Facility Name	2018				2019				2020			
	No. of Procedures	No. of Infections	SIR	National Comparison	No. of Procedures	No. of Infections	SIR	National Comparison	No. of Procedures	No. of Infections	SIR	National Comparison
The Surgery Center At Lutheran	12	--- ¹	N/A	Suppressed ¹	1	---	N/A	Suppressed ¹	N/A			
Vail Valley Surgery Center	N/A								1	--- ¹	N/A	Suppressed ¹
Vail Valley Surgery Center Edwards	1	--- ¹	N/A	Suppressed ¹	N/A							

¹Calculation of comparison is not available due to data suppression for one of the following reasons: no. of procedures fewer than 20, or the predicted number of infections was less than one.

The standardized infection ratio (SIR) is the quotient of the numbers of observed and predicted infections.

N/A, not applicable.

National comparisons based on data collected and reported by facilities participating in the National Healthcare Safety Network (NHSN) from January-December, 2020.

Analysis includes adult patients >=18 years of age.

Data source: NHSN Database.

Prepared by: Colorado Healthcare-Associated Infections and Antimicrobial Resistance Program, Colorado Department of Public Health and Environment.

Surgical-site infections following hip replacements

In 2019, the overall rate of surgical site infection (SSI) following inpatient hip replacement surgeries in acute care hospitals was similar to (not significantly different from) the national baseline. In 2020, overall rates of SSI following inpatient and outpatient hip replacement surgeries were similar to (not significantly different from) the national baseline.

In 2019 and 2020, comparison of rates of SSI following inpatient or outpatient hip replacement surgeries in critical access to the national baseline was not possible.

In 2019 and 2020, comparison of rates of SSI following hip replacement surgery in ambulatory surgery centers was not possible.

Overview

A total or partial hip replacement is a surgery for people with severe hip damage or pain related to chronic osteoarthritis, rheumatoid arthritis, or other degenerative processes involving the hip joint. The surgical procedure for a hip replacement involves removing the damaged cartilage and bone from the hip joint and replacing them with an artificial device. The procedure consists of placing a cup, which is typically plastic, ceramic, or metal, to replace the hip socket, a metal or ceramic ball to replace the head of the femur (thigh bone), and a metal stem to attach to the bone. Hip replacements are monitored for 30 days for a superficial SSI and 90 days for all other SSIs. Further explanation of the three types of SSIs is available in Appendix A.

SSIs following hip replacement surgeries are reportable by acute care hospitals, critical access hospitals, and ambulatory surgery centers. Acute care hospitals are facilities that primarily provide inpatient services including diagnostic, therapeutic, or rehabilitation services. Critical access hospitals are rural hospitals that maintain 24-hour emergency care services 7 days a week and have less than 25 inpatient beds. Ambulatory surgery centers are surgery centers that provide outpatient surgical procedures. A detailed explanation of CMS and Colorado guidelines for facility classification are in Appendix C.

Data are presented by facility type and inpatient versus outpatient status. NHSN defines an inpatient operative procedure as a procedure on a patient whose date of admission to the health care facility and the date of discharge are different calendar days. An outpatient operative procedure occurs when a patient is admitted and discharged in the same calendar day.

A detailed explanation of how the SIR is calculated is in Appendix B. The three categories summarizing how a Colorado facility compares to the national infection baseline are:

- Statistically lower rates of infection than the national baseline (better);
- Statistically similar rates of infection to the national baseline (not significant); or
- Statistically higher rates infection than the national baseline (worse).

Data were suppressed if the predicted number of infections was less than one or the facility had fewer than 20 procedures in the calendar year. Unadjusted rates were calculated for SSI following hip replacement surgeries in ambulatory surgery centers, as SIR calculations were not available at the time of publication.

Results: acute care hospitals

Fifty-two acute care hospitals reported inpatient hip replacement surgeries in 2019 (**Table 24**). Of these, one reported a rate of SSI that was lower (better) than the national baseline, two reported rates of SSI that were higher (worse) than the national baseline, and 28 reported rates of SSI that were similar to (not significantly different from) the national baseline. Fifty-two acute care hospitals reported inpatient hip replacement surgeries in 2020. Of these, one reported a rate of SSI that was lower (better) than the national baseline, one reported a rate of SSI that was higher (worse) than the national baseline, and 29 reported rates of SSI that were similar to (not significantly different from) the national baseline.

Twenty-three acute care hospitals reported outpatient hip replacement surgeries in 2019. Comparison of rates to the national baseline were not possible. Thirty-five acute care hospitals reported outpatient hip replacement surgeries in 2020. Comparison of rates to the national baseline were not possible.

Results: critical access hospitals

Twenty critical access hospitals reported inpatient hip replacement surgeries in 2019. Comparison of rates to the national baseline were not possible. Twenty critical access hospitals reported inpatient hip replacement surgeries in 2020. Comparison of rates to the national baseline were not possible.

Three critical access hospitals reported outpatient hip replacement surgeries in 2019. Comparison of rates to the national baseline were not possible. Four critical access hospitals reported outpatient hip replacement surgeries in 2020. Comparison of rates to the national baseline were not possible.

Results: ambulatory surgery centers

Nineteen ambulatory surgery centers reported hip replacements in adults in 2019 and 2020. Comparison of rates to the national baseline was not possible because risk-adjustment models were not available at the time of this report.

Table 24: Surgical Site Infections Following Hip Replacements (Total or Partial) – Colorado, Jan. 1, 2018 - Dec. 31, 2020

Facility Name	2018				2019				2020			
	No. of Procedures	No. of Infections	SIR	National Comparison	No. of Procedures	No. of Infections	SIR	National Comparison	No. of Procedures	No. of Infections	SIR	National Comparison
Acute Care Hospitals, Inpatient Procedures												
Animas Surgical Hospital	131	0	0.0	Not Significant	167	1	0.8	Not Significant	171	0	0.0	Not Significant
Avista Adventist Hospital	101	1	N/A	Suppressed ¹	101	1	N/A	Suppressed ¹	72	0	N/A	Suppressed ¹
Banner Fort Collins Medical Center	74	1	N/A	Suppressed ¹	85	0	N/A	Suppressed ¹	86	1	N/A	Suppressed ¹
Boulder Community Foothills Hospital	402	2	0.9	Not Significant	407	5	2.1	Not Significant	330	4	2.0	Not Significant
Castle Rock Adventist Hospital	48	2	N/A	Suppressed ¹	32	1	N/A	Suppressed ¹	85	2	N/A	Suppressed ¹
Colorado Plains Medical Center	18	--- ¹	N/A	Suppressed ¹	20	0	N/A	Suppressed ¹	12	--- ¹	N/A	Suppressed ¹
Community Hospital	117	0	0.0	Not Significant	180	2	1.4	Not Significant	114	0	N/A	Suppressed ¹
Delta County Memorial Hospital	65	2	N/A	Suppressed ¹	57	1	N/A	Suppressed ¹	67	0	N/A	Suppressed ¹
Denver Health And Hospital Authority	143	2	1.0	Not Significant	180	4	1.6	Not Significant	156	3	1.5	Not Significant
Exempla Lutheran Medical Center	198	1	0.5	Not Significant	137	0	0.0	Not Significant	141	3	1.9	Not Significant
Exempla Saint Joseph Hospital	521	4	0.9	Not Significant	549	2	0.4	Not Significant	467	2	0.4	Not Significant

Facility Name	2018				2019				2020			
	No. of Procedures	No. of Infections	SIR	National Comparison	No. of Procedures	No. of Infections	SIR	National Comparison	No. of Procedures	No. of Infections	SIR	National Comparison
Grandview Hospital	101	2	N/A	Suppressed ¹	232	3	1.7	Not Significant	276	1	0.5	Not Significant
Littleton Adventist Hospital	276	2	0.7	Not Significant	369	3	1.0	Not Significant	305	1	0.4	Not Significant
Longmont United Hospital	137	2	1.5	Not Significant	184	2	1.2	Not Significant	98	1	1.0	Not Significant
Longs Peak Hospital	31	0	N/A	Suppressed ¹	21	0	N/A	Suppressed ¹	35	1	N/A	Suppressed ¹
McKee Medical Center	141	0	0.0	Not Significant	96	0	0.0	Not Significant	73	2	1.9	Not Significant
Medical Center Of The Rockies	267	6	2.5	Worse	349	5	1.7	Not Significant	281	2	0.9	Not Significant
Memorial Health System	186	1	0.5	Not Significant	106	0	0.0	Not Significant	122	2	1.2	Not Significant
Memorial Hospital North	121	3	2.5	Not Significant	73	1	N/A	Suppressed ¹	75	1	N/A	Suppressed ¹
Mercy Regional Medical Center	119	0	0.0	Not Significant	145	3	2.2	Not Significant	96	0	N/A	Suppressed ¹
Montrose Memorial Hospital	89	1	N/A	Suppressed ¹	57	0	N/A	Suppressed ¹	86	1	N/A	Suppressed ¹
North Colorado Medical Center	140	0	0.0	Not Significant	154	3	1.3	Not Significant	128	2	1.0	Not Significant
North Suburban Medical Center	71	0	N/A	Suppressed ¹	81	2	N/A	Suppressed ¹	55	1	N/A	Suppressed ¹
Ortho Colorado	671	0	0.0	Better	708	2	0.4	Not Significant	676	2	0.4	Not Significant
Parker Adventist Hospital	207	3	1.2	Not Significant	170	0	0.0	Not Significant	130	2	1.3	Not Significant

Facility Name	2018				2019				2020			
	No. of Procedures	No. of Infections	SIR	National Comparison	No. of Procedures	No. of Infections	SIR	National Comparison	No. of Procedures	No. of Infections	SIR	National Comparison
Parkview Medical Center	205	2	0.6	Not Significant	246	0	0.0	Better	157	2	1.0	Not Significant
Penrose St. Francis Health Services	641	0	0.0	Better	567	1	0.2	Not Significant	528	3	0.6	Not Significant
Platte Valley Medical Center	73	0	N/A	Suppressed ¹	67	0	N/A	Suppressed ¹	75	0	N/A	Suppressed ¹
Porter Adventist Hospital	709	10	1.4	Not Significant	592	7	1.1	Not Significant	527	4	0.7	Not Significant
Poudre Valley Health System	667	4	0.9	Not Significant	713	11	2.1	Worse	663	5	1.0	Not Significant
Presbyterian/St Luke's Medical Center	158	5	2.0	Not Significant	210	4	1.7	Not Significant	183	8	3.2	Worse
Rose Medical Center	365	3	0.9	Not Significant	370	4	1.3	Not Significant	287	1	0.4	Not Significant
Saint Anthony North Health Campus	120	1	0.7	Not Significant	174	2	0.9	Not Significant	180	4	1.7	Not Significant
SCL Health Good Samaritan Medical Center	560	6	1.2	Not Significant	547	5	1.2	Not Significant	492	4	1.1	Not Significant
Sky Ridge Medical Center	1,069	9	1.1	Not Significant	885	12	1.6	Not Significant	670	5	0.7	Not Significant
SLC Regional Medical Center	54	1	N/A	Suppressed ¹	47	1	N/A	Suppressed ¹	27	0	N/A	Suppressed ¹
St. Anthony Hospital	103	0	0.0	Not Significant	138	2	1.2	Not Significant	159	2	0.7	Not Significant
St. Anthony Summit Medical Center	33	2	N/A	Suppressed ¹	13	---	N/A	Suppressed ¹	10	---	N/A	Suppressed ¹

Facility Name	2018				2019				2020			
	No. of Procedures	No. of Infections	SIR	National Comparison	No. of Procedures	No. of Infections	SIR	National Comparison	No. of Procedures	No. of Infections	SIR	National Comparison
St. Francis Medical Center	446	4	0.8	Not Significant	492	6	1.2	Not Significant	525	1	0.2	Better
St. Mary's Hospital	347	1	0.3	Not Significant	264	1	0.5	Not Significant	179	2	1.0	Not Significant
St. Mary Corwin Medical Center	184	4	1.9	Not Significant	186	2	1.0	Not Significant	159	1	0.5	Not Significant
Sterling Regional Medcenter	27	0	N/A	Suppressed ¹	37	1	N/A	Suppressed ¹	18	--- ¹	N/A	Suppressed ¹
Swedish Medical Center	341	6	1.4	Not Significant	289	5	1.5	Not Significant	237	1	0.3	Not Significant
The Medical Center of Aurora	228	2	0.9	Not Significant	223	4	1.9	Not Significant	178	2	1.2	Not Significant
UCHealth Broomfield Hospital	8	--- ¹	N/A	Suppressed ¹	33	0	N/A	Suppressed ¹	216	5	2.5	Not Significant
UCHealth Greeley Hospital	N/A				8	--- ¹	N/A	Suppressed ¹	28	1	N/A	Suppressed ¹
UCHealth Highlands Ranch Hospital	N/A				52	1	N/A	Suppressed ¹	109	1	N/A	Suppressed ¹
UCHealth Yampa Valley Medical Center	96	0	N/A	Suppressed ¹	84	1	N/A	Suppressed ¹	84	0	N/A	Suppressed ¹
University Of Colorado Hospital	586	13	1.8	Worse	535	15	2.1	Worse	271	6	1.3	Not Significant
Vail Health Hospital	170	0	N/A	Suppressed ¹	200	2	N/A	Suppressed ¹	21	1	N/A	Suppressed ¹
Valley View Hospital	104	1	N/A	Suppressed ¹	145	2	N/A	Suppressed ¹	134	0	N/A	Suppressed ¹

