



2022-2023
(April–March)

Infection Prevention & Control Annual Report

INFECTION PREVENTION & CONTROL ANNUAL REPORT

INTRODUCTION

Health care-associated infections (HAIs) are defined as infections that are transmitted within a health care setting during the provision of health care.

“Extrapolating from U.S. data, Zoutman et al. estimated that approximately 220,000 HAIs occur annually in Canada and more than 8,000 deaths occur each year, attributable to HAIs. **This translates into approximately 285 deaths per year in Manitoba.**”¹

Collection, analysis, and interpretation (surveillance) of these infections is an essential element in their control. The primary purpose of surveillance is to allow front line health care providers to understand the frequency and distribution of infections, including emerging and changing pathogens, and take steps in their control and prevention. The Public Health Agency of Canada (PHAC) estimates that the burden of illness in Canada related to surgical wound infections, pneumonias, urinary tract infections and other sites of infections exceeds \$453 million with emerging antibiotic resistant organisms adding an additional cost of \$24-35 million.

The term client will be used throughout this document when referring to patient, resident or client.

PROJECTS AND INITIATIVES

HAND HYGIENE STRATEGY

Hand Hygiene (HH) is the most important measure to avoid the transmission of harmful germs and prevent infection. The Southern Health-Santé Sud HH policy calls for all health care providers to perform HH before and after contact with a client or the client’s environment, before aseptic procedure and after body fluid exposure risk, based on the 4 Moments for HH.

HH was monitored in Southern Health-Santé Sud Acute Care (AC) facilities and Personal Care Homes (PCHs) in Quarters 1 & 2, and throughout the year for community programs using a paper audit tool adapted from the Canadian Patient Safety Institute. Health care providers are observed by trained auditors to determine compliance with HH performance for each of the four essential moments for HH. The audit measures HH compliance per opportunity, as well as HH compliance per moments/indications. The definitions for HH Moment/Indication and HH Opportunity are listed below.

- **HH Moment (or Indication):** The 4 Moments for HH are based on the risk of microorganism transmission when a health care worker is interacting with a client. A HH indication is the reason why HH is necessary at a given moment. It is justified by a risk of organism transmission from one surface to another.

¹ MB Health, June 2019. Routine Practices and Additional Precautions: Preventing the Transmission of Infection in Health Care.

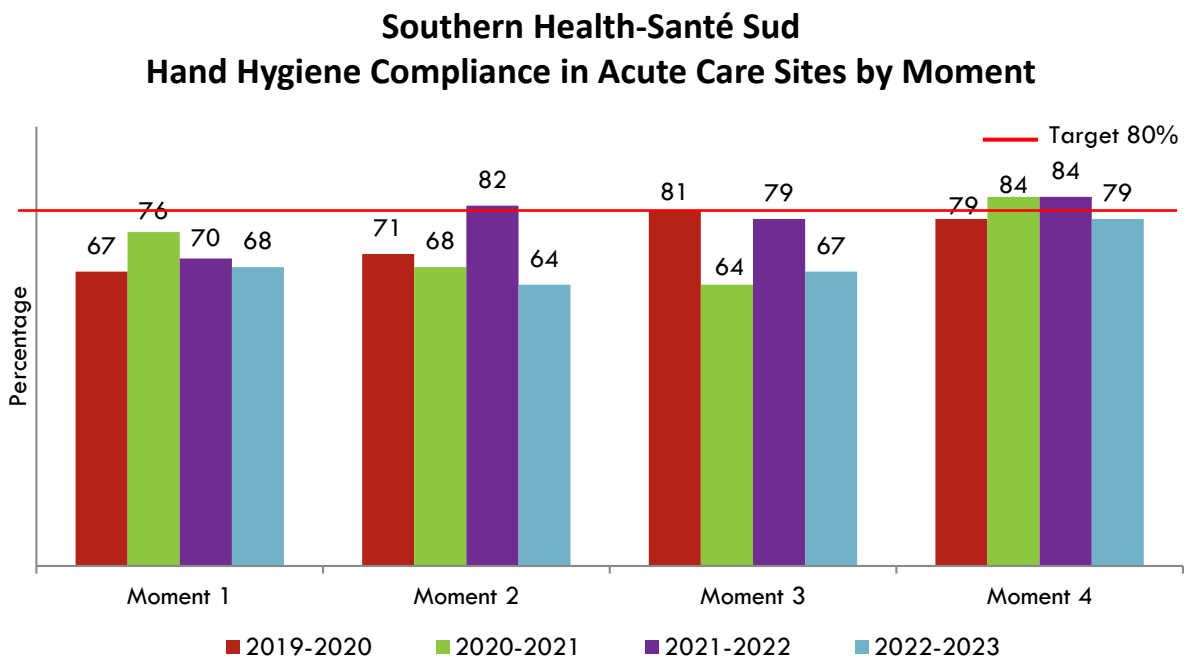
- **HH Opportunity:** The need to perform HH, whether there are single or multiple indications (moments). HH action must correspond to each opportunity. One HH opportunity can also arise from multiple moments (combined moments) resulting in one single act of HH being compliant for multiple HH moments.

2022-2023 has been a year of change relating to monitoring HH across the SDO for all AC facilities and all PCHs. Quarter 3 was the beginning of the use of HandyAudit, an electronic HH auditing platform utilized across all Manitoba SDOs. HandyAudit is an internet-based application that an auditor uses on a mobile electronic device to record the actions of a healthcare worker (HCW). Unlike paper-based auditing methods, the auditor does not decide on whether indications for HH are met. Instead, auditors record the actions of the HCW and the environment in which they occurred. HandyAudit makes the determination of compliance based on the recorded narrative, therefore, removing auditor subjectivity.

Education roll out and auditor training began in Quarter 3, resulting in a lower number of audits done for both Quarters 3 & 4. As such, HandyAudit graphs for these two quarters will not be shown in this annual report.

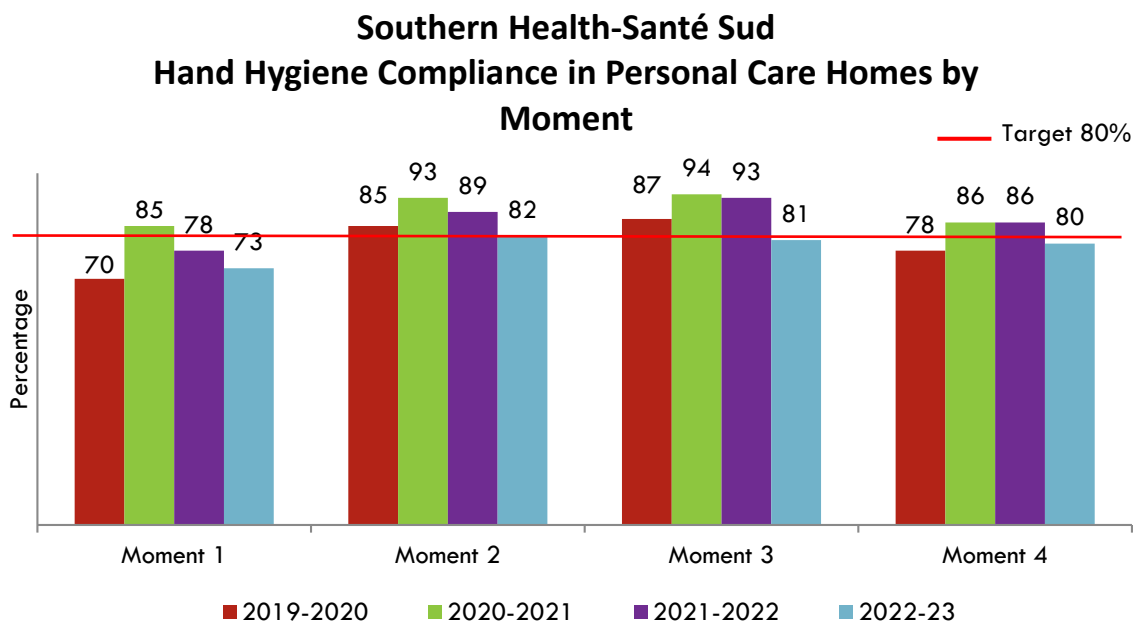
The following graphs in this section show the HH compliance rates per moment comparing the past four fiscal years by program. **Please note: the graphs for HH in AC/PCHs will only show HH compliance for Quarters 1 & 2 in 2022-2023.**

Figure 1a. Overall regional HH compliance by moment at Southern Health-Santé Sud Acute Care (AC) facilities for the past four fiscal years. In AC facilities, HH compliance rates have decreased for all moments compared to the previous year. The 80% target compliance rate was not met.



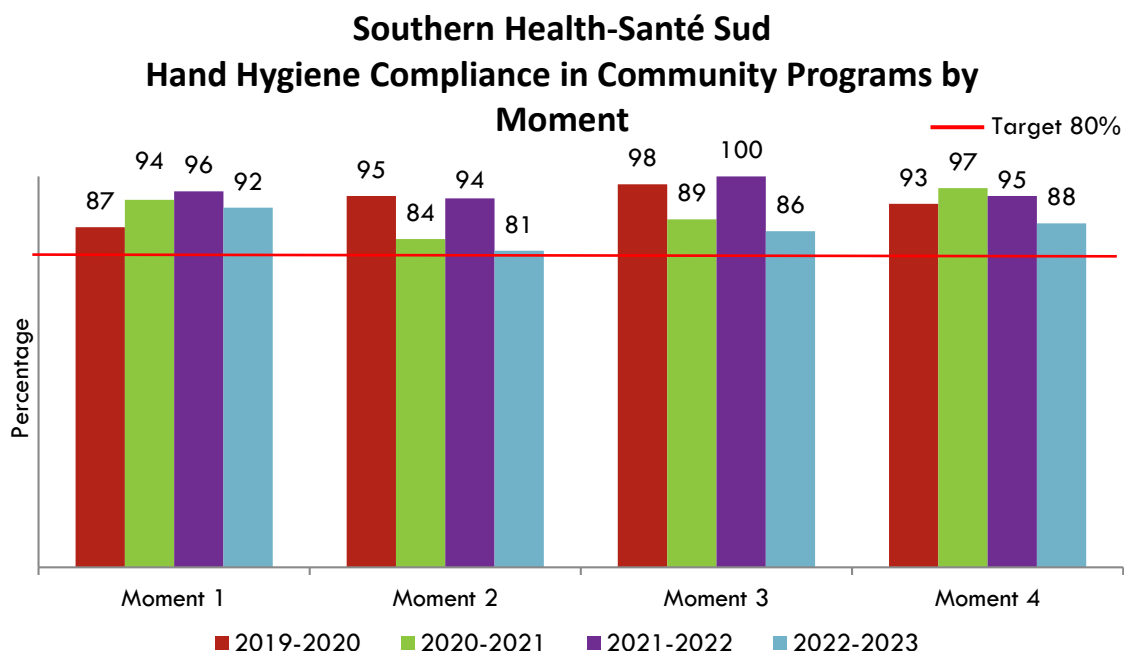
Source: Southern Health-Santé Sud Regional Infection Prevention & Control Indicators 2022-2023

Figure 1b. Overall regional HH compliance by moment at Southern Health-Santé Sud Personal Care Home (PCH) facilities for the past four fiscal years. In PCH facilities, HH compliance rates decreased for all moments compared to the previous year. The 80% target compliance rate was met for moments 2, 3 & 4.