Acute Care Hospitals, Outpatient Procedures

Facility Name	2018				2019				2020			
	No. of Procedures	No. of Infections	SIR	National Comparison	No. of Procedures	No. of Infections	SIR	National Comparison	No. of Procedures	No. of Infections	SIR	National Comparison
Animas Surgical Hospital	4	---	N/A	Suppressed ¹	N/A							
Avista Adventist Hospital	N/A				1	---	N/A	Suppressed ¹	5	---	N/A	Suppressed ¹
Banner Fort Collins Medical Center	N/A								4	---	N/A	Suppressed ¹
Boulder Community Foothills Hospital	18	---	N/A	Suppressed ¹	15	---	N/A	Suppressed ¹	50	1	N/A	Suppressed ¹
Castle Rock Adventist Hospital	6	---	N/A	Suppressed ¹	1	---	N/A	Suppressed ¹	2	---	N/A	Suppressed ¹
Community Hospital	N/A				2	---	N/A	Suppressed ¹	34	0	N/A	Suppressed ¹
Delta County Memorial Hospital	N/A								2	---	N/A	Suppressed ¹
Denver Health And Hospital Authority	N/A								4	---	N/A	Suppressed ¹
Exempla Lutheran Medical Center	11	---	N/A	Suppressed ¹	1	---	N/A	Suppressed ¹	25	0	N/A	Suppressed ¹
Exempla Saint Joseph Hospital	13	---	N/A	Suppressed ¹	5	---	N/A	Suppressed ¹	15	---	N/A	Suppressed ¹
Grandview Hospital	N/A								1	---	N/A	Suppressed ¹
Littleton Adventist Hospital	N/A								13	---	N/A	Suppressed ¹

Facility Name	2018				2019				2020			
	No. of Procedures	No. of Infections	SIR	National Comparison	No. of Procedures	No. of Infections	SIR	National Comparison	No. of Procedures	No. of Infections	SIR	National Comparison
Longmont United Hospital	3	--- ¹	N/A	Suppressed ¹	4	--- ¹	N/A	Suppressed ¹	20	0	N/A	Suppressed ¹
Longs Peak Hospital	N/A				N/A				1	--- ¹	N/A	Suppressed ¹
McKee Medical Center	1	--- ¹	N/A	Suppressed ¹	N/A				1	--- ¹	N/A	Suppressed ¹
Mercy Regional Medical Center	1	--- ¹	N/A	Suppressed ¹	N/A				N/A			
Montrose Memorial Hospital	1	--- ¹	N/A	Suppressed ¹	N/A				N/A			
North Suburban Medical Center	2	--- ¹	N/A	Suppressed ¹	12	--- ¹	N/A	Suppressed ¹	19	--- ¹	N/A	Suppressed ¹
Ortho Colorado	1	--- ¹	N/A	Suppressed ¹	2	--- ¹	N/A	Suppressed ¹	64	0	N/A	Suppressed ¹
Parker Adventist Hospital	60	0	N/A	Suppressed ¹	50	0	N/A	Suppressed ¹	41	0	N/A	Suppressed ¹
Parkview Medical Center	1	--- ¹	N/A	Suppressed ¹	N/A				5	--- ¹	N/A	Suppressed ¹
Penrose St. Francis Health Services	2	--- ¹	N/A	Suppressed ¹	N/A				7	--- ¹	N/A	Suppressed ¹
Porter Adventist Hospital	14	--- ¹	N/A	Suppressed ¹	25	0	N/A	Suppressed ¹	130	0	N/A	Suppressed ¹
Poudre Valley Health System	N/A				N/A				11	--- ¹	N/A	Suppressed ¹
Presbyterian/St Luke's Medical Center	6	--- ¹	N/A	Suppressed ¹	4	--- ¹	N/A	Suppressed ¹	31	0	N/A	Suppressed ¹
Rose Medical Center	1	--- ¹	N/A	Suppressed ¹	6	--- ¹	N/A	Suppressed ¹	16	--- ¹	N/A	Suppressed ¹

Facility Name	2018				2019				2020			
	No. of Procedures	No. of Infections	SIR	National Comparison	No. of Procedures	No. of Infections	SIR	National Comparison	No. of Procedures	No. of Infections	SIR	National Comparison
Saint Anthony North Health Campus	15	--- ¹	N/A	Suppressed ¹	31	0	N/A	Suppressed ¹	83	0	N/A	Suppressed ¹
SCL Health Good Samaritan Medical Center	1	--- ¹	N/A	Suppressed ¹	1	--- ¹	N/A	Suppressed ¹	4	--- ¹	N/A	Suppressed ¹
Sky Ridge Medical Center	55	0	N/A	Suppressed ¹	89	0	N/A	Suppressed ¹	164	2	N/A	Suppressed ¹
St. Francis Medical Center	N/A								2	--- ¹	N/A	Suppressed ¹
St. Mary's Hospital	N/A				2	--- ¹	N/A	Suppressed ¹	49	0	N/A	Suppressed ¹
Swedish Medical Center	25	0	N/A	Suppressed ¹	30	0	N/A	Suppressed ¹	70	0	N/A	Suppressed ¹
The Medical Center of Aurora	1	--- ¹	N/A	Suppressed ¹	16	--- ¹	N/A	Suppressed ¹	31	0	N/A	Suppressed ¹
UCHealth Highlands Ranch Hospital	N/A								38	1	N/A	Suppressed ¹
UCHealth Yampa Valley Medical Center	1	--- ¹	N/A	Suppressed ¹	N/A				1	--- ¹	N/A	Suppressed ¹
University Of Colorado Hospital	1	--- ¹	N/A	Suppressed ¹	5	--- ¹	N/A	Suppressed ¹	1	--- ¹	N/A	Suppressed ¹
Vail Health Hospital	17	--- ¹	N/A	Suppressed ¹	13	--- ¹	N/A	Suppressed ¹	123	0	N/A	Suppressed ²
Valley View Hospital	N/A				1	--- ¹	N/A	Suppressed ¹	2	--- ¹	N/A	Suppressed ²

Ambulatory Surgery Centers, Outpatient Procedures

Facility Name	2018				2019				2020			
	No. of Procedures	No. of Infections	SIR	National Comparison	No. of Procedures	No. of Infections	SIR	National Comparison	No. of Procedures	No. of Infections	SIR	National Comparison
Audubon ASC at St. Francis	30	0	N/A	--- ²	28	0	N/A	--- ²	19	--- ¹	N/A	--- ²
Boulder Community Musculoskeletal Surgery Center	44	0	N/A	--- ²	64	0	N/A	--- ²	93	0	N/A	--- ²
Crown Point Surgery Center	24	1	N/A	--- ²	33	0	N/A	--- ²	20	0	N/A	--- ²
Denver Midtown Surgical Center	4	--- ¹	N/A	--- ²	27	0	N/A	--- ²	26	0	N/A	--- ²
Denver Surgery Center	N/A				N/A				1	--- ¹	N/A	--- ²
DTC Surgery Center	3	--- ¹	N/A	--- ²	8	--- ¹	N/A	--- ²	N/A			
Flatirons Surgery Center	23	0	N/A	--- ²	13	--- ¹	N/A	--- ²	15	--- ¹	N/A	--- ²
Front Range Orthopedic Surgery Center	11	--- ¹	N/A	--- ²	27	0	N/A	--- ²	29	0	N/A	--- ²
Kaiser Permanente Ambulatory Surgery Center	N/A				32	0	N/A	--- ²	N/A			
Kaiser Permanente Lone Tree Ambulatory Surgery	26	0	N/A	--- ²	153	0	N/A	--- ²	163	2	N/A	--- ²
Lincoln Surgery Center	147	0	N/A	--- ²	141	0	N/A	--- ²	125	1	N/A	--- ²
Mile High Surgicenter, LLC	23	0	N/A	--- ²	41	0	N/A	--- ²	99	0	N/A	--- ²

Facility Name	2018				2019				2020			
	No. of Procedures	No. of Infections	SIR	National Comparison	No. of Procedures	No. of Infections	SIR	National Comparison	No. of Procedures	No. of Infections	SIR	National Comparison
Musculoskeletal Surgery Center	N/A				1	--- ¹	N/A	--- ²	1	--- ¹	N/A	--- ²
OCR Loveland Surgery Center	N/A				157	1	N/A	--- ²	432	7	N/A	--- ²
Orthopaedic Center Of The Rockies	97	0	N/A	--- ²	293	1	N/A	--- ²	18	--- ¹	N/A	--- ²
Rocky Mountain Surgery Center	7	--- ¹	N/A	--- ²	17	--- ¹	N/A	--- ²	25	0	N/A	--- ²
Skyline Surgery Center	N/A								15	--- ¹	N/A	--- ²
Surgery Center At Cherry Creek	37	0	N/A	--- ²	75	0	N/A	--- ²	37	0	N/A	--- ²
The Orthopaedic And Spine Center Of Southern Colorado, LLC	98	1	N/A	--- ²	93	0	N/A	--- ²	148	0	N/A	--- ²
The Surgery Center At Lutheran	23	0	N/A	--- ²	37	1	N/A	--- ²	11	--- ¹	N/A	--- ²
Vail Valley Surgery Center	3	--- ¹	N/A	--- ²	1	--- ¹	N/A	--- ²	4	--- ¹	N/A	--- ²
Vail Valley Surgery Center Edwards	178	0	N/A	--- ²	193	0	N/A	--- ²	128	0	N/A	--- ²
Critical Access Hospitals, Inpatient Procedures												
Arkansas Valley Regional Medical Center	15	--- ¹	N/A	Suppressed ¹	18	--- ¹	N/A	Suppressed ¹	18	--- ¹	N/A	Suppressed ¹
Aspen Valley Hospital	10	--- ¹	N/A	Suppressed ¹	11	--- ¹	N/A	Suppressed ¹	27	0	N/A	Suppressed ¹

Facility Name	2018				2019				2020			
	No. of Procedures	No. of Infections	SIR	National Comparison	No. of Procedures	No. of Infections	SIR	National Comparison	No. of Procedures	No. of Infections	SIR	National Comparison
Colorado Canyons Hospital & Medical Center	11	--- ¹	N/A	Suppressed ¹	0	--- ¹	N/A	Suppressed ¹	17	--- ¹	N/A	Suppressed ¹
East Morgan County Hospital	1	--- ¹	N/A	Suppressed ¹	0	--- ¹	N/A	Suppressed ¹	0	--- ¹	N/A	Suppressed ¹
Estes Park Health	21	0	N/A	Suppressed ¹	13	--- ¹	N/A	Suppressed ¹	12	--- ¹	N/A	Suppressed ¹
Grand River Medical Center	35	0	N/A	Suppressed	26	0	N/A	Suppressed ¹	32	0	N/A	Suppressed ¹
Gunnison Valley Hospital	30	0	N/A	Suppressed ¹	37	0	N/A	Suppressed ¹	16	--- ¹	N/A	Suppressed ¹
Heart Of The Rockies Regional Medical Center	28	0	N/A	Suppressed ¹	22	0	N/A	Suppressed ¹	33	2	N/A	Suppressed ¹
Melissa Memorial Hospital	7	--- ¹	N/A	Suppressed ¹	1	--- ¹	N/A	Suppressed ¹	4	--- ¹	N/A	Suppressed ¹
Middle Park Medical Center	N/A				9	--- ¹	N/A	Suppressed ¹	4	--- ¹	N/A	Suppressed ¹
Mt. San Rafael Hospital	0	--- ¹	N/A	Suppressed	2	--- ¹	N/A	Suppressed ¹	4	--- ¹	N/A	Suppressed ¹
Pagosa Springs Medical Center	17	--- ¹	N/A	Suppressed ¹	14	--- ¹	N/A	Suppressed ¹	10	--- ¹	N/A	Suppressed ¹
Pikes Peak Regional Hospital	14	--- ¹	N/A	Suppressed ¹	12	--- ¹	N/A	Suppressed ¹	3	--- ¹	N/A	Suppressed ¹
Pioneers Medical Center	35	0	N/A	Suppressed ¹	22	0	N/A	Suppressed ¹	57	0	N/A	Suppressed ¹
Prowers Medical Center	N/A				6	--- ¹	N/A	Suppressed ¹	4	--- ¹	N/A	Suppressed ¹
Southwest Memorial Hospital	15	--- ¹	N/A	Suppressed ¹	6	--- ¹	N/A	Suppressed ¹	24	1	N/A	Suppressed ¹

Facility Name	2018				2019				2020			
	No. of Procedures	No. of Infections	SIR	National Comparison	No. of Procedures	No. of Infections	SIR	National Comparison	No. of Procedures	No. of Infections	SIR	National Comparison
St. Thomas More Hospital	58	0	N/A	Suppressed	16	--- ¹	N/A	Suppressed	63	2	N/A	Suppressed ¹
The Memorial Hospital	24	0	N/A	Suppressed	24	0	N/A	Suppressed ¹	21	0	N/A	Suppressed ¹
Wray Community District Hospital	8	--- ¹	N/A	Suppressed ¹	26	4	N/A	Suppressed ¹	13	--- ¹	N/A	Suppressed ¹
Yuma District Hospital	0	--- ¹	N/A	Suppressed	0	--- ¹	N/A	Suppressed ¹	1	--- ¹	N/A	Suppressed ¹
Critical Access Hospitals, Outpatient Procedures												
Gunnison Valley Hospital	N/A				16	--- ¹	N/A	Suppressed ¹	N/A			
Heart Of The Rockies Regional Medical Center	N/A				1	--- ¹	N/A	Suppressed ¹	N/A			
Pikes Peak Regional Hospital	1	--- ¹	N/A	Suppressed ¹	N/A				N/A			
Southwest Memorial Hospital	N/A				2	--- ¹	N/A	Suppressed ¹	N/A			
St. Thomas More Hospital	N/A				1	--- ¹	N/A	Suppressed ¹	N/A			
The Memorial Hospital	1	--- ¹	N/A	Suppressed ¹	1	--- ¹	N/A	Suppressed ¹	1	--- ¹	N/A	Suppressed ¹
Yuma District Hospital	N/A				2	--- ¹	N/A	Suppressed ¹	N/A			

¹Calculation of comparison is not available due to data suppression for one of the following reasons: no. of procedures fewer than 20, or the predicted number of infections was less than one;

²National comparison models were not available at the time of this report.

The standardized infection ratio (SIR) is the quotient of the numbers of observed and predicted infections.

N/A, not applicable.

National comparisons based on data collected and reported by facilities participating in the National Healthcare Safety Network (NHSN) from January-December, 2020.

Analysis includes adult patients >=18 years of age.

Data source: NHSN Database. Prepared by: Colorado Healthcare-Associated Infections and Antimicrobial Resistance Program, Colorado Department of Public Health and Environment.

Surgical-site infections following hysterectomies

In 2019 and 2020, overall rates of surgical site infection (SSI) following inpatient and outpatient abdominal hysterectomies in acute care hospitals were similar to (not significantly different from) the national baseline.

In 2019 and 2020, overall rates of SSI following inpatient abdominal hysterectomies in critical access hospitals were similar to (not significantly different from) the national baseline.

In 2018 and 2019, comparison of rates of SSI following abdominal or vaginal hysterectomy in ambulatory surgery centers to the national baseline was not possible.

Overview

In the past, hysterectomies were performed by making a large abdominal incision to access the uterus and surrounding anatomy. This traditional, open abdominal surgery often causes significant pain, threat to surrounding organs and nerves, long recovery periods, and a higher risk of bleeding and infection.⁷ Surgeons now typically use less invasive techniques such as vaginal hysterectomies and abdominal hysterectomies using smaller incisions and scopes. In vaginal hysterectomies, the procedure is completed through the vagina with no abdominal incisions. Compared to traditional, open abdominal hysterectomies, vaginal hysterectomies have been shown to result in fewer surgical complications and infections.⁸ Surgical site infections (SSIs) following abdominal hysterectomies are reportable by acute care hospitals, critical access hospitals, and ambulatory surgery centers. Only ambulatory surgery centers are required to report vaginal hysterectomies. This report presents SSI data for both abdominal and vaginal hysterectomies. Abdominal and vaginal hysterectomies are monitored for 30 days for all SSIs. Further explanation of the three types of SSIs is available in Appendix A.

Acute care hospitals are facilities that primarily provide inpatient services including diagnostic, therapeutic, or rehabilitation services. Critical access hospitals are rural hospitals that maintain 24-hour emergency care services 7 days a week and have less than 25 inpatient beds. Ambulatory surgery centers are surgery centers that provide outpatient surgical procedures. A detailed explanation of CMS and Colorado guidelines for facility classification are in Appendix C.

Data in **Tables 25-26** are presented by facility type and inpatient versus outpatient status. The National Healthcare Safety Network (NHSN) defines an inpatient operative procedure as a procedure on a patient whose date of admission to the health care facility and the date of discharge are different calendar days. An outpatient operative procedure occurs when a patient is admitted and discharged in the same calendar day.

A detailed explanation of how the SIR is calculated is in Appendix B. The three categories summarizing how a Colorado facility compares to the national infection baseline are:

- Statistically lower rate of infection than the national baseline (better);
- Statistically similar rate of infection to the national baseline (not significant); or
- Statistically higher rate of infection than the national baseline (worse).

Data were suppressed if predicted number of infections was less than one or the facility had fewer than 20 procedures of this type in the calendar year. SIRs could not be calculated for SSIs following hysterectomies in ambulatory surgery centers, as this analysis was not available at the time of this report. Rates presented are not risk-adjusted for ambulatory surgery centers.

Results: acute care hospitals

Forty-seven acute care hospitals reported inpatient abdominal hysterectomies in 2019 (**Table 25**). Of these, one reported a rate of SSI that was higher (worse) than the national baseline, and 25 reported rates of SSI that were similar to (not significantly different from) the national baseline. Forty-eight acute care hospitals reported inpatient abdominal hysterectomies in 2020. Of these, one reported a rate of SSI that was higher (worse) than the national baseline, and 22 reported rates of SSI that were similar to (not significantly different from) the national baseline.

Thirty-nine acute care hospitals reported outpatient abdominal hysterectomies in 2019. Comparisons of rates of SSI to the national baseline was not possible. Forty-three acute care hospitals reported outpatient abdominal hysterectomies in 2020. Of these, four reported rates of SSI that were similar to (not significantly different from) the national baseline.

Results: critical access hospitals

Twelve critical access hospitals reported inpatient abdominal hysterectomies in 2019 (**Table 25**). Comparisons of rates of SSI to the national baseline was not possible. Eleven critical access hospitals reported abdominal hysterectomies in 2020. Comparisons of rates of SSI to the national baseline was not possible.

Three critical access hospitals reported outpatient abdominal hysterectomies in 2019. Comparisons of rates of SSI to the national baseline was not possible. Four critical access hospitals reported outpatient abdominal hysterectomies in 2020. Comparison of rates of SSI to the national baseline was not possible.

Results: ambulatory surgery centers

Five ambulatory surgical centers reported abdominal hysterectomies in 2019 (**Table 25**). Comparisons of rates of SSIs to the national baseline was not possible. Five ambulatory surgical centers reported abdominal hysterectomies in 2020. No infections were reported and comparison of rates of SSI to the national baseline was not possible.

Five ambulatory surgical centers reported vaginal hysterectomies in 2019 (**Table 26**). No infections were reported, and comparison of rates of SSI to the national baseline was not possible. Three ambulatory surgical centers reported vaginal hysterectomies in 2020. No infections were reported, and comparison of rates of SSI to the national baseline was not possible.

Table 25: Surgical Site Infections Following Abdominal Hysterectomies – Colorado, January 1, 2018 - December 31, 2020

Facility Name	2018				2019				2020			
	No. of Procedures	No. of Infections	SIR	National Comparison	No. of Procedures	No. of Infections	SIR	National Comparison	No. of Procedures	No. of Infections	SIR	National Comparison
Acute Care Hospitals, Inpatient Procedures												
Animas Surgical Hospital	13	--- ¹	N/A	Suppressed ¹	9	--- ¹	N/A	Suppressed ¹	18	--- ¹	N/A	Suppressed ¹
Avista Adventist Hospital	139	1	0.6	Not Significant	155	1	0.6	Not Significant	93	0	0.0	Not Significant
Banner Fort Collins Medical Center	22	0	N/A	Suppressed ¹	29	0	N/A	Suppressed ¹	9	--- ¹	N/A	Suppressed ¹
Boulder Community Foothills Hospital	85	0	N/A	Suppressed ¹	99	1	N/A	Suppressed ¹	104	1	0.8	Not Significant
Castle Rock Adventist Hospital	14	--- ¹	N/A	Suppressed ¹	48	0	N/A	Suppressed ¹	36	1	N/A	Suppressed ¹
Colorado Plains Medical Center	22	0	N/A	Suppressed ¹	24	1	N/A	Suppressed ¹	12	--- ¹	N/A	Suppressed ¹
Community Hospital	71	0	0.0	Not Significant	104	1	0.7	Not Significant	120	2	1.1	Not Significant
Delta County Memorial Hospital	21	0	N/A	Suppressed ¹	10	--- ¹	N/A	Suppressed ¹	7	--- ¹	N/A	Suppressed ¹
Denver Health And Hospital Authority	79	1	0.5	Not Significant	95	2	0.8	Not Significant	71	0	0.0	Not Significant

Facility Name	2018				2019				2020			
	No. of Procedures	No. of Infections	SIR	National Comparison	No. of Procedures	No. of Infections	SIR	National Comparison	No. of Procedures	No. of Infections	SIR	National Comparison
Exempla Lutheran Medical Center	189	0	0.0	Not Significant	147	0	0.0	Not Significant	116	1	0.5	Not Significant
Exempla Saint Joseph Hospital	203	0	0.0	Better	229	3	0.7	Not Significant	149	3	0.9	Not Significant
Grandview Hospital	0	--- ¹	N/A	Suppressed ¹	0	--- ¹	N/A	Suppressed ¹	0	--- ¹	N/A	Suppressed ¹
Littleton Adventist Hospital	313	1	0.4	Not Significant	243	1	0.5	Not Significant	141	0	0.0	Not Significant
Longmont United Hospital	55	0	N/A	Suppressed ¹	12	--- ¹	N/A	Suppressed ¹	23	0	N/A	Suppressed ¹
Longs Peak Hospital	68	2	1.7	Not Significant	76	3	2.1	Not Significant	54	3	N/A	Suppressed ¹
McKee Medical Center	256	0	0.0	Not Significant	256	0	0.0	Not Significant	170	0	0.0	Not Significant
Medical Center Of The Rockies	156	3	1.4	Not Significant	70	2	1.9	Not Significant	38	1	N/A	Suppressed ¹
Memorial Health System	180	6	2.0	Not Significant	414	7	1.1	Not Significant	293	6	1.3	Not Significant
Memorial Hospital North	105	0	0.0	Not Significant	379	5	0.8	Not Significant	299	2	0.4	Not Significant
Mercy Regional Medical Center	53	1	N/A	Suppressed ¹	57	0	N/A	Suppressed ¹	62	0	N/A	Suppressed ¹

Facility Name	2018				2019				2020			
	No. of Procedures	No. of Infections	SIR	National Comparison	No. of Procedures	No. of Infections	SIR	National Comparison	No. of Procedures	No. of Infections	SIR	National Comparison
Montrose Memorial Hospital	34	1	N/A	Suppressed ¹	23	1	N/A	Suppressed ¹	20	1	N/A	Suppressed ¹
North Colorado Medical Center	81	1	0.9	Not Significant	100	0	0.0	Not Significant	55	1	N/A	Suppressed
North Suburban Medical Center	168	1	0.7	Not Significant	160	1	0.7	Not Significant	131	0	0.0	Not Significant
Parker Adventist Hospital	173	1	0.6	Not Significant	174	0	0.0	Not Significant	99	1	N/A	Suppressed ¹
Parkview Medical Center	63	0	0.0	Not Significant	217	3	1.1	Not Significant	108	1	0.8	Not Significant
Penrose St. Francis Health Services	307	3	0.9	Not Significant	71	1	N/A	Suppressed ¹	50	2	N/A	Suppressed ¹
Platte Valley Medical Center	48	0	N/A	Suppressed ¹	59	1	1.0	Not Significant	44	0	N/A	Suppressed ¹
Porter Adventist Hospital	13	--- ¹	N/A	Suppressed ¹	19	--- ¹	N/A	Suppressed ¹	23	0	N/A	Suppressed ¹
Poudre Valley Health System	207	1	0.3	Not Significant	182	2	0.6	Not Significant	139	0	0.0	Not Significant