Source: Southern Health-Santé Sud Regional Infection Prevention & Control Indicators 2022-2023

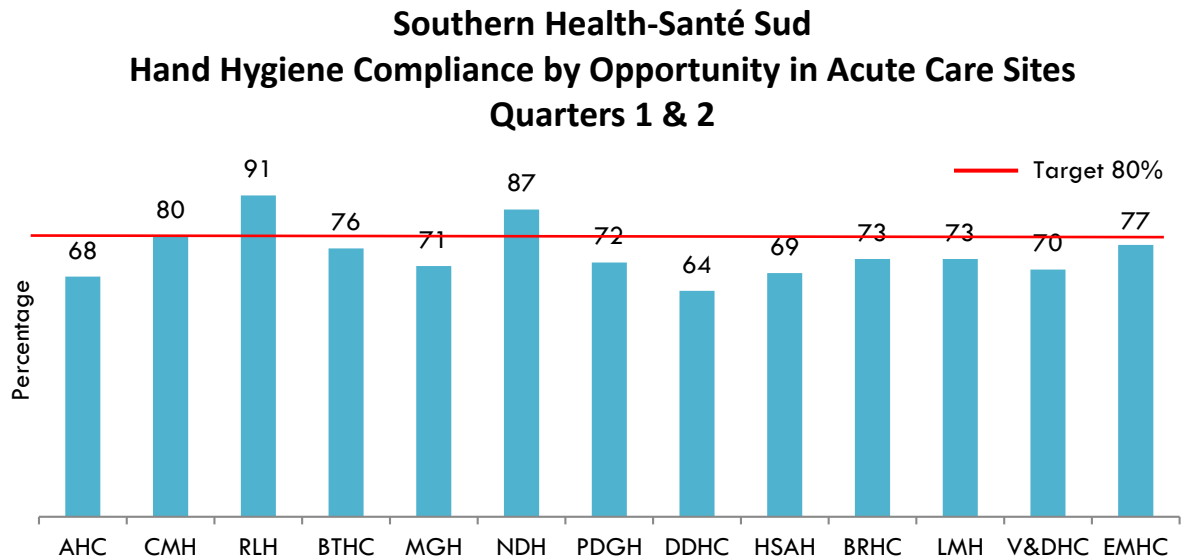
Figure 1c. Overall regional HH compliance by moment reported at Southern Health-Santé Sud community programs for the past four fiscal years. The community programs include Home Care, Public Health (PH), Primary Care (PC) and Mental Health (MH). The target of 80% compliance has been met for all 4 moments.



Source: Southern Health-Santé Sud Regional Infection Prevention & Control Indicators 2022-2023

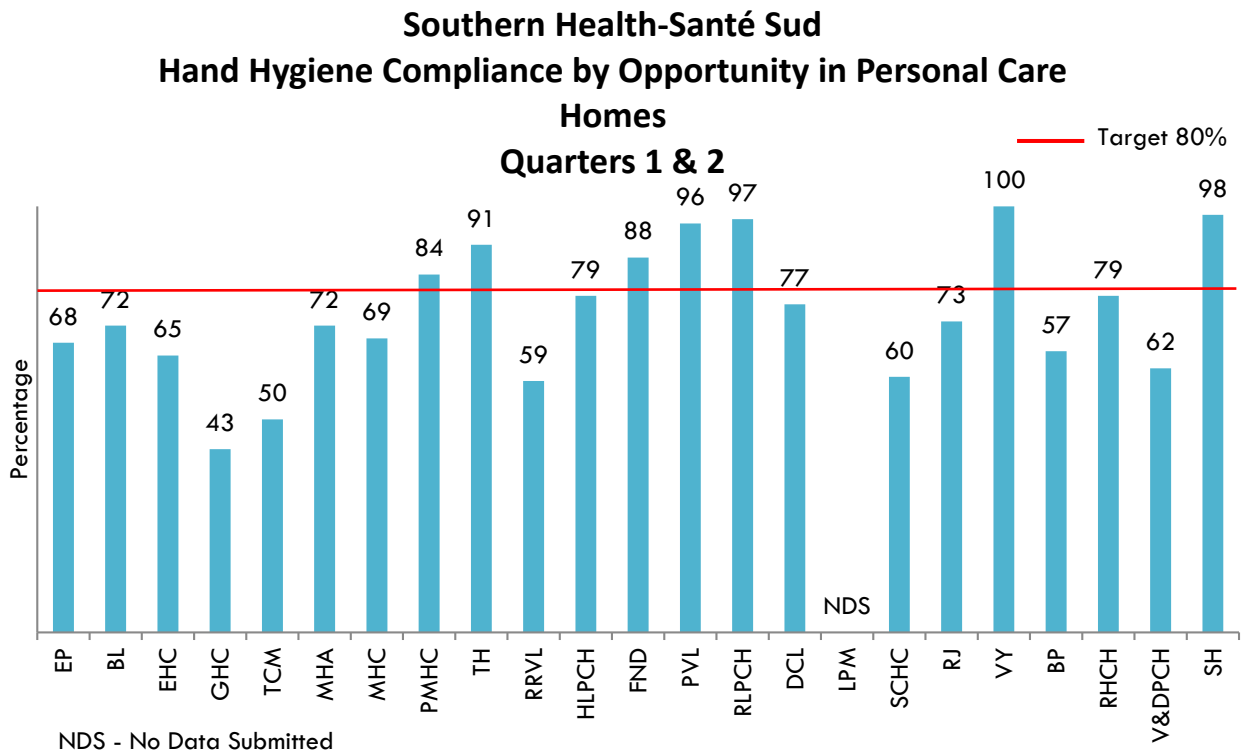
See the Facility Name Legend for the following two graphs.

Figure 1d. Overall HH compliance by opportunity in AC facility in Southern Health-Santé Sud for quarters 1 & 2 in the fiscal year 2022-2023. Three of the thirteen sites show a HH compliance that met the target of 80%.



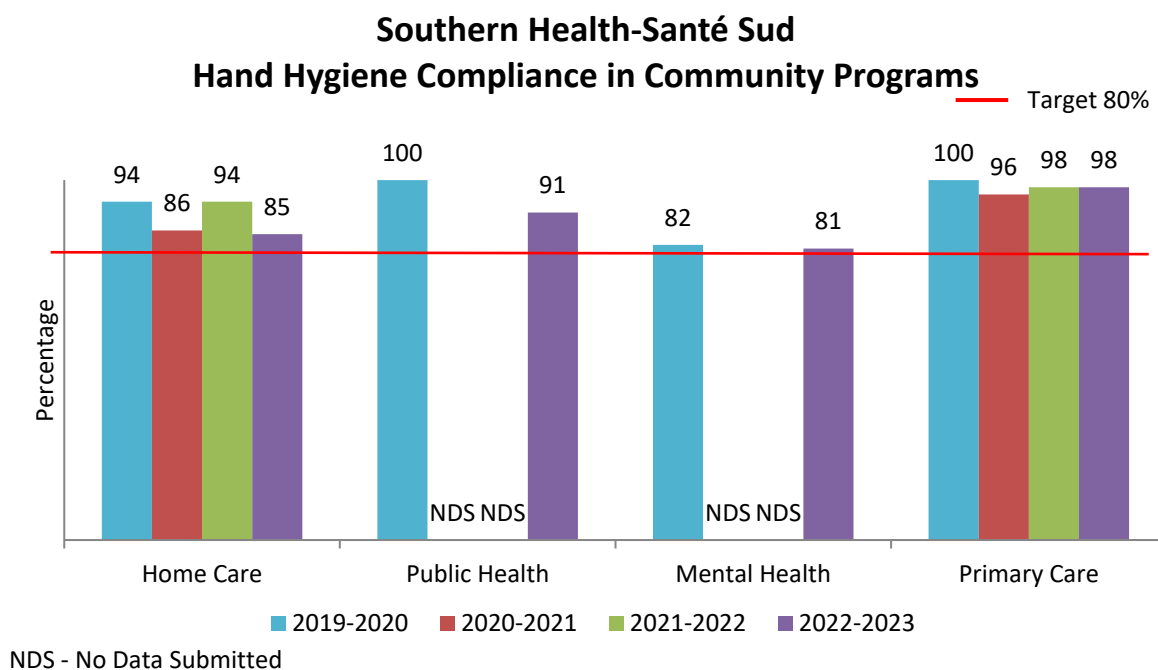
Source: Southern Health-Santé Sud Regional Infection Prevention & Control Indicators 2022-2023

Figure 1e. Overall HH compliance by opportunity in PCH facility in Southern Health-Santé Sud for quarters 1 & 2 in the fiscal year 2022-2023. Seven of the twenty-three PCH sites show a HH compliance that met the target of 80%.



Source: Southern Health-Santé Sud Regional Infection Prevention & Control Indicators 2022-2023

Figure 1f. HH compliance by community programs in Southern Health-Santé Sud for the fiscal year 2022-2023. HH audits were completed by all programs this year and all programs are meeting the target of 80%.



Source: Southern Health-Santé Sud Regional Infection Prevention & Control Indicators 2022-2023

WHAT IS SOUTHERN HEALTH-SANTÉ SUD DOING TO IMPROVE HAND HYGIENE RATES?

Southern Health-Santé Sud continues to emphasize the importance of HH in preventing the spread of HAIs through implementation of a comprehensive HH strategy targeting the 4 Moments for HH. This strategy includes:

- education on the 4 Moments for HH in the Regional Orientation for all new hires in all programs;
- education on the 4 Moments for HH in the Regional Clinical Orientation days, for all new nurses;
- requirement to have “point-of-care” hand rub available throughout the region;
- regional 4 Moments for HH audit process including audit training, audit criteria, use of audit tool and submission of quarterly results throughout the region;
- posting of 4 Moments for HH audit results; and
- reporting regional HH monitoring compliance results to MB Health.

Regional Infection Prevention & Control (IP&C) completed a HH education blitz in early spring for all facility/community staff. The HandyAudit electronic HH auditing platform was rolled out in Quarter 3 across all AC/PCHs in the SDO.

WHAT IS THE ANNUAL TARGET SOUTHERN HEALTH-SANTÉ SUD SEEKS TO REACH?

The ultimate goal for HH compliance in SH-SS is 100% with a minimal target of 80% compliance.

WHAT ARE THE NEXT STEPS FOR SOUTHERN HEALTH-SANTÉ SUD?

Moving forward for 2023-2024, the Regional IP&C goals are:

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- to continue to monitor hand hygiene compliance with a goal of increasing the number of HH opportunities being audited,
 - to roll out the HandyAudit software to all community programs (including training HH auditors), and
 - to provide HH education regarding HandyAudit for all direct care providers and those that interact with client environments in Southern Health-Santé Sud.

SURVEILLANCE

The Regional IP&C program carries out surveillance for a number of quality and patient safety indicators. This section of the report presents information on the targeted indicators.

HEALTHCARE ASSOCIATED INFECTION (HAI) SURVEILLANCE

The Regional IP&C program developed a new Healthcare Associated Infection (HAI) Surveillance Policy this year, moving to a targeted HAI surveillance program for infections that are more common/relevant to an area or that are required by governing bodies (i.e., Manitoba (MB) Health, Accreditation Canada).

- Acute Care targeted HAI surveillance includes the following:
 - Methicillin Resistant Staphylococcus aureus (MRSA) colonizations and infections,
 - Carbapenamase Producing Enterobacteriaceae (CPE) colonizations and infections,
 - Vancomycin Resistant Enterococci (VRE) bacteremia (bloodstream infection),
 - Clostridioides difficile infections (CDI), and
 - Catheter-Associated Urinary Tract Infections (CAUTI).
- Personal Care Home targeted HAI surveillance includes the following:
 - MRSA colonizations and infections,
 - CPE colonizations and infections,
 - VRE bacteremia (bloodstream infection),
 - CDI,
 - Symptomatic Urinary Tract Infections (UTI) excluding CAUTI,
 - Respiratory tract infections, and
 - Gastrointestinal tract infections.

The AC HAI rate is now calculated as total number of cases by 10,000 AC inpatient days (to align with MB Health) and the PCH rate is calculated as total number of cases by 1,000 PCH resident days (to align with Infection Prevention and Control [IPAC] Canada). The presentation of rates by client days is recommended by Canadian Nosocomial Infection Surveillance Program (CNISP) as it reflects the per-day client risk of acquiring a HAI and disease risk factors. For this reason, it is the most useful rate for comparing different types of health care facilities with varying average lengths of stay.

With the changes to the targeted infections for AC and PCH, HAI rates cannot be compared to previous years. As such, the HAI rates for 2022-2023 will be a new baseline.