Facility Name	2018				2019				2020			
	No. of Procedures	No. of Infections	SIR	National Comparison	No. of Procedures	No. of Infections	SIR	National Comparison	No. of Procedures	No. of Infections	SIR	National Comparison
Presbyterian /St Luke's Medical Center	111	1	0.7	Not Significant	84	1	0.9	Not Significant	95	0	0.0	Not Significant
Rose Medical Center	226	5	1.6	Not Significant	213	0	0.0	Not Significant	183	4	1.6	Not Significant
Saint Anthony North Health Campus	100	2	1.7	Not Significant	108	2	1.4	Not Significant	127	3	1.7	Not Significant
SCL Health Good Samaritan Medical Center	83	1	N/A	Suppressed ¹	29	0	N/A	Suppressed ¹	19	--- ¹	N/A	Suppressed ¹
Sky Ridge Medical Center	493	4	0.9	Not Significant	521	4	0.8	Not Significant	512	5	1.0	Not Significant
SLC Regional Medical Center	12	--- ¹	N/A	Suppressed ¹	20	1	N/A	Suppressed ¹	20	0	N/A	Suppressed ¹
St. Anthony Hospital	14	--- ¹	N/A	Suppressed ¹	13	--- ¹	N/A	Suppressed ¹	14	--- ¹	N/A	Suppressed ¹
St. Anthony Summit Medical Center	31	1	N/A	Suppressed ¹	45	0	N/A	Suppressed ¹	14	--- ¹	N/A	Suppressed ¹
St. Francis Medical Center	321	2	0.7	Not Significant	318	7	2.4	Worse	376	8	2.0	Not Significant
St. Mary's Hospital	190	2	1.0	Not Significant	227	0	0.0	Not Significant	128	0	0.0	Not Significant

Facility Name	2018				2019				2020			
	No. of Procedures	No. of Infections	SIR	National Comparison	No. of Procedures	No. of Infections	SIR	National Comparison	No. of Procedures	No. of Infections	SIR	National Comparison
St. Mary Corwin Medical Center	0	--- ¹	N/A	Suppressed ¹	0	--- ¹	N/A	Suppressed ¹	0	--- ¹	N/A	Suppressed ¹
Sterling Regional Medcenter	1	--- ¹	N/A	Suppressed ¹	1	--- ¹	N/A	Suppressed ¹	1	--- ¹	N/A	Suppressed ¹
Swedish Medical Center	229	0	0.0	Not Significant	334	3	0.9	Not Significant	304	2	0.6	Not Significant
The Medical Center of Aurora	74	2	1.9	Not Significant	70	0	0.0	Not Significant	50	0	N/A	Suppressed ¹
UCHealth Broomfield Hospital	0	--- ¹	N/A	Suppressed ¹	0	--- ¹	N/A	Suppressed ¹	0	--- ¹	N/A	Suppressed ¹
UCHealth Greeley Hospital	N/A				0	--- ¹	N/A	Suppressed ¹	8	--- ¹	N/A	Suppressed ¹
UCHealth Highlands Ranch Hospital	N/A				37	0	N/A	Suppressed ¹	64	0	0.0	Not Significant
UCHealth Yampa Valley Medical Center	20	0	N/A	Suppressed ¹	11	--- ¹	N/A	Suppressed ¹	17	--- ¹	N/A	Suppressed ¹
University Of Colorado Hospital	269	4	0.5	Not Significant	358	14	1.5	Not Significant	314	17	1.9	Worse
Vail Health Hospital	3	--- ¹	N/A	Suppressed ¹	1	--- ¹	N/A	Suppressed ¹	1	--- ¹	N/A	Suppressed ¹

Facility Name	2018				2019				2020			
	No. of Procedures	No. of Infections	SIR	National Comparison	No. of Procedures	No. of Infections	SIR	National Comparison	No. of Procedures	No. of Infections	SIR	National Comparison
Valley View Hospital	48	1	N/A	Suppressed ¹	43	0	N/A	Suppressed ¹	55	0	N/A	Suppressed ¹
Acute Care Hospitals, Outpatient Procedures												
Animas Surgical Hospital	1	--- ¹	N/A	Suppressed ¹	N/A							
Avista Adventist Hospital	4	--- ¹	N/A	Suppressed ¹	7	--- ¹	N/A	Suppressed ¹	22	0	N/A	Suppressed ¹
Banner Fort Collins Medical Center	N/A				1	--- ¹	N/A	Suppressed ¹	10	--- ¹	N/A	Suppressed ¹
Boulder Community Foothills Hospital	2	--- ¹	N/A	Suppressed ¹	9	--- ¹	N/A	Suppressed ¹	12	--- ¹	N/A	Suppressed ¹
Castle Rock Adventist Hospital	2	--- ¹	N/A	Suppressed ¹	N/A				3	--- ¹	N/A	Suppressed ¹
Colorado Plains Medical Center	1	--- ¹	N/A	Suppressed ¹	N/A							
Community Hospital	7	--- ¹	N/A	Suppressed ¹	17	--- ¹	N/A	Suppressed ¹	30	0	N/A	Suppressed ¹
Delta County Memorial Hospital	N/A								1	--- ¹	N/A	Suppressed ¹
Denver Health And Hospital Authority	4	--- ¹	N/A	Suppressed ¹	11	--- ¹	N/A	Suppressed ¹	26	0	N/A	Suppressed ¹

Facility Name	2018				2019				2020			
	No. of Procedures	No. of Infections	SIR	National Comparison	No. of Procedures	No. of Infections	SIR	National Comparison	No. of Procedures	No. of Infections	SIR	National Comparison
Exempla Lutheran Medical Center	154	0	N/A	Suppressed ¹	156	0	N/A	Suppressed ¹	167	2	N/A	Suppressed ¹
Exempla Saint Joseph Hospital	254	0	0.0	Not Significant	208	2	N/A	Suppressed ¹	209	3	2.0	Not Significant
Littleton Adventist Hospital	23	0	N/A	Suppressed ¹	37	0	N/A	Suppressed ¹	73	0	N/A	Suppressed ¹
Longmont United Hospital	6	--- ¹	N/A	Suppressed ¹	34	0	N/A	Suppressed ¹	30	0	N/A	Suppressed ¹
Longs Peak Hospital	68	0	N/A	Suppressed ¹	75	2	N/A	Suppressed ¹	107	2	N/A	Suppressed ¹
McKee Medical Center	1	--- ¹	N/A	Suppressed ¹	4	--- ¹	N/A	Suppressed ¹	56	0	N/A	Suppressed ¹
Medical Center Of The Rockies	33	0	N/A	Suppressed ¹	139	1	N/A	Suppressed ¹	135	2	N/A	Suppressed ¹
Memorial Health System	2	--- ¹	N/A	Suppressed ¹	1	--- ¹	N/A	Suppressed ¹	1	--- ¹	N/A	Suppressed ¹
Memorial Hospital North	156	2	N/A	Suppressed ¹	175	0	N/A	Suppressed ¹	198	0	0.0	Not Significant
Mercy Regional Medical Center	N/A								4	--- ¹	N/A	Suppressed ¹
Montrose Memorial Hospital	90	0	N/A	Suppressed ¹	88	0	N/A	Suppressed ¹	106	0	N/A	Suppressed ¹

Facility Name	2018				2019				2020			
	No. of Procedures	No. of Infections	SIR	National Comparison	No. of Procedures	No. of Infections	SIR	National Comparison	No. of Procedures	No. of Infections	SIR	National Comparison
North Colorado Medical Center	31	0	N/A	Suppressed ¹	85	2	N/A	Suppressed ¹	84	0	N/A	Suppressed ¹
North Suburban Medical Center	29	0	N/A	Suppressed ¹	25	0	N/A	Suppressed ¹	30	0	N/A	Suppressed ¹
Parker Adventist Hospital	19	--- ¹	N/A	Suppressed ¹	15	--- ¹	N/A	Suppressed ¹	1	--- ¹	N/A	Suppressed ¹
Parkview Medical Center	44	0	N/A	Suppressed ¹	114	0	N/A	Suppressed ¹	101	0	N/A	Suppressed ¹
Penrose St. Francis Health Services	2	--- ¹	N/A	Suppressed ¹	36	0	N/A	Suppressed ¹	21	0	N/A	Suppressed ¹
Platte Valley Medical Center	7	--- ¹	N/A	Suppressed ¹	14	--- ¹	N/A	Suppressed ¹	24	0	N/A	Suppressed ¹
Porter Adventist Hospital	52	0	N/A	Suppressed ¹	68	0	N/A	Suppressed ¹	35	0	N/A	Suppressed ¹
Poudre Valley Health System	7	--- ¹	N/A	Suppressed ¹	28	0	N/A	Suppressed ¹	28	2	N/A	Suppressed ¹
Presbyterian /St Luke's Medical Center	4	--- ¹	N/A	Suppressed ¹	N/A				7	--- ¹	N/A	Suppressed ¹

Facility Name	2018				2019				2020			
	No. of Procedures	No. of Infections	SIR	National Comparison	No. of Procedures	No. of Infections	SIR	National Comparison	No. of Procedures	No. of Infections	SIR	National Comparison
Rose Medical Center	201	2	N/A	Suppressed ¹	183	0	N/A	Suppressed ¹	226	2	N/A	Suppressed ¹
Saint Anthony North Health Campus	N/A				1	--- ¹	N/A	Suppressed ¹	N/A			
SCL Health Good Samaritan Medical Center	185	0	0.0	Not Significant	84	0	N/A	Suppressed ¹	54	1	N/A	Suppressed ¹
Sky Ridge Medical Center	197	1	1.0	Not Significant	204	0	N/A	Suppressed ¹	202	2	2.0	Not Significant
SLV Regional Medical Center	1	--- ¹	N/A	Suppressed ¹	3	--- ¹	N/A	Suppressed ¹	4	--- ¹	N/A	Suppressed ¹
St. Anthony Hospital	1	--- ¹	N/A	Suppressed ¹	5	--- ¹	N/A	Suppressed ¹	5	--- ¹	N/A	Suppressed ¹
St. Anthony Summit Medical Center	3	--- ¹	N/A	Suppressed ¹	1	--- ¹	N/A	Suppressed ¹	N/A			
St. Francis Medical Center	19	--- ¹	N/A	Suppressed ¹	29	0	N/A	Suppressed ¹	35	0	N/A	Suppressed ¹
St. Mary's Hospital	7	--- ¹	N/A	Suppressed ¹	53	0	N/A	Suppressed ¹	128	0	N/A	Suppressed ¹
Sterling Regional Medcenter	N/A								1	--- ¹	N/A	Suppressed ¹

Facility Name	2018				2019				2020			
	No. of Procedures	No. of Infections	SIR	National Comparison	No. of Procedures	No. of Infections	SIR	National Comparison	No. of Procedures	No. of Infections	SIR	National Comparison
Swedish Medical Center	41	0	N/A	Suppressed ¹	48	0	N/A	Suppressed ¹	113	0	N/A	Suppressed ¹
The Medical Center of Aurora	30	0	N/A	Suppressed ¹	36	0	N/A	Suppressed ¹	42	0	N/A	Suppressed ¹
UCHealth Greeley Hospital	N/A								70	0	N/A	Suppressed ¹
UCHealth Highlands Ranch Hospital	N/A				14	--- ¹	N/A	Suppressed ¹	60	1	N/A	Suppressed ¹
UCHealth Yampa Valley Medical Center	33	0	N/A	Suppressed ¹	45	0	N/A	Suppressed ¹	46	0	N/A	Suppressed ¹
University Of Colorado Hospital	122	4	N/A	Suppressed ¹	165	1	N/A	Suppressed ¹	191	3	1.5	Not Significant
Vail Health Hospital	2	--- ¹	N/A	Suppressed ¹	10	--- ¹	N/A	Suppressed ¹	2	--- ¹	N/A	Suppressed ¹
Valley View Hospital	1	--- ¹	N/A	Suppressed ¹	8	--- ¹	N/A	Suppressed ¹	19	--- ¹	N/A	Suppressed ¹
Ambulatory Surgery Centers, Outpatient Procedures												
Crown Point Surgery Center	N/A				13	--- ¹	N/A	--- ²	18	--- ¹	N/A	--- ²
Kaiser Permanente Ambulatory Surgery Center	48	0	N/A	--- ²	206	1	N/A	--- ²	197	0	N/A	--- ²

Facility Name	2018				2019				2020			
	No. of Procedures	No. of Infections	SIR	National Comparison	No. of Procedures	No. of Infections	SIR	National Comparison	No. of Procedures	No. of Infections	SIR	National Comparison
Kaiser Permanente Lone Tree Ambulatory Surgery	31	0	N/A	--- ²	183	1	N/A	--- ²	159	0	N/A	--- ²
Pueblo Surgery Center	1	--- ¹	N/A	--- ²	N/A							
Red Rocks Surgery Center, LLC	2	--- ¹	N/A	--- ²	2	--- ¹	N/A	--- ²	1	--- ¹	N/A	--- ²
Skyline Surgery Center	N/A								3	--- ¹	N/A	--- ²
Surgery Center Of Fort Collins	3	--- ¹	N/A	--- ²	N/A							
The Surgery Center At Lutheran	N/A				4	--- ¹	N/A	--- ²	N/A			
Critical Access Hospitals, Inpatient Procedures												
Arkansas Valley Regional Medical Center	0	--- ¹	N/A	Suppressed ¹	0	--- ¹	N/A	Suppressed ¹	0	--- ¹	N/A	Suppressed ¹
Aspen Valley Hospital	8	--- ¹	N/A	Suppressed ¹	8	--- ¹	N/A	Suppressed ¹	2	--- ¹	N/A	Suppressed ¹
Colorado Canyons Hospital & Medical Center	0	--- ¹	N/A	Suppressed ¹	1	--- ¹	N/A	Suppressed ¹	2	--- ¹	N/A	Suppressed ¹

Facility Name	2018				2019				2020			
	No. of Procedures	No. of Infections	SIR	National Comparison	No. of Procedures	No. of Infections	SIR	National Comparison	No. of Procedures	No. of Infections	SIR	National Comparison
East Morgan County Hospital	0	--- ¹	N/A	Suppressed ¹	0	--- ¹	N/A	Suppressed ¹	4	--- ¹	N/A	Suppressed ¹
Estes Park Health	6	--- ¹	N/A	Suppressed ¹	4	--- ¹	N/A	Suppressed ¹	3	--- ¹	N/A	Suppressed ¹
Grand River Medical Center	2	--- ¹	N/A	Suppressed ¹	1	--- ¹	N/A	Suppressed ¹	0	--- ¹	N/A	Suppressed ¹
Gunnison Valley Hospital	1	--- ¹	N/A	Suppressed ¹	3	--- ¹	N/A	Suppressed ¹	1	--- ¹	N/A	Suppressed ¹
Heart Of The Rockies Regional Medical Center	6	--- ¹	N/A	Suppressed ¹	16	--- ¹	N/A	Suppressed ¹	8	--- ¹	N/A	Suppressed ¹
Melissa Memorial Hospital	0	--- ¹	N/A	Suppressed ¹	0	--- ¹	N/A	Suppressed ¹	0	--- ¹	N/A	Suppressed ¹
Mt. San Rafael Hospital	6	--- ¹	N/A	Suppressed ¹	4	--- ¹	N/A	Suppressed ¹	2	--- ¹	N/A	Suppressed ¹
Pagosa Springs Medical Center	0	--- ¹	N/A	Suppressed ¹	0	--- ¹	N/A	Suppressed ¹	0	--- ¹	N/A	Suppressed ¹
Pikes Peak Regional Hospital	0	--- ¹	N/A	Suppressed ¹	0	--- ¹	N/A	Suppressed ¹	0	--- ¹	N/A	Suppressed ¹
Pioneers Medical Center	0	--- ¹	N/A	Suppressed ¹	N/A							

Facility Name	2018				2019				2020			
	No. of Procedures	No. of Infections	SIR	National Comparison	No. of Procedures	No. of Infections	SIR	National Comparison	No. of Procedures	No. of Infections	SIR	National Comparison
Prowers Medical Center	4	--- ¹	N/A	Suppressed ¹	2	--- ¹	N/A	Suppressed ¹	1	--- ¹	N/A	Suppressed ¹
Southeast Colorado Hospital District	0	--- ¹	N/A	Suppressed ¹	N/A							
Southwest Memorial Hospital	11	--- ¹	N/A	Suppressed ¹	8	--- ¹	N/A	Suppressed ¹	9	--- ¹	N/A	Suppressed ¹
Spanish Peaks Regional Health Center	0	--- ¹	N/A	Suppressed ¹	0	--- ¹	N/A	Suppressed ¹	N/A			
St. Thomas More Hospital	45	0	N/A	Suppressed ¹	43	0	N/A	Suppressed ¹	36	1	N/A	Suppressed ¹
The Memorial Hospital	N/A				6	--- ¹	N/A	Suppressed ¹	0	--- ¹	N/A	Suppressed
Wray Community District Hospital	0	--- ¹	N/A	Suppressed ¹	1	--- ¹	N/A	Suppressed ¹	1	--- ¹	N/A	Suppressed ¹
Yuma District Hospital	0	--- ¹	N/A	Suppressed ¹	0	--- ¹	N/A	Suppressed ¹	N/A			
Critical Access Hospitals, Outpatient Procedures												
Colorado Canyons Hospital & Medical Center	N/A				3	--- ¹	N/A	Suppressed ¹	3	--- ¹	N/A	Suppressed ¹

Facility Name	2018				2019				2020			
	No. of Procedures	No. of Infections	SIR	National Comparison	No. of Procedures	No. of Infections	SIR	National Comparison	No. of Procedures	No. of Infections	SIR	National Comparison
Heart Of The Rockies Regional Medical Center	N/A				1	--- ¹	N/A	Suppressed ¹	N/A			
Mt. San Rafael Hospital	N/A								2	--- ¹	N/A	Suppressed ¹
Pikes Peak Regional Hospital	N/A								6	--- ¹	N/A	Suppressed ¹
Southwest Memorial Hospital	1	--- ¹	N/A	Suppressed ¹	N/A							
St. Thomas More Hospital	1	--- ¹	N/A	Suppressed ¹	N/A							
Wray Community District Hospital	N/A				6	--- ¹	N/A	Suppressed ¹	4	--- ¹	N/A	Suppressed ¹

¹Calculation of comparison is not available due to data suppression for one of the following reasons: no. of procedures fewer than 20, or the predicted number of infections was less than one;

²National comparison models were not available at the time of this report

The standardized infection ratio (SIR) is the quotient of the numbers of observed and predicted infections.

N/A, not applicable.

National comparisons based on data collected and reported by facilities participating in the National Healthcare Safety Network (NHSN) from January-December, 2018.

Analysis includes adult patients >=18 years of age.

Data source: NHSN Database.

Prepared by: Colorado Healthcare-Associated Infections and Antimicrobial Resistance Program, Colorado Department of Public Health and Environment.

Table 26: Surgical Site Infections for All Vaginal Hysterectomies – Colorado, Jan. 1, 2018 - Dec. 31, 2020

Facility Name	2018				2019				2020			
	No. of Procedures	No. of Infections	SIR	National Comparison	No. of Procedures	No. of Infections	SIR	National Comparison	No. of Procedures	No. of Infections	SIR	National Comparison
Ambulatory Surgery Centers, Outpatient Procedures												
Kaiser Permanente Ambulatory Surgery Center	5	--- ¹	N/A	--- ²	14	--- ¹	N/A	--- ²	1	--- ¹	N/A	--- ²
Kaiser Permanente Lone Tree Ambulatory Surgery	N/A				39	0	N/A	--- ²	29	0	N/A	--- ²
Peak One Surgery Center	N/A				1	--- ¹	N/A	--- ²	N/A			
Pueblo Surgery Center	4	--- ¹	N/A	--- ²	N/A							
Red Rocks Surgery Center, LLC	1	--- ¹	N/A	--- ²	1	--- ¹	N/A	--- ²	N/A			
Skyline Surgery Center	N/A								1	--- ¹	N/A	--- ²
Surgery Center Of Fort Collins	56	0	N/A	--- ²	14	--- ¹	N/A	--- ²	N/A			

¹Calculation of comparison is not available due to data suppression for one of the following reasons: no. of procedures fewer than 20, or the predicted number of infections was less than one;

²National comparison models were not available at the time of this report

The standardized infection ratio (SIR) is the quotient of the numbers of observed and predicted infections.

N/A, not applicable.

National comparisons based on data collected and reported by facilities participating in the National Healthcare Safety Network (NHSN) from January-December, 2020.

Analysis includes adult patients >=18 years of age.

Data source: NHSN Database.

Prepared by: Colorado Healthcare-Associated Infections and Antimicrobial Resistance Program, Colorado Department of Public Health and Environment.

Surgical-site infections following knee replacements

In 2018 and 2019, overall rates of surgical site infection (SSI) following inpatient or outpatient knee replacement surgeries in acute care hospitals were similar to (not significantly different from) the national baseline.

In 2019 and 2020, overall rates of SSI following inpatient knee replacement surgeries in critical access hospitals were similar to (not significantly different from) the national baseline.

In 2019, the rate of SSI following knee replacement surgery in ambulatory surgical centers was higher (worse) than the national baseline. In 2020, the rate of SSI following knee replacement surgery in ambulatory surgical centers was similar to (not significantly different from) the national baseline.

Overview

A total or partial knee replacement is a surgery for people with severe knee damage and pain related to osteoarthritis, rheumatoid arthritis or traumatic arthritis. A total knee replacement involves removing the damaged cartilage and bone from the surface of the knee joint and replacing them with an artificial device. In this procedure, the patella (kneecap) is removed, the femur (thighbone) and tibia (shinbone) are cut down, and a metal, ceramic, or plastic prosthesis is put in place. Knee replacements are monitored for 30 days for a superficial SSI and 90 days for all other SSIs. Further explanation of the three types of SSIs is available in Appendix A.

SSIs following knee replacement surgeries are reportable by acute care hospitals, critical access hospitals, and ambulatory surgery centers. Acute care hospitals are facilities that primarily provide inpatient services including diagnostic, therapeutic, or rehabilitation services. Critical access hospitals are rural hospitals that maintain 24-hour emergency care services 7 days a week and have less than 25 inpatient beds. Ambulatory surgery centers are surgery centers that provide outpatient surgical procedures. A detailed explanation of Centers for Medicare and Medicaid Services (CMS) and Colorado guidelines for facility classification are in Appendix C.

Data are presented by facility type and inpatient versus outpatient status. The National Healthcare Safety Network (NHSN) defines an inpatient operative procedure as a procedure on a patient whose date of admission to the health care facility and the date of discharge are different calendar days. An outpatient operative procedure occurs when a patient is admitted and discharged in the same calendar day.

A detailed explanation of how the SIR is calculated is in Appendix B. The three categories summarizing how a Colorado facility compares to the national infection baseline are:

- Statistically lower rate of infection than the national baseline (better);
- Statistically similar rate of infection to the national baseline (not significant); or
- Statistically higher infection than the national baseline (worse).

Data were suppressed if the predicted number of infections was less than one or the facility had fewer than 20 procedures the calendar year.

Results: acute care hospitals

Fifty-two acute care hospitals reported inpatient knee replacement surgeries in 2019 (**Table 27**). Of these, two reported rates of SSI that were higher (worse) than the national baseline, and 26 reported rates of SSI that were similar to (not significantly different from) the national baseline. Fifty-two acute care hospitals reported inpatient knee replacement surgeries in 2020. Of these, one reported a rate of SSI that was lower (better) than the national baseline, two reported rates of SSI that were higher (worse) than the national baseline, and 24 reported rates of SSI that were similar to (not significantly different from) the national baseline.

Thirty-one acute care hospitals reported outpatient knee replacement surgeries in 2019. Of these, two reported rates of SSI that were similar to (not significantly different from) the national baseline. Forty-three acute care hospitals reported outpatient knee replacement surgeries in 2020. Of these, three reported rates that were similar to (not significantly different from) the national baseline.

Results: critical access hospitals

Twenty critical access hospitals reported inpatient knee replacement surgeries in 2019 (**Table 27**). Comparison of rates of SSI to the national baseline was not possible. Twenty critical access hospitals reported inpatient knee replacement surgeries in 2020. Of these, one reported a rates of SSI that was similar to (not significantly different from) the national baseline.

Seven critical access hospitals reported outpatient knee replacement surgeries in 2019. No infections were reported, and comparison of the rate of SSI to the national baseline was not possible. Nine critical access hospitals reported outpatient knee replacement surgeries in 2020. Comparison of the rate of SSI to the national baseline was not possible.

Results: ambulatory surgery centers

Twenty-three ambulatory surgery centers reported knee replacement surgeries in 2019 (**Table 27**). Comparison of rates of SSI to the national baseline was not possible. Twenty-four ambulatory surgery centers reported knee replacements in 2020. Comparison of rates to the national baseline was not possible.