- **The AC targeted HAI rate for 2022-2023 is 6.29 per 10,000 client days.**
- **The PCH targeted HAI rate for 2022-2023 is 2.04 per 1,000 resident days.**

Descriptions of the surveillance case definitions can be found in the Southern Health-Santé Sud *Infection Prevention & Control: Healthcare Associated Infection Indicator Definitions - Surveillance in Acute Care and Personal Care Home, April 2022-March 2023*.

What are the next steps for Southern Health-Santé Sud?

Moving forward for 2023-2024, the Regional Infection Prevention & Control (IP&C) goals are:

- to continue to disseminate the targeted HAI rates in a report to each AC and PCH facility in the region on a quarterly basis.
- to provide each facility with an annual report comparing their HAI rates to the regional rate.
- to encourage facility ICPs to continue discussions with Facility IP&C Committee re: analyzing infection rates, investigating causes where infection rates are high and developing an action plan focused on decreasing infections.
- to monitor for clusters of illness where heightened awareness is required.
- to ensure the surveillance case definitions align with current published definitions.

PREVENTION AND TREATMENT OF URINARY TRACT INFECTIONS

Urinary tract infections (UTIs) are the most frequently encountered HAI in PCH facilities, accounting for up to 20% of infections reported by PCHs as stated in the National Healthcare Safety Network (NHSN), Long-term Care Facility Component Urinary Tract Infection – January 2019. UTIs are the leading cause of bacteremia among PCH clients and can lead to significant morbidity and mortality in the elderly. UTIs are one of the most common reasons for client hospitalization, and are also the reason for considerable antibiotic use in PCH settings. **PCHs are now only targeting symptomatic UTIs (excluding catheter-associated UTIs).**

UTIs are also the fourth most common type of HAI in AC, accounting for more than 12% of infections reported by AC hospitals as stated in the Centers for Disease Control (CDC)/NHSN Urinary Tract Infection Events, January 2018. A large percentage of healthcare associated UTIs in AC are caused by the insertion of urinary catheters. It is estimated that each year, more than 13,000 deaths are associated with UTIs. ² **AC facilities are now only targeting catheter-associated UTIs (CAUTIs).**

What is Southern Health-Santé Sud doing to decrease the risk of UTIs?

Southern Health-Santé Sud PCHs continue to use The Guidelines and Clinical Care Map - Diagnosis and Management of UTIs in PCH, commonly referred to as the UTI Guideline for the management and treatment of UTIs in PCH. These clinical guidelines were developed based on expert recommendations and are intended to:

- assist health care workers to accurately identify UTIs and CAUTIs;
- prevent or reduce the risk of UTIs and CAUTIs; and
- provide management and treatment options for individuals with UTI or CAUTI.

These activities are complementary to the regional antimicrobial stewardship program whereby best client outcomes are optimized and antibiotic resistance is reduced by appropriately selecting antimicrobial therapy only when it is needed.

Other initiatives that have been put in place to decrease the rates of UTIs within the region are as follows:

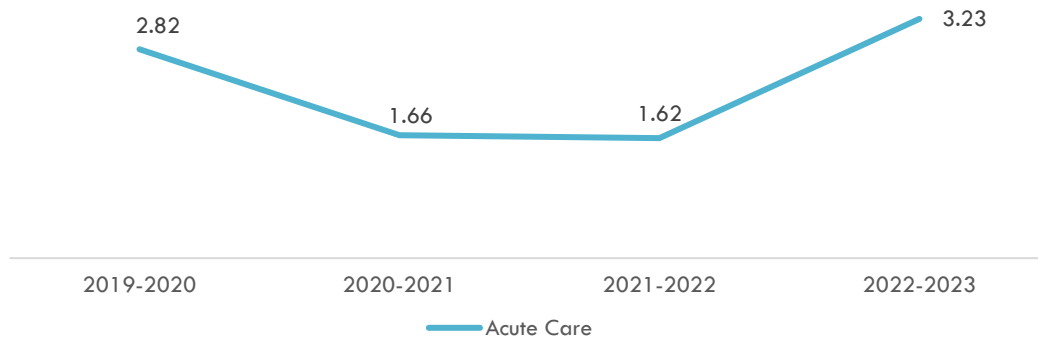
- The Regional Clinical Orientation for all new nurses working in PCH and AC continues to include a presentation about Antimicrobial Stewardship.

² Centers for Disease Control (CDC): Urinary Tract Infection(Catheter-Associated Urinary Tract Infection [CAUTI] and Non-Catheter-Associated Urinary Tract Infection [UTI]) Events (January 2020).

- A Urine Trouble education sheet is being used for PCH residents/families providing education on UTI symptoms and how overuse of antibiotics can lead to the development of antibiotic resistant organisms (adapted from Winnipeg Regional Health Authority).

Figure 3a. The rate of CAUTIs in Southern Health-Santé Sud AC facilities from April 1, 2019 to March 31, 2023. The regional rate of CAUTIs reported in AC for 2022-2023 was 3.23 per 10,000 client days, an increase of 1.61 from last year. This rate represents 36 healthcare associated CAUTIs.

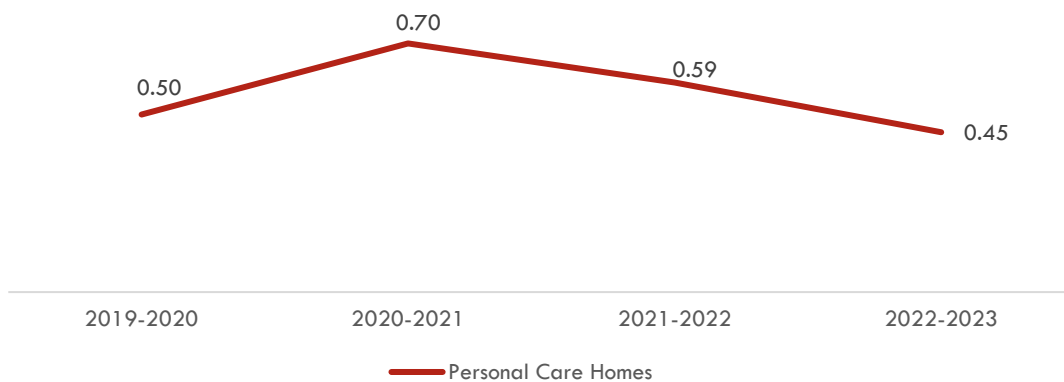
**Southern Health-Santé Sud
Rate of Catheter-Associated Urinary Tract infections
in Acute Care per 10,000 Client Days**



Source: Southern Health-Santé Sud Regional Infection Prevention & Control Indicators 2022-2023

Figure 3b. The rate of symptomatic UTIs (excluding CAUTIs) in Southern Health-Santé Sud PCH facilities from April 1, 2019 to March 31, 2023. The regional rate of UTIs reported in PCHs for 2022-2023 was 0.45 per 1,000 resident days, a decrease of 0.14 from last year. This rate represents 194 healthcare associated UTIs.

**Southern Health-Santé Sud
Rate of Symptomatic Urinary Tract Infections in
Personal Care Homes per 1,000 Resident Days**



Source: Southern Health-Santé Sud Regional Infection Prevention & Control Indicators 2022-2023

What are the next steps for Southern Health-Santé Sud?

- The Regional IP&C Team is planning to revise the PCH UTI Guideline in collaboration with the Antimicrobial Stewardship working group, creating a combined UTI Guideline for both AC & PCH facilities.
- The goal is to decrease the CAUTI rates in all AC sites and decrease the symptomatic UTI rates in all PCHs.

ANTIBIOTIC RESISTANT ORGANISMS (AROs)

Surveillance for AROs focuses on newly identified cases. The targeted AROs of concern include Methicillin-Resistant *Staphylococcus aureus* (MRSA), Carbapenemase-Producing *Enterobacteriaceae* (CPE) and Vancomycin Resistant Enterococci (VRE) bacteremia (bloodstream infection). Newly identified cases are categorized according to where they were most likely acquired. Cases may be healthcare associated, community-acquired, or of unknown origin. Healthcare associated cases are further investigated to determine whether they were acquired in one of the region's facilities or from another health care facility.

AROs are usually introduced into the health care setting by an infected or colonized individual. An infected individual is an ARO positive individual who shows signs and symptoms of an infection caused by that organism. Colonization refers to the presence of microorganisms in or on a host with growth and multiplication but without tissue invasion or cellular injury, so there are no signs or symptoms of infection.

ARO infection transmission most frequently occurs via the hands of health care workers that become transiently colonized while delivering care to patients, when removing gloves, or when touching contaminated surfaces. Environmental contamination can also serve as a vehicle of transmission. It remains important to control the spread of AROs within AC facilities where the risk of infections with AROs is greatest. General IP&C measures (e.g. Routine Practices) remain essential, including hand hygiene, appropriate equipment cleaning and decontamination of the environment. The addition of contact precautions is also effective in preventing transmission of AROs.

New AROs, i.e. *Candida auris*, continue to emerge and consultations with Infectious Diseases are recommended when dealing with such cases.

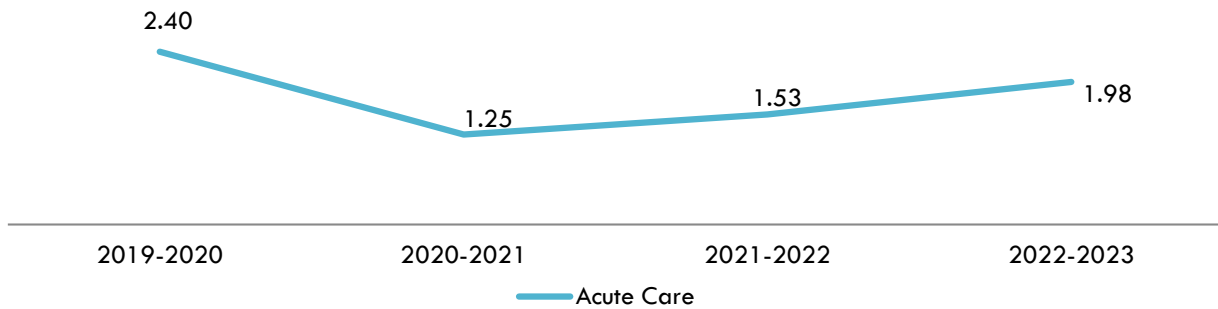
Methicillin Resistant *Staphylococcus aureus* (MRSA) incidence rate

MRSA is a strain of *Staphylococcus aureus* resistant to various antimicrobial agents. Individuals who carry the organism usually on their skin or in their nose without signs of infection are said to be colonized. Sometimes MRSA can cause serious wound, respiratory or bloodstream infections. Clients who are older, have chronic disease, and undergo invasive procedures are at higher risk of acquiring MRSA. The principle mode of transmission within health care facilities is considered to be from one colonized or infected client to another via the hands of health care providers. The data represents newly identified cases of MRSA among clients admitted to a Southern Health-Santé Sud facility where the acquisition occurred during the provision of health care.

“An incidence rate measures the occurrence of new cases or events in a specific population during a given time period” (APIC Text of Infection Control and Epidemiology, 2014).

Figure 4a. MRSA incidence rates per 10,000 client days in Southern Health-Santé Sud AC facilities from April 1, 2019 to March 31, 2023. The incidence rate for MRSA acquired in AC is 1.97 per 10,000 patient days for the fiscal year 2022-2023, which is higher than the previous year. This rate represents a total of 22 MRSA cases (18 colonizations and 4 infections).