Table 27: Surgical Site Infections for All Knee Replacement (Total or Partial) – Colorado, Jan. 1, 2018 - Dec. 31, 2020

Facility Name	2018				2019				2020			
	No. of Procedures	No. of Infections	SIR	National Comparison	No. of Procedures	No. of Infections	SIR	National Comparison	No. of Procedures	No. of Infections	SIR	National Comparison
Acute Care Hospitals, Inpatient Procedures												
Animas Surgical Hospital	236	0	0.0	Not Significant	266	1	0.8	Not Significant	234	0	0.0	Not Significant
Avista Adventist Hospital	150	0	N/A	Suppressed ¹	164	1	N/A	Suppressed ¹	116	0	N/A	Suppressed ¹
Banner Fort Collins Medical Center	74	0	N/A	Suppressed ¹	85	1	N/A	Suppressed ¹	93	1	N/A	Suppressed ¹
Boulder Community Foothills Hospital	477	0	0.0	Not Significant	554	2	0.9	Not Significant	367	2	1.5	Not Significant
Castle Rock Adventist Hospital	97	1	N/A	Suppressed ¹	88	1	N/A	Suppressed ¹	129	1	N/A	Suppressed ¹
Colorado Plains Medical Center	33	1	N/A	Suppressed ¹	30	0	N/A	Suppressed ¹	23	0	N/A	Suppressed ¹
Community Hospital	200	1	0.8	Not Significant	290	3	1.9	Not Significant	237	0	0.0	Not Significant
Delta County Memorial Hospital	135	1	N/A	Suppressed ¹	103	1	N/A	Suppressed ¹	71	1	N/A	Suppressed ¹
Denver Health And Hospital Authority	156	2	1.7	Not Significant	192	4	3.0	Not Significant	135	2	2.0	Not Significant
Exempla Lutheran Medical Center	236	1	0.9	Not Significant	153	1	N/A	Suppressed ¹	74	0	N/A	Suppressed ¹
Exempla Saint Joseph Hospital	920	7	1.5	Not Significant	839	8	1.6	Not Significant	613	3	0.8	Not Significant

Facility Name	2018				2019				2020			
	No. of Procedures	No. of Infections	SIR	National Comparison	No. of Procedures	No. of Infections	SIR	National Comparison	No. of Procedures	No. of Infections	SIR	National Comparison
Grandview Hospital	216	1	0.9	Not Significant	513	3	1.3	Not Significant	549	3	1.2	Not Significant
Littleton Adventist Hospital	380	2	0.8	Not Significant	468	1	0.4	Not Significant	456	3	1.1	Not Significant
Longmont United Hospital	234	1	0.8	Not Significant	93	0	N/A	Suppressed ¹	170	2	N/A	Suppressed ¹
Longs Peak Hospital	17	--- ¹	N/A	Suppressed ¹	23	0	N/A	Suppressed ¹	29	2	N/A	Suppressed ¹
McKee Medical Center	185	1	0.8	Not Significant	103	0	N/A	Suppressed ¹	70	0	N/A	Suppressed ¹
Medical Center Of The Rockies	352	8	4.1	Worse	432	8	3.6	Worse	281	2	1.4	Not Significant
Memorial Health System	161	4	3.5	Worse	42	0	N/A	Suppressed ¹	36	0	N/A	Suppressed ¹
Memorial Hospital North	320	1	0.6	Not Significant	192	3	2.1	Not Significant	128	2	N/A	Suppressed ¹
Mercy Regional Medical Center	106	1	N/A	Suppressed ¹	139	1	N/A	Suppressed ¹	102	0	N/A	Suppressed ¹
Montrose Memorial Hospital	174	1	N/A	Suppressed ¹	127	1	N/A	Suppressed ¹	188	0	N/A	Suppressed ¹
North Colorado Medical Center	325	4	1.6	Not Significant	300	3	1.2	Not Significant	191	1	0.7	Not Significant
North Suburban Medical Center	111	0	N/A	Suppressed ¹	117	0	N/A	Suppressed ¹	81	0	N/A	Suppressed ¹
Ortho Colorado	1,397	3	0.5	Not Significant	1,397	2	0.3	Not Significant	1,165	4	0.8	Not Significant
Parker Adventist Hospital	265	5	2.6	Not Significant	192	2	1.6	Not Significant	155	1	0.9	Not Significant

Facility Name	2018				2019				2020			
	No. of Procedures	No. of Infections	SIR	National Comparison	No. of Procedures	No. of Infections	SIR	National Comparison	No. of Procedures	No. of Infections	SIR	National Comparison
Parkview Medical Center	437	3	0.6	Not Significant	366	4	1.5	Not Significant	302	1	0.4	Not Significant
Penrose St. Francis Health Services	689	2	0.5	Not Significant	626	1	0.3	Not Significant	557	1	0.3	Not Significant
Platte Valley Medical Center	148	0	N/A	Suppressed ¹	194	0	0.0	Not Significant	133	0	N/A	Suppressed ¹
Porter Adventist Hospital	863	2	0.4	Not Significant	785	4	0.8	Not Significant	539	2	0.5	Not Significant
Poudre Valley Health System	1,248	6	1.0	Not Significant	1,305	10	1.5	Not Significant	996	4	0.8	Not Significant
Presbyterian/St Luke's Medical Center	224	5	2.1	Not Significant	314	6	2.1	Not Significant	260	6	2.8	Worse
Rose Medical Center	643	2	0.5	Not Significant	648	4	1.1	Not Significant	487	1	0.4	Not Significant
Saint Anthony North Health Campus	176	1	0.6	Not Significant	256	1	0.4	Not Significant	216	3	1.6	Not Significant
SCL Health Good Samaritan Medical Center	676	9	3.3	Worse	722	3	1.0	Not Significant	613	4	1.6	Not Significant
Sky Ridge Medical Center	1,474	8	0.9	Not Significant	1,433	7	0.8	Not Significant	1,029	1	0.2	Better
SLC Regional Medical Center	104	2	N/A	Suppressed ¹	100	2	N/A	Suppressed ¹	80	1	N/A	Suppressed ¹
St. Anthony Hospital	33	0	N/A	Suppressed ¹	45	0	N/A	Suppressed ¹	33	0	N/A	Suppressed ¹
St. Anthony Summit Medical Center	36	0	N/A	Suppressed ¹	9	--- ¹	N/A	Suppressed ¹	4	--- ¹	N/A	Suppressed ¹

Facility Name	2018				2019				2020			
	No. of Procedures	No. of Infections	SIR	National Comparison	No. of Procedures	No. of Infections	SIR	National Comparison	No. of Procedures	No. of Infections	SIR	National Comparison
St. Francis Medical Center	839	2	0.3	Not Significant	915	3	0.5	Not Significant	806	9	1.5	Not Significant
St. Mary's Hospital	425	3	1.5	Not Significant	281	1	0.6	Not Significant	168	0	0.0	Not Significant
St. Mary Corwin Medical Center	403	1	0.4	Not Significant	362	0	0.0	Not Significant	329	1	0.4	Not Significant
Sterling Regional Medcenter	46	2	N/A	Suppressed ¹	40	0	N/A	Suppressed ¹	25	0	N/A	Suppressed ¹
Swedish Medical Center	539	3	0.9	Not Significant	411	0	0.0	Not Significant	290	0	0.0	Not Significant
The Medical Center of Aurora	279	6	2.8	Worse	296	11	5.3	Worse	221	3	1.8	Not Significant
UCHealth Broomfield Hospital	28	0	N/A	Suppressed ¹	47	1	N/A	Suppressed ¹	260	7	4.7	Worse
UCHealth Greeley Hospital	N/A				5	--- ¹	N/A	Suppressed ¹	14	--- ¹	N/A	Suppressed ¹
UCHealth Highlands Ranch Hospital	N/A				90	0	N/A	Suppressed ¹	154	1	N/A	Suppressed ¹
UCHealth Yampa Valley Medical Center	141	1	N/A	Suppressed ¹	118	1	N/A	Suppressed ¹	107	4	N/A	Suppressed ¹¹
University Of Colorado Hospital	536	4	1.0	Not Significant	490	6	1.5	Not Significant	172	2	1.3	Not Significant
Vail Health Hospital	155	0	N/A	Suppressed ¹	32	0	N/A	Suppressed ¹	35	2	N/A	Suppressed ¹
Valley View Hospital	126	1	N/A	Suppressed ¹	147	1	N/A	Suppressed ¹	139	0	N/A	Suppressed ¹

Acute Care Hospitals, Outpatient Procedures

Facility Name	2018				2019				2020			
	No. of Procedures	No. of Infections	SIR	National Comparison	No. of Procedures	No. of Infections	SIR	National Comparison	No. of Procedures	No. of Infections	SIR	National Comparison
Animas Surgical Hospital	4	--- ¹	N/A	Suppressed ¹	N/A							
Avista Adventist Hospital	2	--- ¹	N/A	Suppressed ¹	4	--- ¹	N/A	Suppressed ¹	33	0	N/A	Suppressed ¹
Banner Fort Collins Medical Center	N/A								7	--- ¹	N/A	Suppressed ¹
Boulder Community Foothills Hospital	24	1	N/A	Suppressed ¹	38	0	N/A	Suppressed ¹	73	0	N/A	Suppressed ¹
Castle Rock Adventist Hospital	N/A				1	--- ¹	N/A	Suppressed ¹	3	--- ¹	N/A	Suppressed ¹
Colorado Plains Medical Center	7	--- ¹	N/A	Suppressed ¹	N/A				1	--- ¹	N/A	Suppressed ¹
Community Hospital	1	--- ¹	N/A	Suppressed ¹	1	--- ¹	N/A	Suppressed ¹	34	0	N/A	Suppressed ¹
Delta County Memorial Hospital	N/A				2	--- ¹	N/A	Suppressed ¹	8	--- ¹	N/A	Suppressed ¹
Denver Health And Hospital Authority	1	--- ¹	N/A	Suppressed ¹	N/A				11	--- ¹	N/A	Suppressed ¹
Exempla Lutheran Medical Center	27	0	N/A	Suppressed ¹	6	--- ¹	N/A	Suppressed ¹	23	0	N/A	Suppressed ¹
Exempla Saint Joseph Hospital	15	--- ¹	N/A	Suppressed ¹	11	--- ¹	N/A	Suppressed ¹	5	--- ¹	N/A	Suppressed ¹
Grandview Hospital	N/A								1	--- ¹	N/A	Suppressed ¹

Facility Name	2018				2019				2020			
	No. of Procedures	No. of Infections	SIR	National Comparison	No. of Procedures	No. of Infections	SIR	National Comparison	No. of Procedures	No. of Infections	SIR	National Comparison
Littleton Adventist Hospital	5	--- ¹	N/A	Suppressed ¹	N/A				35	0	N/A	Suppressed ¹
Longmont United Hospital	N/A				67	1	N/A	Suppressed ¹	50	0	N/A	Suppressed ¹
Longs Peak Hospital	N/A								1	--- ¹	N/A	Suppressed ¹
McKee Medical Center	N/A								3	--- ¹	N/A	Suppressed ¹
Memorial Hospital North	N/A				1	--- ¹	N/A	Suppressed ¹	1	--- ¹	N/A	Suppressed ¹
Mercy Regional Medical Center	1	--- ¹	N/A	Suppressed ¹	1	--- ¹	N/A	Suppressed ¹	3	--- ¹	N/A	Suppressed ¹
Montrose Memorial Hospital	4	--- ¹	N/A	Suppressed ¹	1	--- ¹	N/A	Suppressed ¹	3	--- ¹	N/A	Suppressed ¹
North Colorado Medical Center	4	--- ¹	N/A	Suppressed ¹	5	--- ¹	N/A	Suppressed ¹	4	--- ¹	N/A	Suppressed ¹
North Suburban Medical Center	8	--- ¹	N/A	Suppressed ¹	18	--- ¹	N/A	Suppressed ¹	27	0	N/A	Suppressed ¹
Ortho Colorado	2	--- ¹	N/A	Suppressed ¹	13	--- ¹	N/A	Suppressed ¹	214	2	N/A	Suppressed ¹
Parker Adventist Hospital	142	1	0.7	Not Significant	151	0	0.0	Not Significant	91	0	N/A	Suppressed ¹
Parkview Medical Center	5	--- ¹	N/A	Suppressed ¹	3	--- ¹	N/A	Suppressed ¹	12	--- ¹	N/A	Suppressed ¹
Penrose St. Francis Health Services	1	--- ¹	N/A	Suppressed ¹	N/A				19	--- ¹	N/A	Suppressed ¹
Porter Adventist Hospital	33	0	N/A	Suppressed ¹	50	0	N/A	Suppressed ¹	158	0	N/A	Suppressed ¹

Facility Name	2018				2019				2020			
	No. of Procedures	No. of Infections	SIR	National Comparison	No. of Procedures	No. of Infections	SIR	National Comparison	No. of Procedures	No. of Infections	SIR	National Comparison
Poudre Valley Health System	N/A				1	--- ¹	N/A	Suppressed ¹	N/A			
Presbyterian/St Luke's Medical Center	2	--- ¹	N/A	Suppressed ¹	5	--- ¹	N/A	Suppressed ¹	27	1	N/A	Suppressed ¹
Rose Medical Center	8	--- ¹	N/A	Suppressed ¹	17	--- ¹	N/A	Suppressed ¹	30	0	N/A	Suppressed ¹
Saint Anthony North Health Campus	30	1	N/A	Suppressed ¹	58	0	N/A	Suppressed ¹	143	2	1.3	Not Significant
SLC Health Good Samaritan Medical Center	2	--- ¹	N/A	Suppressed ¹	1	--- ¹	N/A	Suppressed ¹	4	--- ¹	N/A	Suppressed ¹
Sky Ridge Medical Center	98	1	N/A	Suppressed ¹	126	0	0.0	Not Significant	174	1	0.6	Not Significant
SLV Regional Medical Center	2	--- ¹	N/A	Suppressed ¹	4	--- ¹	N/A	Suppressed ¹	1	--- ¹	N/A	Suppressed ¹
St. Anthony Hospital	N/A								1	--- ¹	N/A	Suppressed ¹
St. Francis Medical Center	2	--- ¹	N/A	Suppressed ¹	N/A				12	--- ¹	N/A	Suppressed ¹
St. Mary's Hospital	N/A				5	--- ¹	N/A	Suppressed ¹	62	0	N/A	Suppressed
St. Mary Corwin Medical Center	3	--- ¹	N/A	Suppressed ¹	N/A				22	0	N/A	Suppressed ¹
Swedish Medical Center	9	--- ¹	N/A	Suppressed ¹	71	0	N/A	Suppressed ¹	143	0	0.0	Not Significant
The Medical Center of Aurora	10	--- ¹	N/A	Suppressed ¹	19	--- ¹	N/A	Suppressed ¹	54	0	N/A	Suppressed ¹

Facility Name	2018				2019				2020			
	No. of Procedures	No. of Infections	SIR	National Comparison	No. of Procedures	No. of Infections	SIR	National Comparison	No. of Procedures	No. of Infections	SIR	National Comparison
UCHealth Broomfield Hospital	N/A								4	--- ¹	N/A	Suppressed ¹
UCHealth Highlands Ranch Hospital	N/A				2	--- ¹	N/A	Suppressed ¹	61	1	N/A	Suppressed ¹
UCHealth Yampa Valley Medical Center	9	--- ¹	N/A	Suppressed ¹	3	--- ¹	N/A	Suppressed ¹	11	--- ¹	N/A	Suppressed ¹
University Of Colorado Hospital	2	--- ¹	N/A	Suppressed ¹	1	--- ¹	N/A	Suppressed ¹	4	--- ¹	N/A	Suppressed ¹
Vail Health Hospital	220	0	N/A	Suppressed ¹	472	2	N/A	Suppressed ¹	228	0	0.0	Not Significant
Valley View Hospital	N/A								4	--- ¹	N/A	Suppressed ¹
Ambulatory Surgery Centers, Outpatient Procedures												
Audubon ASC at St. Francis	112	0	N/A	Suppressed ¹	68	0	N/A	Suppressed ¹	88	1	N/A	Suppressed ¹
Audubon Surgery Center	N/A								10	--- ¹	N/A	Suppressed ¹
Boulder Community Musculoskeletal Surgery Center	8	--- ¹	N/A	Suppressed ¹	8	--- ¹	N/A	Suppressed ¹	80	0	N/A	Suppressed ¹
Crown Point Surgery Center	35	0	N/A	Suppressed ¹	100	0	N/A	Suppressed ¹	95	0	N/A	Suppressed ¹
Denver Midtown Surgical Center	10	--- ¹	N/A	Suppressed ¹	44	0	N/A	Suppressed ¹	54	0	N/A	Suppressed ¹
DTC Surgery Center	28	1	N/A	Suppressed ¹	51	0	N/A	Suppressed ¹	48	0	N/A	Suppressed ¹

Facility Name	2018				2019				2020			
	No. of Procedures	No. of Infections	SIR	National Comparison	No. of Procedures	No. of Infections	SIR	National Comparison	No. of Procedures	No. of Infections	SIR	National Comparison
Flatirons Surgery Center	19	--- ¹	N/A	Suppressed ¹	29	0	N/A	Suppressed ¹	35	0	N/A	Suppressed ¹
Front Range Orthopedic Surgery Center	22	0	N/A	Suppressed ¹	46	1	N/A	Suppressed ¹	51	0	N/A	Suppressed ¹
Grand Valley Surgical Center	2	--- ¹	N/A	Suppressed ¹	1	--- ¹	N/A	Suppressed ¹	1	--- ¹	N/A	Suppressed ¹
Kaiser Permanente Ambulatory Surgery Center	N/A				30	0	N/A	Suppressed ¹	N/A			
Kaiser Permanente Lone Tree Ambulatory Surgery	99	2	N/A	Suppressed ¹	218	1	N/A	Suppressed ¹	331	0	N/A	Suppressed ¹
Lincoln Surgery Center	84	0	N/A	Suppressed ¹	168	2	N/A	Suppressed ¹	177	0	N/A	Suppressed ¹
Loveland Surgery Center	N/A				1	--- ¹	N/A	Suppressed ¹	1	--- ¹	N/A	Suppressed ¹
Mile High Surgicenter, LLC	39	0	N/A	Suppressed ¹	76	0	N/A	Suppressed ¹	163	0	N/A	Suppressed ¹
Mountain Vista Surgery Center	N/A								9	--- ¹	N/A	Suppressed ¹
Musculoskeletal Surgery Center	N/A				4	--- ¹	N/A	Suppressed ¹	N/A			
OCR Loveland Surgery Center	N/A				206	1	N/A	Suppressed ¹	671	0	N/A	Suppressed ¹
Orthopaedic Center Of The Rockies	661	0	N/A	Suppressed ¹	431	1	N/A	Suppressed ¹	234	0	N/A	Suppressed ¹

Facility Name	2018				2019				2020			
	No. of Procedures	No. of Infections	SIR	National Comparison	No. of Procedures	No. of Infections	SIR	National Comparison	No. of Procedures	No. of Infections	SIR	National Comparison
Rocky Mountain Surgery Center	2	--- ¹	N/A	Suppressed ¹	88	1	N/A	Suppressed ¹	49	0	N/A	Suppressed ¹
Rose Surgical Center	49	0	N/A	Suppressed ¹	3	--- ¹	N/A	Suppressed ¹	N/A			
Skyline Surgery Center	N/A				1	--- ¹	N/A	Suppressed ¹	36	0	N/A	Suppressed ¹
Surgery Center At Cherry Creek	25	0	N/A	Suppressed ¹	42	0	N/A	Suppressed ¹	113	0	N/A	Suppressed ¹
Surgical Center Of The Rockies	N/A								2	--- ¹	N/A	Suppressed ¹
The Orthopaedic And Spine Center Of Southern Colorado, LLC	136	0	N/A	Suppressed ¹	144	0	N/A	Suppressed ¹	142	0	N/A	Suppressed ¹
The Surgery Center At Lutheran	34	0	N/A	Suppressed ¹	47	0	N/A	Suppressed ¹	31	1	N/A	Suppressed ¹
Vail Valley Surgery Center	7	--- ¹	N/A	Suppressed ¹	N/A				10	--- ¹	N/A	Suppressed ¹
Vail Valley Surgery Center Edwards	263	0	N/A	Suppressed ¹	249	0	N/A	Suppressed ¹	310	0	N/A	Suppressed ¹
Critical Access Hospitals, Inpatient Procedures												
Arkansas Valley Regional Medical Center	31	1	N/A	Suppressed ¹	15	--- ¹	N/A	Suppressed ¹	16	--- ¹	N/A	Suppressed ¹
Aspen Valley Hospital	64	0	N/A	Suppressed ¹	82	0	N/A	Suppressed ¹	56	1	N/A	Suppressed ¹
Colorado Canyons Hospital & Medical Center	11	--- ¹	N/A	Suppressed ¹	1	--- ¹	N/A	Suppressed ¹	15	--- ¹	N/A	Suppressed ¹

Facility Name	2018				2019				2020			
	No. of Procedures	No. of Infections	SIR	National Comparison	No. of Procedures	No. of Infections	SIR	National Comparison	No. of Procedures	No. of Infections	SIR	National Comparison
East Morgan County Hospital	2	--- ¹	N/A	Suppressed ¹	0	--- ¹	N/A	Suppressed ¹	0	--- ¹	N/A	Suppressed ¹
Estes Park Health	22	0	N/A	Suppressed ¹	8	--- ¹	N/A	Suppressed ¹	9	--- ¹	N/A	Suppressed ¹
Grand River Medical Center	27	0	N/A	Suppressed ¹	37	0	N/A	Suppressed ¹	43	0	N/A	Suppressed ¹
Gunnison Valley Hospital	45	0	N/A	Suppressed ¹	52	1	N/A	Suppressed ¹	18	--- ¹	N/A	Suppressed ¹
Heart Of The Rockies Regional Medical Center	32	0	N/A	Suppressed ¹	37	1	N/A	Suppressed ¹	39	0	N/A	Suppressed ¹
Melissa Memorial Hospital	10	--- ¹	N/A	Suppressed ¹	9	--- ¹	N/A	Suppressed ¹	3	--- ¹	N/A	Suppressed ¹
Middle Park Medical Center	2	--- ¹	N/A	Suppressed ¹	13	--- ¹	N/A	Suppressed ¹	8	--- ¹	N/A	Suppressed ¹
Mt. San Rafael Hospital	3	--- ¹	N/A	Suppressed ¹	17	--- ¹	N/A	Suppressed ¹	17	--- ¹	N/A	Suppressed ¹
Pagosa Springs Medical Center	39	0	N/A	Suppressed ¹	30	0	N/A	Suppressed ¹	22	0	N/A	Suppressed ¹
Pikes Peak Regional Hospital	34	0	N/A	Suppressed ¹	29	0	N/A	Suppressed ¹	18	--- ¹	N/A	Suppressed ¹
Pioneers Medical Center	50	0	N/A	Suppressed ¹	99	0	N/A	Suppressed ¹	183	0	0.0	Not Significant
Prowers Medical Center	N/A				7	--- ¹	N/A	Suppressed ¹	10	--- ¹	N/A	Suppressed ¹
Rio Grande Hospital	1	--- ¹	N/A	Suppressed ¹	9	--- ¹	N/A	Suppressed ¹	11	--- ¹	N/A	Suppressed ¹
Southwest Memorial Hospital	28	0	N/A	Suppressed ¹	18	--- ¹	N/A	Suppressed ¹	45	0	N/A	Suppressed ¹

Facility Name	2018				2019				2020			
	No. of Procedures	No. of Infections	SIR	National Comparison	No. of Procedures	No. of Infections	SIR	National Comparison	No. of Procedures	No. of Infections	SIR	National Comparison
St. Thomas More Hospital	97	0	N/A	Suppressed ¹	15	--- ¹	N/A	Suppressed ¹	90	2	N/A	Suppressed ¹
The Memorial Hospital	35	0	N/A	Suppressed ¹	38	0	N/A	Suppressed ¹	23	0	N/A	Suppressed ¹
Wray Community District Hospital	37	0	N/A	Suppressed ¹	42	2	N/A	Suppressed ¹	39	0	N/A	Suppressed ¹
Yuma District Hospital	0	--- ¹	N/A	Suppressed ¹	1	--- ¹	N/A	Suppressed ¹	3	--- ¹	N/A	Suppressed ¹
Critical Access Hospitals, Outpatient Procedures												
Aspen Valley Hospital	N/A				N/A				2	--- ¹	N/A	Suppressed ¹
Estes Park Health	1	--- ¹	N/A	Suppressed ¹	N/A				N/A			
Grand River Medical Center	1	--- ¹	N/A	Suppressed ¹	1	--- ¹	N/A	Suppressed ¹	2	--- ¹	N/A	Suppressed ¹
Gunnison Valley Hospital	3	--- ¹	N/A	Suppressed ¹	1	--- ¹	N/A	Suppressed ¹	24	0	N/A	Suppressed ¹
Heart Of The Rockies Regional Medical Center	N/A				1	--- ¹	N/A	Suppressed ¹	2	--- ¹	N/A	Suppressed ¹
Pagosa Springs Medical Center	1	--- ¹	N/A	Suppressed ¹	1	--- ¹	N/A	Suppressed ¹	N/A			
Pioneers Medical Center	3	--- ¹	N/A	Suppressed ¹	1	--- ¹	N/A	Suppressed ¹	1	--- ¹	N/A	Suppressed ¹
Rio Grande Hospital	N/A				N/A				1	--- ¹	N/A	Suppressed ¹
Southwest Memorial Hospital	N/A				N/A				2	--- ¹	N/A	Suppressed ¹

Facility Name	2018				2019				2020			
	No. of Procedures	No. of Infections	SIR	National Comparison	No. of Procedures	No. of Infections	SIR	National Comparison	No. of Procedures	No. of Infections	SIR	National Comparison
The Memorial Hospital	N/A				1	--- ¹	N/A	Suppressed ¹	2	--- ¹	N/A	Suppressed ¹
Yuma District Hospital	N/A				1	--- ¹	N/A	Suppressed ¹	1	--- ¹	N/A	Suppressed ¹

¹Calculation of comparison is not available due to data suppression for one of the following reasons: no. of procedures fewer than 20, or the predicted number of infections was less than one.

The standardized infection ratio (SIR) is the quotient of the numbers of observed and predicted infections.

N/A, not applicable.

National comparisons based on data collected and reported by facilities participating in the National Healthcare Safety Network (NHSN) from January-December, 2020.

Analysis includes adult patients >=18 years of age.