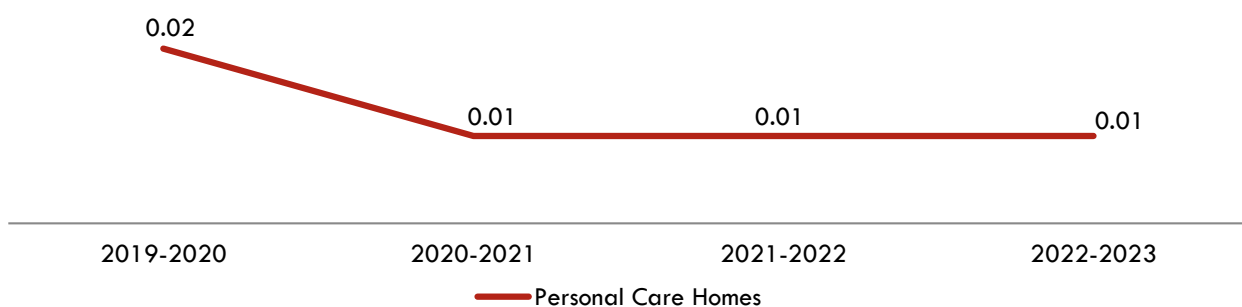
**Southern Health-Santé Sud
MRSA Cases (infection and colonization) Per 10,000 Client Days
Acquired in Acute Care**



Source: Southern Health-Santé Sud Regional Infection Prevention & Control Indicators 2022-2023

Figure 4b. MRSA incidence rates per 1,000 resident days in Southern Health-Santé Sud PCHs from April 1, 2019 to March 31, 2023. The incidence rate for MRSA acquired in PCH is 0.01 per 1,000 resident days for the reporting year 2022-2023, which is the same as the previous year. This rate represents a total of 3 MRSA cases (1 colonization and 2 infections).

**Southern Health-Santé Sud
MRSA Cases (infection and colonization) Per 1000 Resident Days
Acquired in Personal Care Homes**



Source: Southern Health-Santé Sud Regional Infection Prevention & Control Indicators 2022-2023

What is Southern Health-Santé Sud doing to decrease MRSA incidence rates?

All clients admitted to Southern Health-Santé Sud AC facilities are screened for MRSA risk factors and those considered to be at risk are tested for the organism as quickly as possible. Clients who are found to be MRSA positive are placed on precautions to reduce the risk of transmission within a facility.

Admission screening is important to quickly identify and isolate positive cases to prevent cross transmission. A consistent regional ARO admission screening process in AC has been established to screen for AROs on admission.

What are the next steps for Southern Health-Santé Sud?

- The Regional IP&C goal is to revise the Admission Screening for AROs Policy and the ARO Management Policy within the coming year.

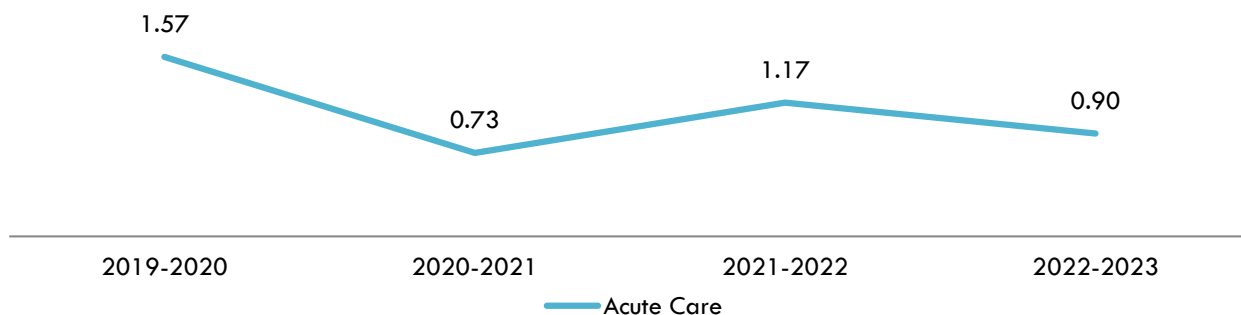
Clostridioides difficile infection (CDI) incidence rate

CDIs are the most frequent cause of healthcare associated infectious diarrhea in developed countries.³ CDIs are often related to antimicrobial therapy, which alters the normal bacteria found in the gastrointestinal tract. CDIs may present as severe diarrhea that may be difficult to control, toxic megacolon, sepsis and even death. The principle mode of transmission within health care facilities occurs when *C. difficile* spores are spread on environmental surfaces (e.g., toilet fixtures, furniture, health care equipment), contaminated gloves or unwashed hands. It can then be picked up by another person who touches these contaminated objects and then touches their face or mouth, causing *C. difficile* spores to enter the intestinal tract.

Surveillance for CDIs is different because clients may experience more than one episode of CDI and/or may experience relapses associated with an earlier episode. A case would be considered to be healthcare associated if the client’s symptoms occurred 72 hours or more post-admission, the client had been previously admitted to a healthcare facility and discharged within the previous 4 weeks or client had a previous healthcare exposure at a healthcare facility within the previous 4 weeks.

Figure 5a. Incidence of CDIs per 10,000 client days acquired in Southern Health-Santé Sud AC facilities from April 1, 2019 to March 31, 2023. The incidence rate for CDIs acquired in AC facilities is 0.09 per 10,000 patient days for the fiscal year 2022-2023, which is lower than the previous year. This rate represents a total of 10 healthcare associated CDIs, distributed by cases at four of the thirteen AC sites.

Southern Health-Santé Sud Clostridium difficile Infections Per 10,000 Client Days Acquired in Acute Care



Source: Southern Health-Santé Sud Regional Infection Prevention & Control Indicators 2022-2023

³ Canadian Nosocomial Infection Surveillance Program (CNISP) – 2018 Surveillance for Clostridium difficile infection (CDI) – Dec 2017.

Figure 5b. Incidence of CDIs per 1,000 resident days acquired in Southern Health-Santé Sud PCHs from April 1, 2019 to March 31, 2023. The incidence rate for CDIs acquired in PCH facilities is zero for the fiscal year 2022-2023, which is the same incidence rate as the previous four years. This rate represents zero healthcare associated CDIs.

Southern Health-Santé Sud *Clostridium difficile* Infections Per 1000 Resident Days Acquired in Personal Care Homes



Source: Southern Health-Santé Sud Regional Infection Prevention & Control Indicators 2022-2023

Surgical site infections in acute care

Despite advances in operative techniques and use of prophylactic antibiotics, surgical site infections (SSIs) continue to be a major source of morbidity for clients who undergo operative procedures. SSIs are identified by the development of an infection within a specified period of time following the procedure. The follow-up period varies according to operative procedure; within 30 days for most surgeries, but up to one year if the procedure included some type of implant (e.g. joint replacement).

The Regional IP&C program developed a new Surgical Site Infection (SSI) Surveillance Policy this year, moving to a targeted SSI surveillance program. Southern Health-Santé Sud targeted surveillance of SSIs includes open colorectal surgery, caesarean section surgery, total hip arthroplasty and total knee arthroplasty. ICPs are now engaging open colorectal patients one month after surgery in an effort to improve SSI surveillance. The cases presented in this report are representative of all clients with infections associated with a targeted surgery performed in a Southern Health-Santé Sud regional surgical centre. We know that some SSIs may be treated in outpatient clinics and physician offices and therefore may not be captured in this surveillance system.

SSI surveillance measurement utilized by Southern Health-Santé Sud is based on standard case definitions published by the Centers for Disease Control and Prevention/National Healthcare Safety Network.

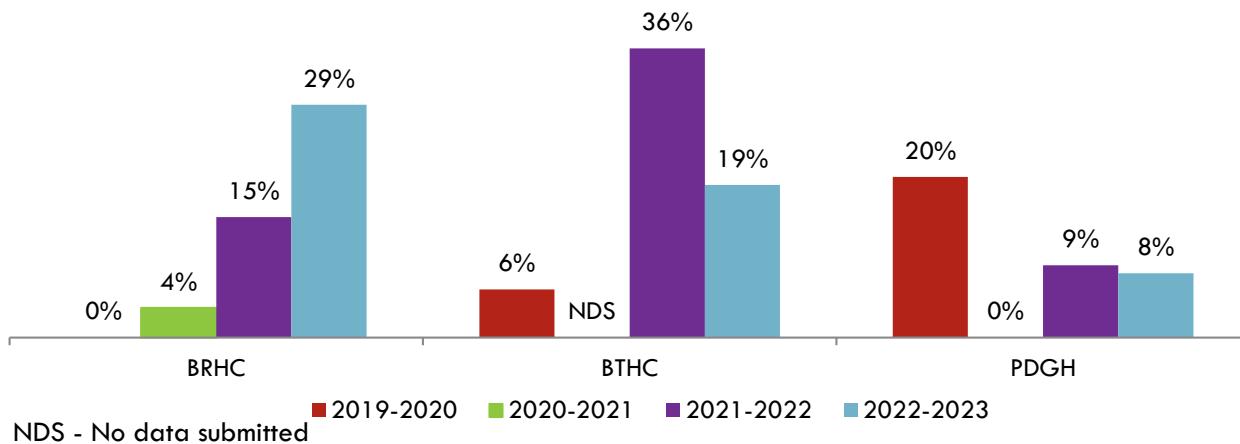
With the changes to the targeted SSIs in our SDO, the overall SSI rates cannot be compared to previous years. As such, the overall SSI rates for 2022-2023 will be a new baseline.

- **The overall targeted SSI rate per 100 targeted surgical procedures at the three regional centres for 2022-2023 is 3.48%. This rate represents a total of 21 SSIs in the regional centres (17 BRHC, 18 BTHC and 2 PDGH) for the fiscal year 2022-2023.**

The following five graphs show the SSI rates at the regional centres (BRHC, BTHC and PDGH) for each of the targeted surgical procedures during the past four fiscal years.

Figure 6a. Southern Health-Santé Sud SSI rates per 100 open colorectal surgical procedures in the three regional centres for the past four fiscal years. There was a total of 17 SSIs reported out of a total of 89 open colorectal surgical procedures in the regional centres (8 BRHC, 7 BTHC and 2 PDGH) for the fiscal year 2022-2023.

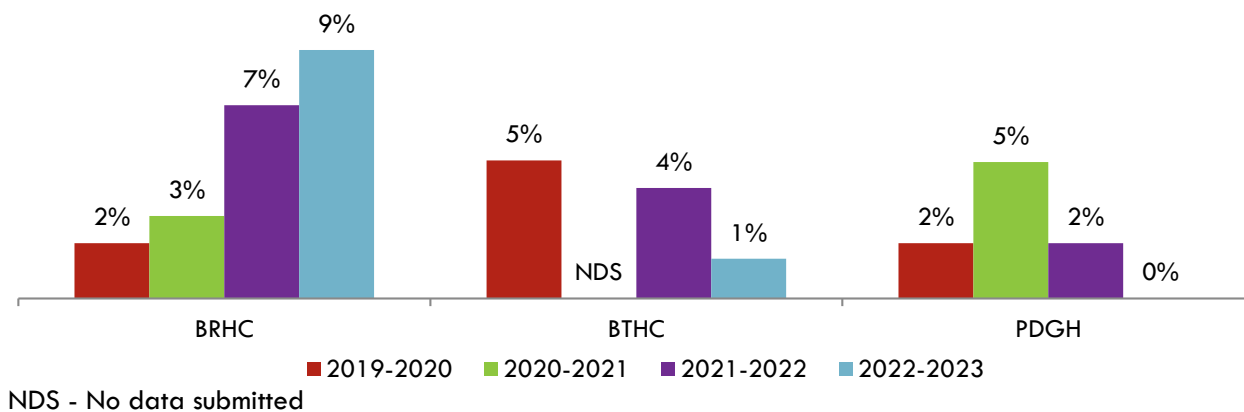
Southern Health-Santé Sud Regional Centres Surgical Site Infection Rates per 100 Open Colorectal Procedures



Source: Southern Health-Santé Sud Regional Infection Prevention & Control Indicators 2022-2023

Figure 6b. Southern Health-Santé Sud SSI rates per 100 C-section surgical procedures in the three regional centres for the past four fiscal years. There was a total of 12 SSIs reported out of a total of 379 C-section surgical procedures in the regional centres (9 BRHC, 3 BTHC and 0 PDGH) for the fiscal year 2022-2023.