Data source: NHSN Database.

Prepared by: Colorado Healthcare-Associated Infections and Antimicrobial Resistance Program, Colorado Department of Public Health and Environment.

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Appendix A

Glossary of terms and abbreviations

Access-related bloodstream infection (ARB): The presence of bacteria in the blood verified by culture with the source identified as the vascular access site or is unknown.

Bloodstream infection (BSI): An infection of the blood.

Central line (CL): A flexible tube (intravascular catheter) that terminates at or close to the heart or in one of the great vessels.

Central line-associated bloodstream infection (CLABSI): A primary bloodstream infection (BSI) in a patient that had a central line within the 48-hour period before the development of the BSI.

Central line-associated bloodstream infection (CLABSI) rate: The total number of central line-associated bloodstream infections divided by the number of central line days multiplied by 1,000.

Central line days (device days): A daily count of patients with a central line in place is performed at the same time each day.

Coronary artery bypass graft surgery (CABG): A surgical treatment for heart disease in which a vein or artery from another part of the body is used to create an alternate path for blood to flow to the heart bypassing a blocked artery.

Critical care unit (CCU): A nursing care area that provides intensive observation, diagnosis, and therapeutic procedures for adults and/or children who are critically ill.

Dialysis event: An event for a dialysis patient involving any one of three possible scenarios: 1) hospitalization; 2) intravenous (IV) antimicrobial start; or 3) a positive blood culture. Dialysis event reporting involves *outpatient* facilities only.

Fascia: A thin layer of connective tissue covering, supporting, or connecting the muscles or inner organs of the body.

Great vessel: Based on NHSN criteria for reporting central line BSI, the following are considered great vessels: aorta, pulmonary artery, superior vena cava, inferior vena cava, brachiocephalic veins, internal jugular veins, subclavian veins, external iliac veins, common iliac veins, common femoral veins, and in neonates, the umbilical artery and vein.

Healthcare-associated infection (HAI): An infection of a patient that occurs in a health care setting which was not present or incubating at the time of admission and is not related to a previous admission.

Hip replacement surgery: An elective procedure for people with severe hip damage or pain related to chronic osteoarthritis, rheumatoid arthritis or other degenerative processes involving the hip joint.

Implant: A nonhuman-derived object, material, or tissue that is permanently placed in a patient during an operation. Examples include heart valves, metal rods, mesh, wires, screws, cements, hip replacements and other devices.

Infection: An invasion of the body tissues by an infectious agent.

Infection preventionist (IP): A health professional that has special training in infection prevention.

Inpatient: A patient whose date of admission to a health care facility and the date of discharge are different calendar days.

IV antimicrobial start: The first dose of a medication given intravenously to kill microscopic infectious organisms such as bacteria and viruses in the body.

Knee replacement surgery (arthroplasty): An elective procedure for people with severe knee damage and pain related to osteoarthritis, rheumatoid arthritis, and traumatic arthritis.

Local access infection (LAI): Pus, redness, or swelling of the vascular access site without the presence of access-associated bacteremia, patient hospitalization, or initiation of IV antimicrobials.

Location of attribution: The inpatient location where the patient was assigned on the date of the bloodstream infection (BSI) event, which is further defined as the date when the first clinical evidence appeared or the date the specimen used to meet the BSI criteria was collected, whichever came first.

Metric: A measurement for calculating health outcomes. There are both process metrics that measure adherence to standard health care quality processes, and outcome metrics that measure the number of patients affected by specific medical treatments.

National baseline: The number of predicted infections is calculated based on the 2015 national HAI aggregate data and adjusted for each facility using variables found to be significant predictors of HAI incidence.

National Healthcare Safety Network (NHSN): NHSN is a secure, internet-based surveillance (monitoring and reporting) system managed by the Centers for Disease Control and Prevention (CDC) Division of Healthcare Quality Promotion.

NHSN operative procedure: A procedure that meets the following criteria: 1) performed on a patient who is a NHSN inpatient or outpatient; 2) takes place during an operation; and 3) included in the NHSN operative procedure categories.

NHSN reportable surgical procedure: an operation that takes place in an operating room, where at least one incision (including laparoscopic approach and cranial Burr holes) is made through the skin or mucous membrane, or reoperation via an incision that was left open during a prior operative procedure that is included in the ICD-10-PCS or CPT NHSN operative procedure code mapping.

Neonate: An infant less than or up to 30 days of age.

Neonatal critical care unit (NCCU): Patient care area providing care to most critically ill infants.

Outpatient: Patient whose date of admission to the facility and date of discharge are the same day (definition for the National Healthcare Safety Network reporting purposes).

Patient-days: The total number of inpatients for a particular unit determined at the same time each day for every day of the month recorded as a total sum for the month.

Permanent central line: A catheter that is tunneled under the skin on the chest wall and includes certain dialysis catheters (e.g., Hickman, Groshong, and Broviac) and implantable venous access ports (e.g., Port-a-Cath). Some dialysis patients may still have a port used for dialysis; however, most do not use this type of access due to the increased risk of infection.

Population: The total number of inhabitants of a geographic area or the total number of persons in a particular group (e.g., the number of persons engaged in a certain occupation).

Prevalence: The number or proportion of cases, events or attributes among a given population.

Rate: An expression of the relative frequency with which an event occurs among a defined population and specific time-period, calculated as the number of new cases or deaths during a specified period divided by either person-time or the average (mid-interval) population.

Risk: The probability that an adverse event will occur (e.g., that a person will be affected by, or die from, an illness, injury, or other health condition within a specified time or age span).

Risk adjustment: Accounts for differences in patient populations, enabling hospital comparisons.

Risk-adjusted rate: A risk-adjusted rate is a rate of infection that accounts for differences in patient populations and/or hospital characteristics between hospitals. Risk adjustment is accomplished by comparing an actual (observed) rate to the rate that is expected based on national data from similar patient populations and/or hospital characteristics.

Risk factor: An aspect of personal behavior/lifestyle, environmental exposure, or hereditary characteristic associated with an increased occurrence of a disease, injury, or other health condition.

Standardized infection ratio (SIR): A risk-adjusted summary measure that accounts for the type of procedure and risk category. The SIR compares the actual number of HAIs reported to the number that would be predicted, given the standard population (i.e., NHSN baseline), adjusting for several risk factors that have been found to be significantly associated with differences in infection incidence. In other words, an SIR greater than 1.0 indicates that more HAIs were observed than predicted; conversely, an SIR less than 1.0 indicates that fewer HAIs were observed than predicted.

Surgical site infection (SSI): Infections that are directly related to an operative procedure. Some SSIs are minor and only involve the skin or subcutaneous tissue. Other SSIs may be deeper and more serious.

Superficial incision infection: involves only the top layers of the skin.

Deep incision infection: involves deeper soft tissues (e.g., fascia and muscle layers)

Organ space infection: involves any part of the body that is opened or manipulated during the surgical procedure, excluding the top layers of skin, fascia or muscle layers.

Surgical site infection rate: Surgical site infection rates per 100 operative procedures are found by dividing the number of SSI by the total number of specific operative procedures within a given reporting period. The results are then multiplied by 100. These calculations are performed separately for each type of surgical procedure. These are not risk adjusted and no comparison between facilities, states, or to the national baseline can be made.

Symptom: Any indication of disease noticed or felt by a patient.

Temporary central line: A central line that is not tunneled.

Trend: Movement or change in frequency over time, usually upwards or downwards.

Validation: A method of assessing the completeness and accuracy of reported HAI data.

Vascular access infection: An infection that is either a local access infection or access-related bloodstream infection.

Wound class: An assessment of the likelihood and degree of contamination of a surgical wound at the time of the operation. The four classes are clean, clean contaminated, contaminated, and dirty.

Appendix B

Standardized infection ratio

The standardized infection ratio (SIR) is a risk-adjusted summary measure used throughout this report. The SIR compares the actual number of healthcare-associated infections (HAIs) reported to the number that would be predicted, given the standard population (i.e., National Healthcare Safety Network (NHSN) baseline). The SIR accounts for several risk factors that have been found to influence infection rates. The number of predicted infections is calculated based on the 2015 national HAI aggregate data and adjusted for each facility.

Interpretation of the SIR is done by comparing a facility's value to one (observed and predicted number of SSI are the same). A SIR greater than 1.0 indicates that more HAIs were observed than predicted (i.e., the rate is higher (worse) than the national baseline). Conversely, an SIR less than 1.0 indicates that fewer HAIs were observed than predicted (i.e., the rate is lower (better) than the national baseline).

The statistical significance of the difference between the observed and predicted SSI based on the national baseline is indicated by a p-value. A p-value indicates the probability of observing a similar or larger difference between the observed and predicted rates if in truth there was no difference. . If the p-value is greater than or equal to 0.05, then there is no significant difference between the facility's HAI count and the predicted count based on the national rate. If the p-value is less than or equal to than 0.05, then the difference is statistically significant, and the value of the SIR determines whether the facility is better than or worse than the national rate.

For some conditions, SIRs are not available, and this report presents crude rates that are not adjusted for patient population risk factors or facility characteristics that may influence differences in rates between facilities. For this reason, crude rates of infection should be interpreted with caution. For a more detailed explanation of how the SIR is calculated, see NHSN's SIR guide (<https://www.cdc.gov/nhsn/pdfs/ps-analysis-resources/nhsn-sir-guide.pdf>).

Rates

Rates were reported when risk-adjusted analysis (i.e., SIR) is not available through NHSN. Rates are reported with a national comparison for dialysis events. Rates without a national comparison are reported for selected surgical site infections (following hip replacements and hysterectomies) among ambulatory surgery centers.

Dialysis

Rates of access-related bloodstream infections related to hemodialysis were compared to national aggregate rates:

- If the rate is lower than the national aggregate rate and the p-value is less than or equal to 0.05, the facility's infection rate is designated as "better."
- If the rate is higher than the national aggregate rate and the p-value is less than or equal to 0.05, the facility's infection rate is designated as "worse."
- If the p-value is greater than 0.05, the difference between the facility's rate and the national aggregate rate is not statistically significant, and the facility's infection rate is designated as "same."

Surgical-site infections

Rates for surgical site infections (SSIs) were calculated by dividing the number of SSI events by the number of procedures reported in that year. This number was multiplied by 100 to have the rate per 100 procedures. No comparison between facilities or to the national baseline could be made, as there was no risk adjustment for differences between facilities. These differences may include number of beds, patient population, and others. Rates were used in place of SIR (risk adjustment) for SSIs following hip replacements and hysterectomies that occurred in ambulatory surgery centers. All other SSIs in this report use the SIR calculation and are compared to national baselines.

Appendix C

Facility types

Certain health care facility types in Colorado must report healthcare-associated infections by Colorado law (CRS 25-3-601). A detailed list of the current reportable conditions can be found on the CDPHE website

(<https://www.colorado.gov/pacific/cdphe/hai-professionals>) under “HAI Reportable Conditions”.

Acute care hospitals: Facilities that primarily provide inpatient services including diagnostic, therapeutic, or rehabilitation services. Details on acute care hospital reporting can be found on the acute care hospital NHSN webpage

(<https://www.cdc.gov/nhsn/acute-care-hospital/index.html>).

Ambulatory surgery center: A facility, which operates exclusively for providing surgical services to patients not requiring hospitalization. Details on ambulatory surgery center reporting can be found on the ambulatory surgery center NHSN webpage

(<https://www.cdc.gov/nhsn/ambulatory-surgery/index.html>).

Critical access hospital: A designation given to certain rural hospitals by the Centers for Medicare and Medicaid Services (CMS) to reduce financial vulnerability and improve access to health care by keeping essential services in rural communities. A critical access hospital must have 25 or fewer acute care inpatient beds, be more than 35 miles from another hospital, maintain an average length of stay of 96 hours or less for acute care patients, and provide 24/7 emergency care services. Details on critical access hospitals can be found on the critical access hospitals CMS webpage (<https://www.cms.gov/Medicare/Provider-Enrollment-and-Certification/CertificationandCompliance/CAHs.html>).

Dialysis facility: A facility which operates exclusively to provide dialysis services to patients not requiring hospitalization. Details on dialysis facility reporting can be found on the outpatient dialysis NHSN webpage

(<https://www.cdc.gov/nhsn/dialysis/index.html>).

Inpatient rehabilitation facility: Inpatient rehabilitation facilities and inpatient rehabilitation wards in hospitals care for patients who have lost function due to an injury or medical condition. Details on inpatient rehabilitation facility reporting can be found on the inpatient rehabilitation facility NHSN webpage (<https://www.cdc.gov/nhsn/inpatient-rehab/index.html>).

Long-term acute care hospital: A specialty care hospital that cares for patients with serious medical conditions that require intense, special treatment for long periods of time (an average length of stay is 25 days). Details on long-term acute care hospital reporting can be found on the long-term acute care hospital NHSN webpage (<https://www.cdc.gov/nhsn/ltach/index.html>).