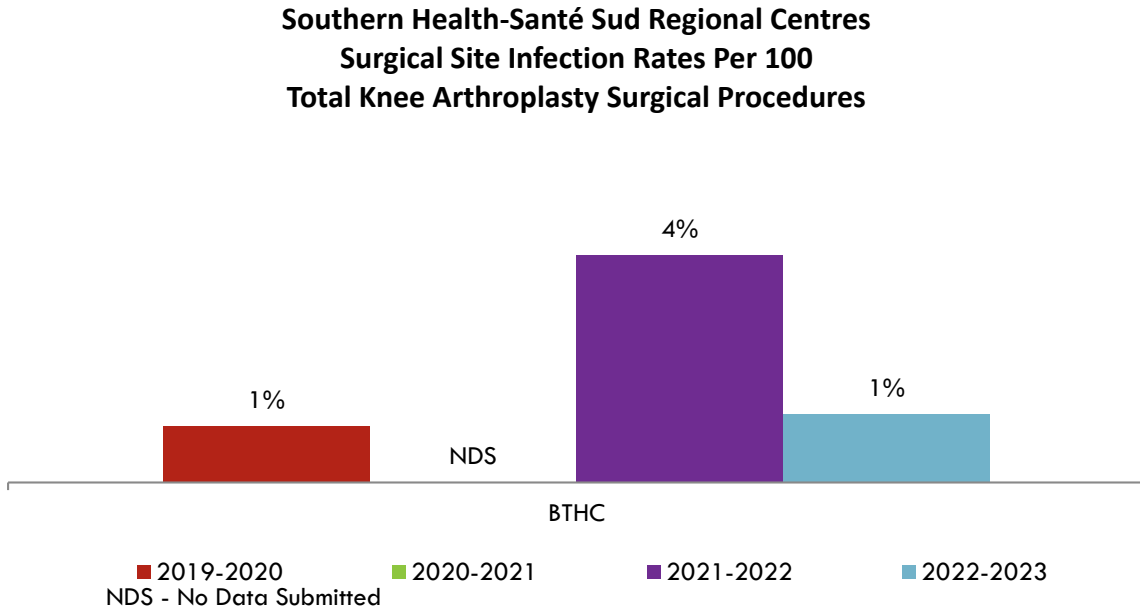
Southern Health-Santé Sud Regional Centres Surgical Site Infection Rates per 100 C-section Surgical Procedures



Source: Southern Health-Santé Sud Regional Infection Prevention & Control Indicators 2022-2023

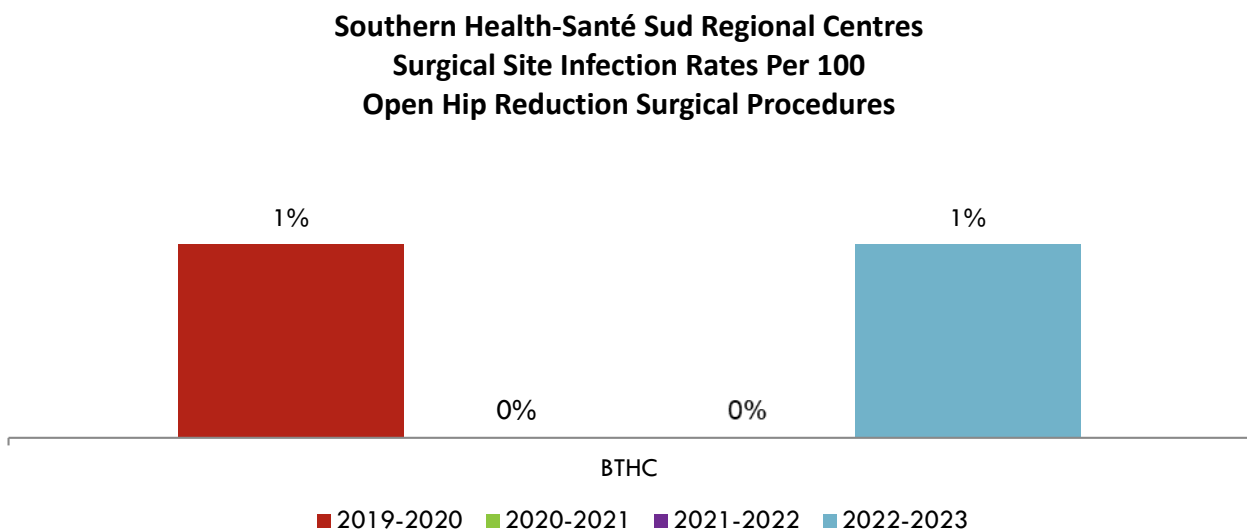
Note: BTHC is the only regional centre that performs total knee/total hip arthroplasty surgical procedures.

Figure 6c. Southern Health-Santé Sud SSI rates per 100 total knee arthroplasty surgical procedures at BTHC for the past four fiscal years. In the period of 2022-2023, there were 4 SSIs reported out of a total of 347 total knee arthroplasty surgical procedures.



Source: Southern Health-Santé Sud Regional Infection Prevention & Control Indicators 2022-2023

Figure 6d. Southern Health-Santé Sud SSI rates per 100 total hip arthroplasty surgical procedures at BTHC for the past four fiscal years. For 2022-2023, there was a total of 3 SSIs reported out of a total of 249 total hip arthroplasty surgical procedures.



Source: Southern Health-Santé Sud Regional Infection Prevention & Control Indicators 2022-2023

What is Southern Health-Santé Sud doing to decrease SSI rates?

Processes are in place in Southern Health-Santé Sud surgical facilities to decrease the SSI rates. These processes include the timely administration, timely discontinuation and appropriate selection of antimicrobials perioperatively, maintaining normothermia during the surgical procedure and following recommendations for no hair removal or the use of clippers or depilatory as opposed to the use of razors in preparing the operative site.

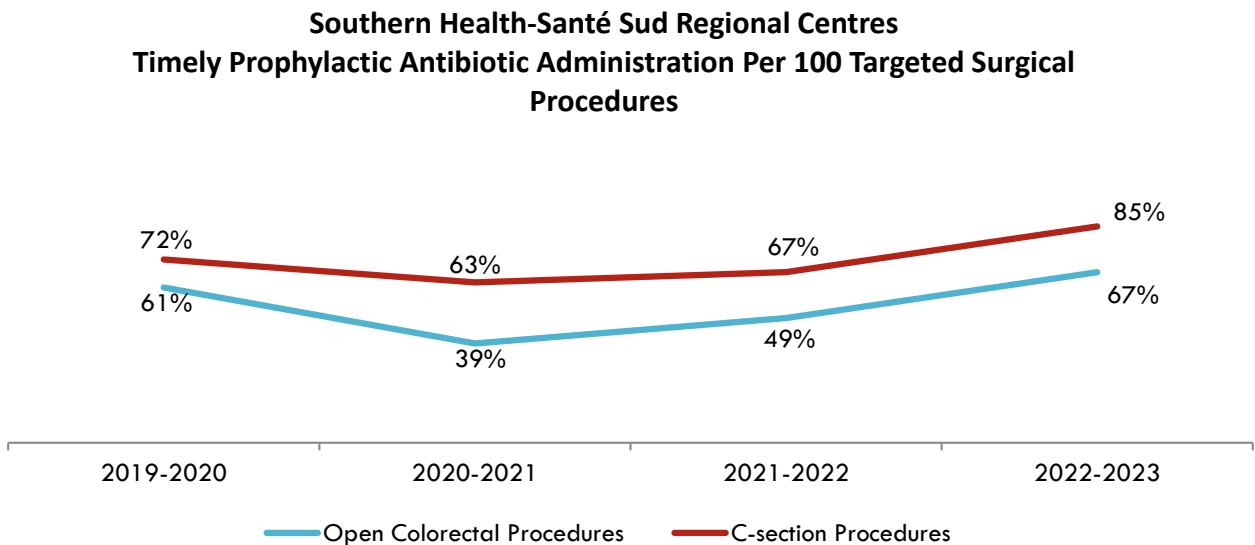
The Southern Health-Santé Sud surgical team meets on a regular basis to look at areas that can be improved. Infection Control representation on this team assists in reviewing infection rates and planning interventions to make positive changes to the area. Providing infection data feedback and education for this team helps to bring about positive change.

The following graphs will show some of the infection prevention strategies including:

- Open colorectal and C-section surgical clients receive prophylactic antibiotic within appropriate time prior to incision during surgical procedure.
- Open colorectal and C-section surgical clients remain normothermic (36.0° - 38.0°C) during surgeries as recorded in the post-anesthesia care unit (PACU).

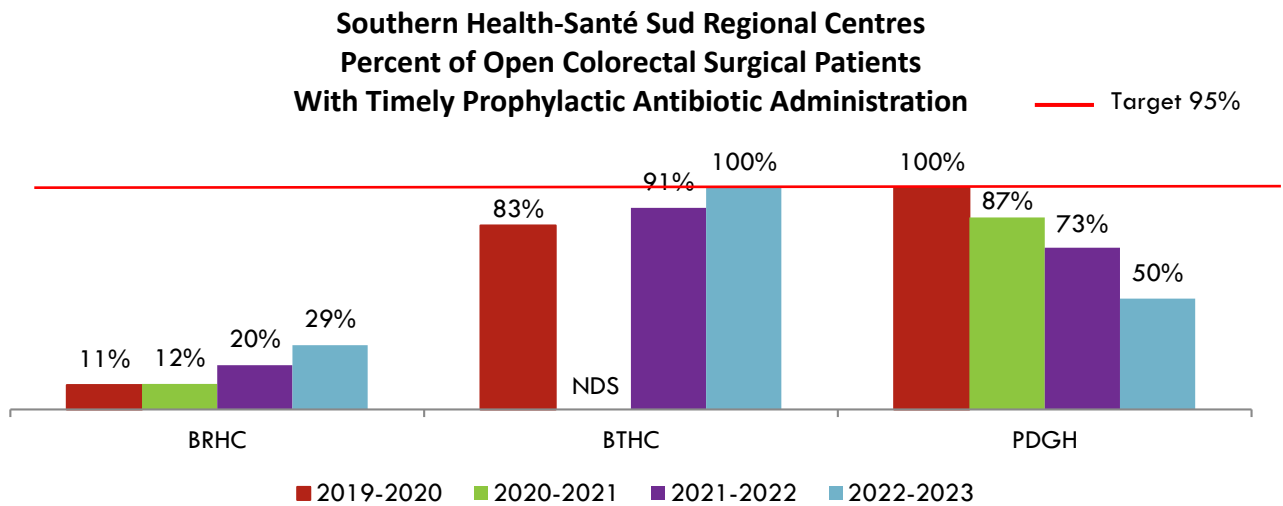
The target rates for timely prophylactic antibiotic administration and maintaining normothermia is 95% or higher as per Safer Healthcare Now (SHN), Prevent Surgical Site Infections: Getting Started Kit, March 2011.

Figure 7a. Southern Health-Santé Sud rate of timely prophylactic antibiotic administration per 100 targeted surgical procedures at the three regional centres for the past four fiscal years. The rate of timely prophylactic antibiotic administration has increased by 18% for both open colorectal procedures and C-section procedures compared to the previous year.



Source: Southern Health-Santé Sud Regional Infection Prevention & Control Indicators 2022-2023

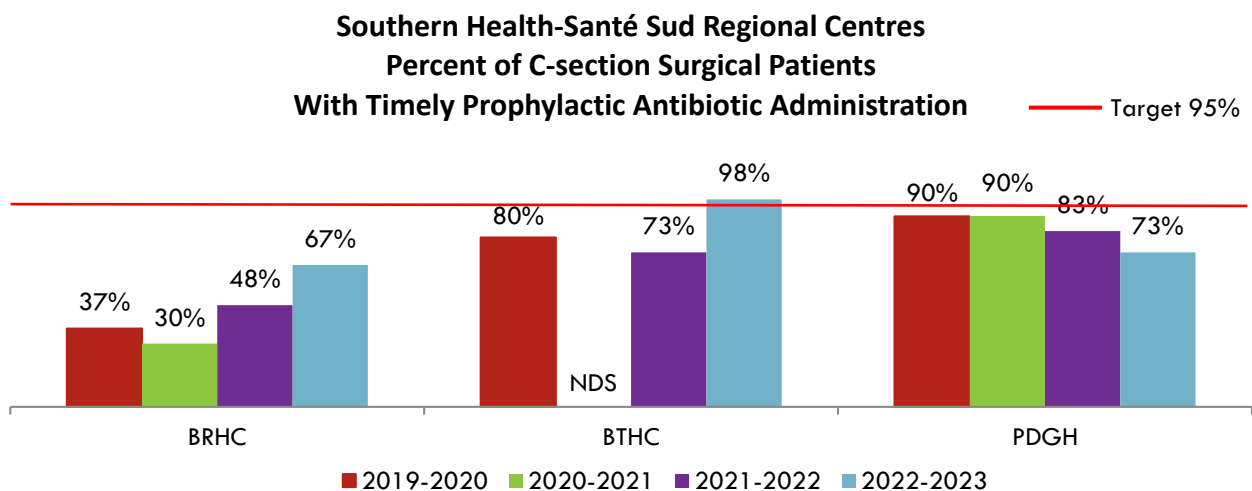
Figure 7b. Southern Health-Santé Sud percent of open colorectal surgical clients receiving timely prophylactic antibiotic administration in the three regional centres for the past four fiscal years. The 2022-2023 rate of open colorectal surgical clients receiving timely prophylactic antibiotic administration has decreased in PDGH by 23%, and increased by 9% at both BRHC and BTHC. The rates at BRHC & PDGH are below the recommended SHN target of 95% identified by the red line, with a significantly low rate at BRHC. The rate at BTHC is to be commended as 100% of targeted surgical patients received timely prophylactic antibiotic administration.



NDS - No Data Submitted

Source: Southern Health-Santé Sud Regional Infection Prevention & Control Indicators 2022-2023

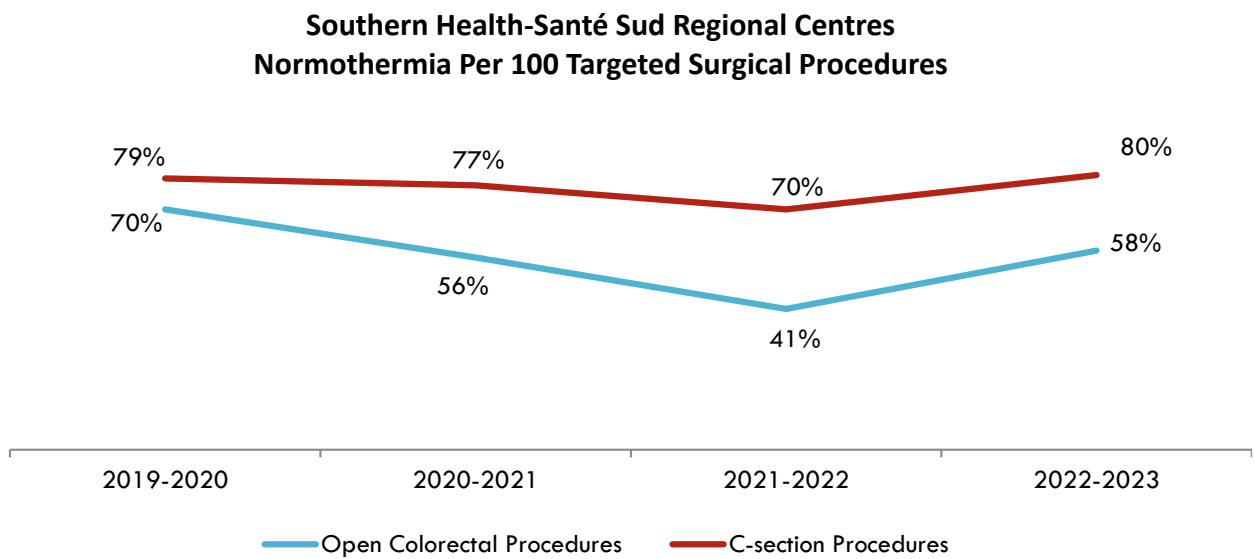
Figure 7c. Southern Health-Santé Sud percent of C-section surgical clients receiving timely prophylactic antibiotic administration in the three regional centres for the past four fiscal years. The target of 95% is identified by the red line. The 2022-2023 rates of C-section surgical clients receiving timely prophylactic decreased by 10% at PDGH, while the rates increased by 19% at BRHC and by 25% at BTHC. The rates at BRHC & PDGH are below the recommended SHN target of 95% identified by the red line. The rate at BTHC is above the target line at 98%.



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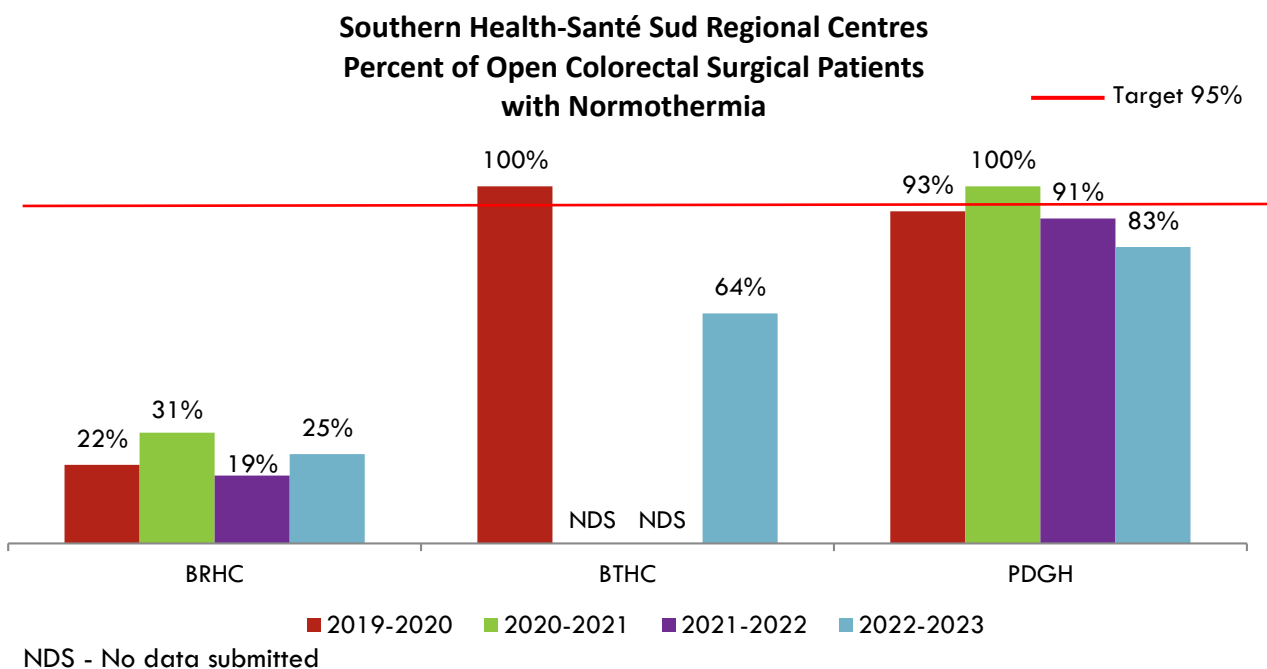
Source: Southern Health-Santé Sud Regional Infection Prevention & Control Indicators 2022-2023

Figure 7d. Southern Health-Santé Sud rate of normothermia per 100 targeted surgical procedures for the past four fiscal years. The rate of maintaining normothermia for open colorectal surgical procedures has increased by 17% in the regional centres from the previous year. The rate of maintaining normothermia for C-section surgical procedures has increased by 10% in the regional centres from the previous year.



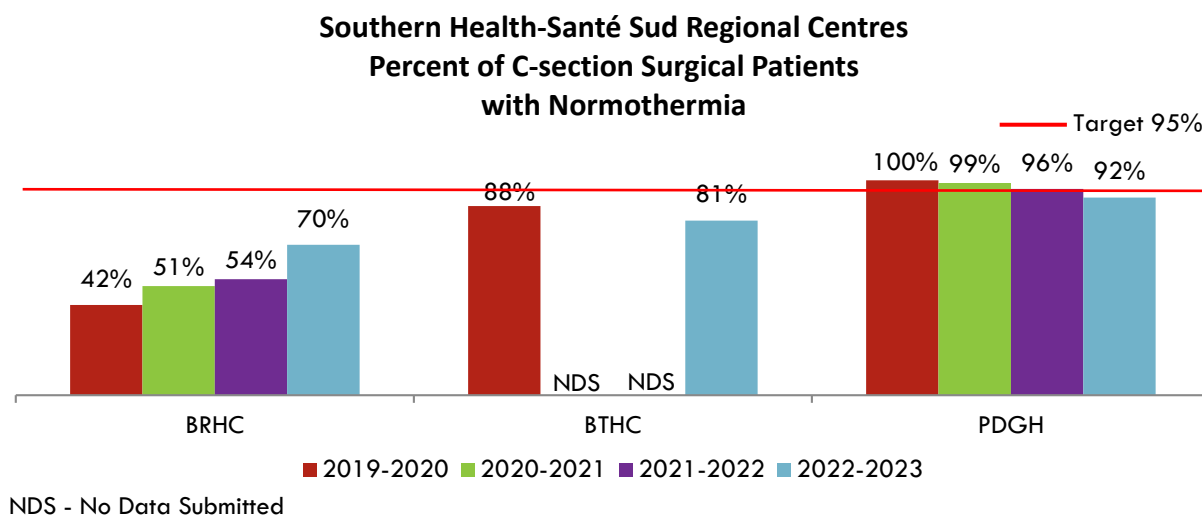
Source: Southern Health-Santé Sud Regional Infection Prevention & Control Indicators 2022-2023

Figure 7e. Southern Health-Santé Sud percent of open colorectal surgical clients maintaining normothermia in the three regional centres for the past four fiscal years. The 2022-2023 rates of open colorectal surgical clients maintaining normothermia during open colorectal surgical procedures decreased by 8% for PDGH and increased by 6% for BRHC. For 2022-2023, BTHC was at 64%. All rates are below the target of 95%, while the rate at BRHC is significantly lower than the target of 95%.



Source: Southern Health-Santé Sud Regional Infection Prevention & Control Indicators 2022-2023

Figure 7f. Southern Health-Santé Sud percent of C-section surgical clients maintaining normothermia in the three regional centres for the past four fiscal years. The 2022-2023 rates of C-section surgical clients maintaining normothermia during C-section surgical procedures have decreased slightly by 4% at PDGH and increased by 16% at BRHC. The 2022-23 rate is 81% for BTHC. The rate at PDGH fell just below the target for 2022-23. BRHC & BTHC remains below the recommended SHN target of 95%.



Source: Southern Health-Santé Sud Regional Infection Prevention & Control Indicators 2022-2023

What are the next steps for Southern Health-Santé Sud?

Moving forward for 2023-2024, the Regional IP&C goals are:

- to disseminate the SSI rates in a report to each surgical centre in the region on a quarterly basis. to provide each surgical centre with an annual report comparing their SSI rates to the regional rate.
- to review process to ensure consistent reporting at all regional surgical centers.
- Site Infection Control Practitioners (ICPs) will strategize with surgical team to improve SSI rates, timely prophylactic antibiotic administration and maintenance of normothermia for targeted surgical procedures.
- to ensure any new surgical program is considered as a targeted SSI.

OUTBREAKS

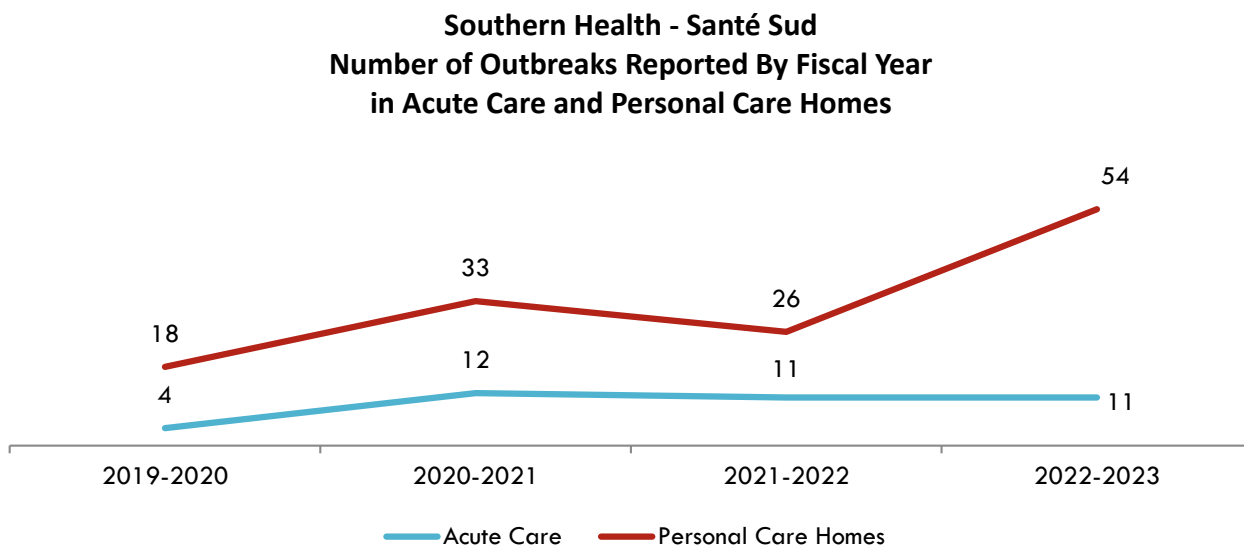
The Regional IP&C program provides support to Southern Health-Santé Sud AC and PCH facilities that are experiencing outbreaks, including affiliated sites.

OUTBREAK SUMMARY

From April 2022 to March 2023, a total of 65 outbreaks were reported in Southern Health-Santé Sud facilities, 11 in AC and 54 in PCH. This is an increase from the 37 outbreaks in the previous year. The virus responsible for 41 of the respiratory outbreaks this year was COVID-19. This correlates to the presence of the COVID-19 Omicron variant and shift to airborne transmission of the virus. Other viruses identified in outbreaks were Influenza A, Coronavirus, RSV and Norovirus. All outbreaks are reported to the Canadian Network for Public Health Intelligence (CNPHI).

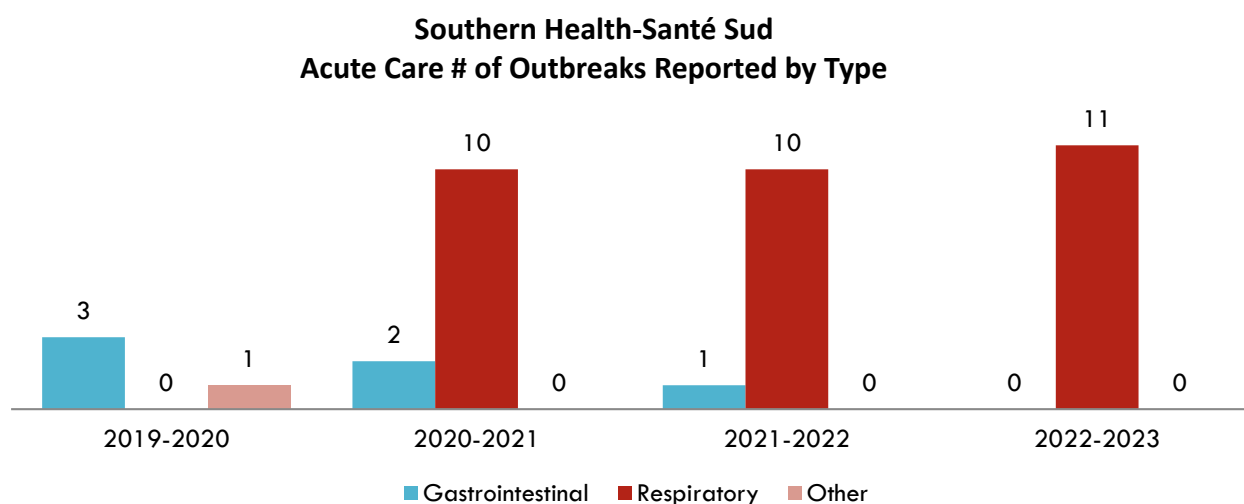
When comparing the number of outbreaks from year to year, it is important to keep in mind the changing prevalence of gastrointestinal and respiratory pathogens in the community.

Figure 8a. Number of outbreaks in Southern Health-Santé Sud AC and PCH facilities per fiscal year since 2019. In 2022-2023, there were 54 PCH outbreaks, which is a significant increase of 28 outbreaks compared to the previous year. AC outbreaks remained the same as the previous year at 11 outbreaks.



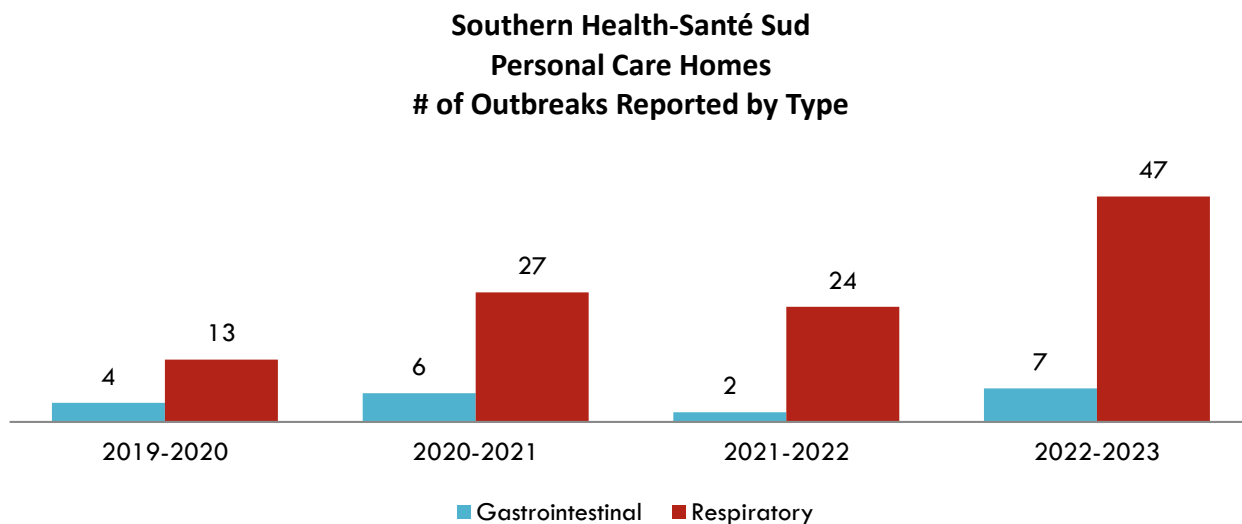
Source: Southern Health-Santé Sud Regional Infection Prevention & Control Indicators 2022-2023

Figure 8b. The number of outbreaks reported by type in Southern Health-Santé Sud AC facilities per fiscal year since 2019. In 2022-2023, there were 11 outbreaks, which is the same as the previous year. Of the 11 outbreaks reported in AC, all were respiratory in nature.



Source: Southern Health-Santé Sud Regional Infection Prevention & Control Indicators 2022-2023

Figure 8c. The number of outbreaks reported by type in Southern Health-Santé Sud PCH facilities per fiscal year since 2019. In 2022-2023, PCH sites reported a total of 54 outbreaks, which is an increase of 28 outbreaks compared to the previous year. Of the 54 outbreaks reported, 7 were gastrointestinal outbreaks and 47 were respiratory outbreaks.



Source: Southern Health-Santé Sud Regional Infection Prevention & Control Indicators 2022-2023

While the endemic level of viruses may increase the risk of outbreaks, the presence of effective infection control measures to rapidly detect transmission and initiate appropriate interventions can reduce the severity of an outbreak, both in terms of the number of people affected and duration of illness. In the outbreak setting, the term attack rate is often used as a synonym for risk. It is the risk of getting the disease during a specified period, such as the duration of an outbreak. Overall attack rate is the total number of new cases divided by the total population. (Centers for Disease Control and Prevention, 2012).

Figure 8d. The percentage of reported client illness during outbreaks in Southern Health-Santé Sud AC and PCH facilities. During 2022-2023, the outbreak attack rate increased by 16% in PCH and decreased by 7% in AC.

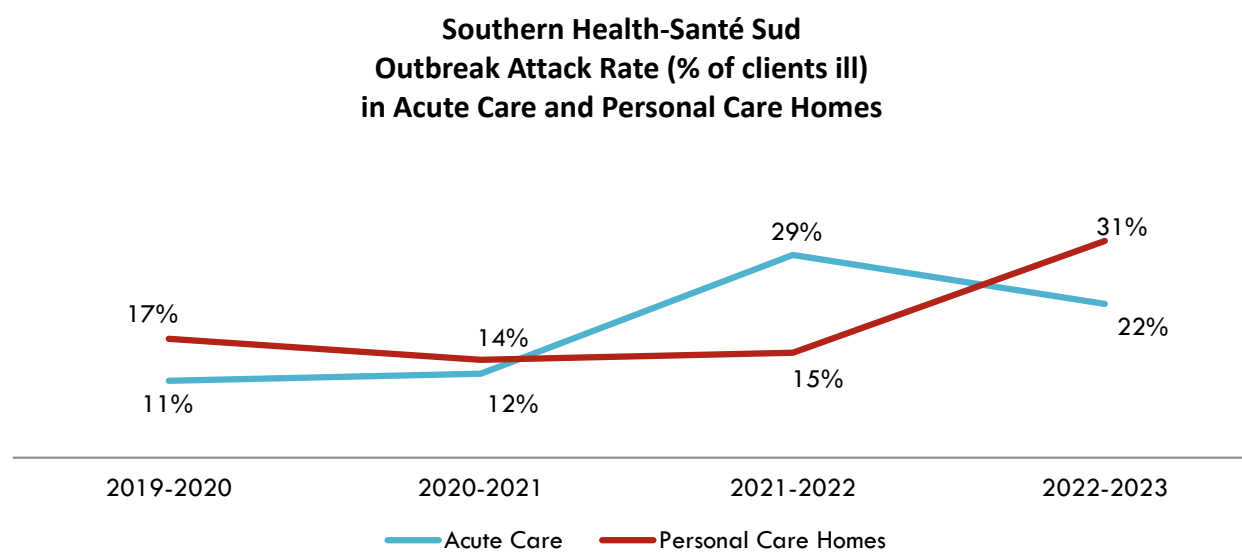
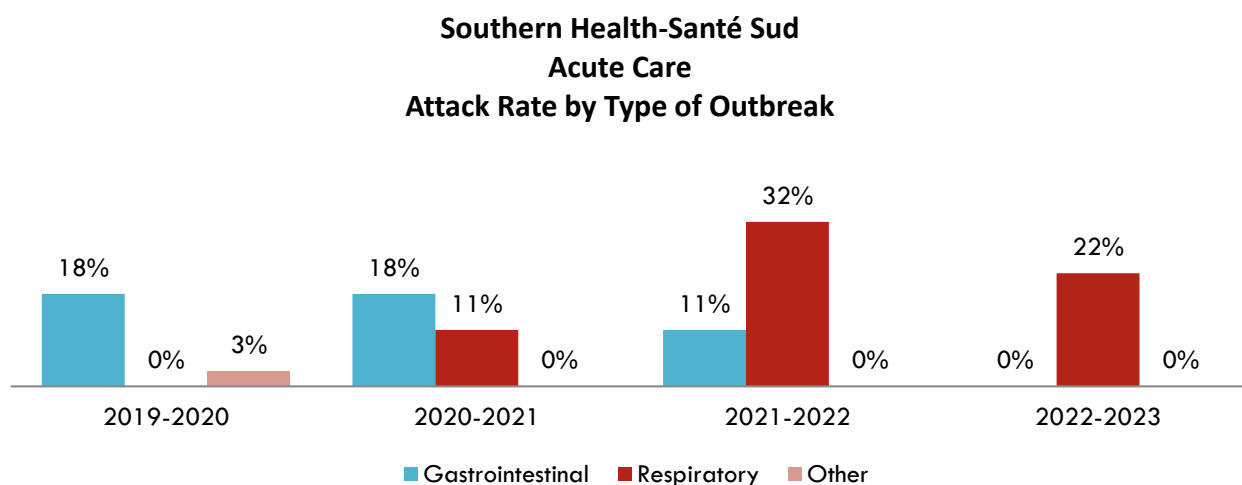
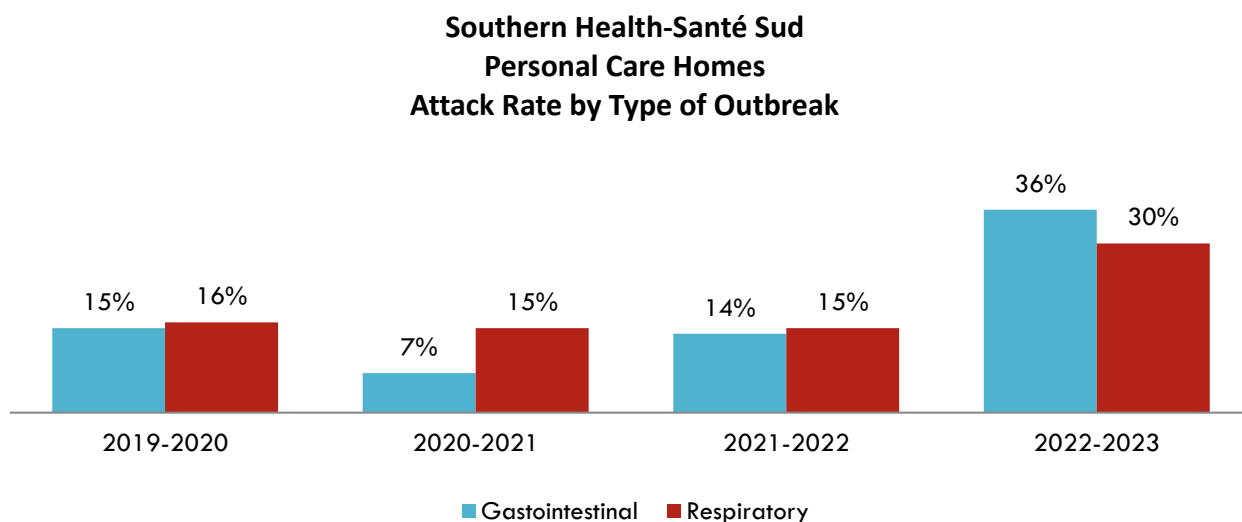


Figure 8e. The percentage of reported client illness by outbreak type in Southern Health-Santé Sud AC facilities. For 2022 to 2023, the attack rate (% of clients ill) decreased by 10% for respiratory outbreaks compared to the previous year and remained at 0% for gastrointestinal outbreaks.



Source: Southern Health-Santé Sud Regional Infection Prevention & Control Indicators 2022-2023

Figure 8f. The percentage of reported client illness by outbreak type in Southern Health-Santé Sud PCH facilities. For 2022 to 2023, the attack rate (% of clients ill) increased by 22% for gastrointestinal outbreaks and by 15% for respiratory outbreaks compared to the previous year.



Source: Southern Health-Santé Sud Regional Infection Prevention & Control Indicators 2022-2023

What is Southern Health-Santé Sud doing to decrease number and duration of outbreaks?

In health care settings where the risk of transmission is high, use of additional precautions (isolation), adherence to HH and enhanced environmental cleaning are the most effective means of interrupting transmission of microorganisms.

The outbreak management protocols have been used when managing outbreaks in AC and PCH sites throughout Southern Health-Santé Sud. The Outbreak Management – Respiratory (including Influenza and COVID-19) and Gastrointestinal Policy was approved in February 2023 and follows the provincial outbreak management guidelines. Outbreak management is standardized across the region and well understood by staff members. Early identification of outbreak situations and prompt implementation of coordinated infection control measures and treatment or prophylaxis is key to decreasing both client illness and duration of outbreak.

An environmental scan is an intensive inspection of all areas within a facility which looks for overall compliance with IP&C principles. In uncontrolled outbreak situation, Regional IP&C complete an environmental scan to guide the facility in making improvements.

What are the next steps for Southern Health-Santé Sud?

Moving forward for 2023-2024, the Regional IP&C goals are:

- to move forward with the province in treating COVID-19 as an endemic state vs pandemic state
- to move forward with use of provincial audit practices (i.e., Additional Precautions, use of PPE, environmental cleaning and HH).

EDUCATION

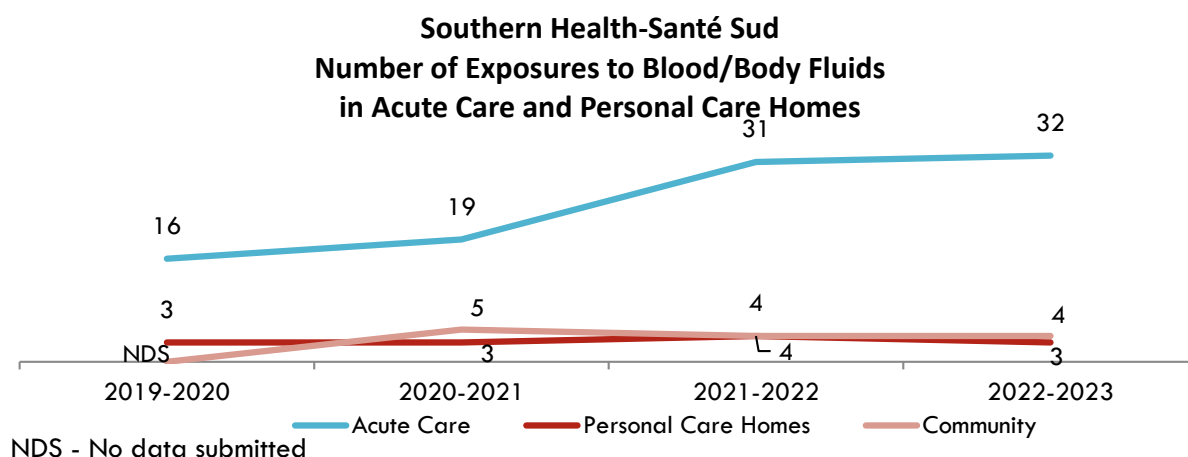
Education is a key component of the IP&C practitioner’s role. Education regarding IP&C principles and practices is provided to Southern Health-Santé Sud staff primarily through the following venues: Regional and Facility Orientation for all new employees, Regional Clinical Orientation for all new nursing employees and senior practicum nursing students, annual IP&C education days, and ongoing in-service education. As mentioned previously, hand hygiene blitz education was rolled out for all facility/community staff.

Due to the ongoing COVID-19 pandemic, no regional IP&C education day was held in 2022-2023.

EXPOSURES TO BLOOD/BODY FLUIDS IN ACUTE CARE & PERSONAL CARE HOMES

Following initial assessment and treatment at an Emergency Department, IP&C continues to be responsible to direct the follow-up care of all occupational exposures for Southern Health-Santé Sud employees, physicians, students or volunteers as per the post-exposure prophylaxis policy.

Figure 9. The number of staff exposures to blood/body fluids in Southern Health-Santé Sud AC and PCH facilities for the past four fiscal years. In 2022-2023, the number of exposures to blood/body fluids decreased slightly for PCH and a slight increase was noted in AC. Data for community program exposures to blood/body fluids was added for the past 3 fiscal years.



Source: Southern Health-Santé Sud Regional Infection Prevention & Control Indicators 2022-2023

INFECTION CONTROL DURING CONSTRUCTION, RENOVATION AND MAINTENANCE

Construction, renovation and some maintenance projects in health care facilities pose a health risk to certain clients, particularly the immunosuppressed, the elderly and the very young.

Documented incidents of construction-related infections occurring in health care facilities caused by *Aspergillus*, *Legionella*, and other agents have been reported. Good planning and early implementation of preventive measures are necessary to prevent the transmission of infectious agents to vulnerable clients, health care workers and visitors during construction, renovation and maintenance projects.

Prevention of construction-related infections must include:

- a) control of dust generated during demolition and construction;
- b) prevention of dust infiltration into client care areas, laboratories, food preparation areas, and diagnostic areas; and
- c) prevention of the generation of aerosols from contaminated water sources.
- d) appropriate mitigation measures, focusing on client safety, which are necessary before construction and renovation begins, and throughout the construction process until completion.

IP&C is involved in construction, renovation and maintenance projects for the following reasons:

- To reduce the potential for HAIs related to construction, renovation and maintenance.
- To ensure client and personnel safety needs are met through implementing and maintaining IP&C measures.
- To participate as a member of the multidisciplinary team and provide IP&C construction education/advice to the team and construction workers.

Regional IP&C in Southern Health-Santé Sud have put efforts into increasing knowledge of IP&C during construction, renovation and maintenance both within our region and across MB. The following is a list of our involvement during 2022-2023:

- Provided IC Construction education on Infection Control Risk Assessment (ICRA), preventive measures and emergency measures for Senior Leadership and all Physical Plant staff throughout the SDO;
- Ongoing participation on Boyne Lodge PCH capital project;
- Participated on the Multidisciplinary Team (MDT) for Bethesda Community Health Dialysis project;
- Participated on the MDT for schematic and design development of the three regional capital projects (BRHC, BTHC, PDGH);
- Ongoing participation on MDTs for the three regional capital projects as construction progresses;
- Provided emergency assistance to Eden Mental Health Centre during an extensive flooding event;
- Black mould was identified DURING ENVIRONMENTAL SCANS in numerous facilities, requiring further investigation and mould abatement;
- Provided construction advice to ICPs across the province upon consultation; and
- Provided ongoing direction to ICPs in the SDO when dealing with construction projects at their facilities.

MOVING FORWARD INTO 2023-2024

Southern Health-Santé Sud is committed to the following priorities for 2023-2024:

- Share the results of the HH compliance audits with staff, service providers and volunteers and disseminate reports on a regular basis.
 - Continue to monitor HH compliance with a goal of increasing the number of HH opportunities being audited across the SDO
- Roll out the HandyAudit software program to community (including training of HH auditors).
- Provide HH education regarding HandyAudit for all direct care providers and those that interact with client environments in Southern Health-Santé Sud.
- Share the targeted HAI rates/reports with AC and PCH facilities on a regular basis and encourage site ICPs to analyze, investigate and develop action plans to decrease infections.
- Develop the capacity and capability of the IP&C team members and designates by providing current relevant information.
 - Provide regular IP&C updates at Regional Staff Development/IP&C Team and Regional IP&C Team meetings
 - Provide IP&C input/recommendations to other regional programs as requested.
 - Continue to provide IP&C education as needs arise.
- Further harmonize, develop and integrate the IP&C program throughout Southern Health-Santé Sud.
 - Policy development
 - Provide standardized orientation/education for new and existing ICPs as needed.
- Disseminate the SSI rates in a report to each surgical centre in the region on a quarterly basis, with an annual report comparing their SSI rates to the regional rate at the end of the fiscal year.
 - Strategize with surgical team to improve SSI rates, timely prophylactic antibiotic administration and maintaining normothermia for targeted surgical procedures
- Develop audit practices in the SDO to align with provincial recommendations.
- Represent IP&C through involvement in construction projects (from the planning/design phase to completion of the project) throughout Southern Health-Santé Sud facilities/programs.
- Develop new contractor specific construction education.
- Transition PCH program to a provincial structure – Regional Nurse 4 IP&C for Long Term Care and Infection Control Support Associates in PCHs across the SDO.
- Seek input from staff, service providers, volunteers, clients and families on components of the IP&C program.

Additional Attachments on HPS

- [Facility Name Legend](#)
- [Infection Prevention and Control, Healthcare Associated Infection Surveillance Definitions, Acute Care and Personal Care Home – April 2022-March 2023 \(revised 10-Nov-2022\)](#)