2020-2021
(June–March)

Infection Prevention & Control Annual Report

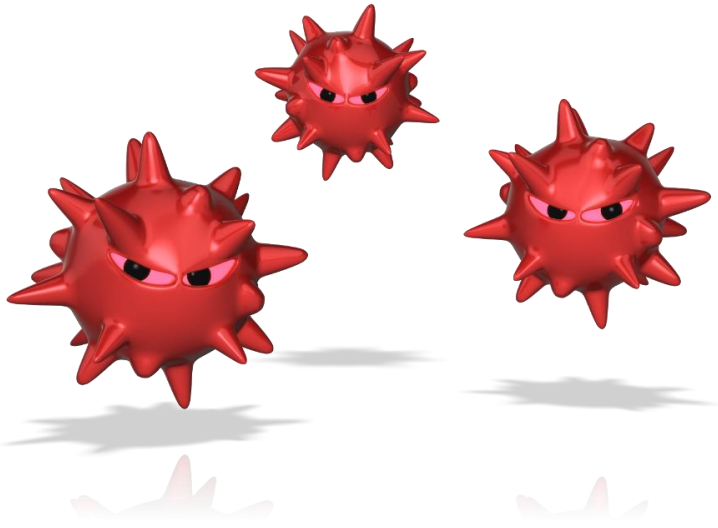
INFECTION PREVENTION & CONTROL ANNUAL REPORT

DISCLAIMER FOR REPORT:

This report should be interpreted with caution. Compared to previous reports, data is incomplete due to limited time and resources related to the COVID-19 pandemic. Due to COVID-19 pandemic, data from April and May 2020 has not been included in this report.

2020/21 KEY HIGHLIGHTS

- Six of the thirteen acute care (AC) facilities showed Hand Hygiene compliance over the target of 80%.
- Seventeen of the twenty-three personal care home (PCH) sites had a Hand Hygiene compliance over the target of 80%.
- The percentage of catheter associated urinary infections in Acute Care facilities decreased by 2%, whereas in PCH decreased by 4%.
- The incidence rate of Clostridioides difficile infections (CDIs) decreased in AC by 0.08 per 1,000 client days and remained at zero for PCH. This rate represents a total of 7 health care-associated CDIs.
- The surgical site infection (SSI) rate per 100 targeted surgical procedures increased by 0.66% compared to the previous year. This rate represents a total of 11 SSIs in two of the regional centres (BRHC and PDGH). No data submitted for BTHC.
- From June 2020 to March 2021, a total of 45 outbreaks were reported in Southern Health-Santé Sud facilities - 12 in AC and 33 in PCH.
- The number of exposures to blood/body fluids increased to 19 exposures in acute care facilities, and remained the same at 3 exposures in PCH.



INTRODUCTION

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

In Canada, an estimated 220,000 infections acquired in health care facilities occur annually.[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

Each year in Canada, 8,000 to 12,000 clients die as a result of complications of HAIs.[2] 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 is monitored in Southern Health-Santé Sud community programs using an 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 HH audit tool used for facilities complies with Manitoba Health, Seniors and Active Living (MHSAL), Quality and Patient Safety Council recommendations, adopting provincial standardized definitions and data collection methodology according to the 4 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.

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.

The following graphs in this section show the HH compliance rates per moment over the past four fiscal years by program.

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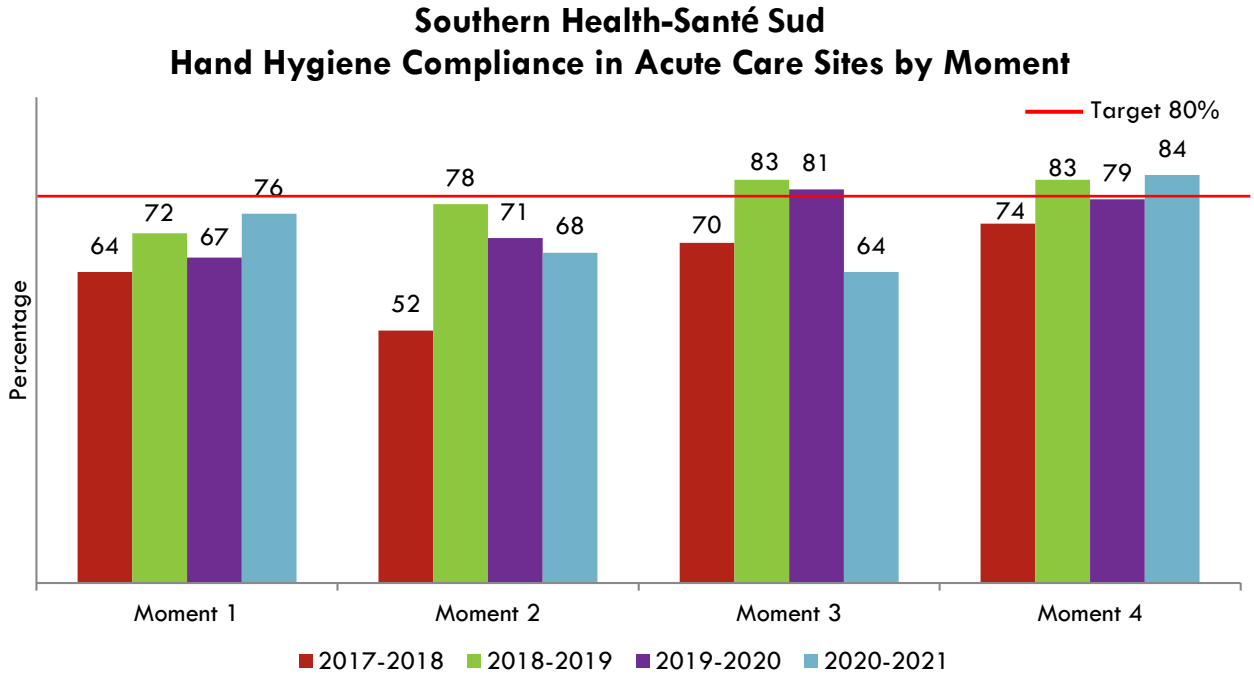
[1] Zoutman DE, et al. (2003). *The state of infection surveillance and control in Canadian acute care hospitals*. American Journal of Infection Control, 31(5). 266-72

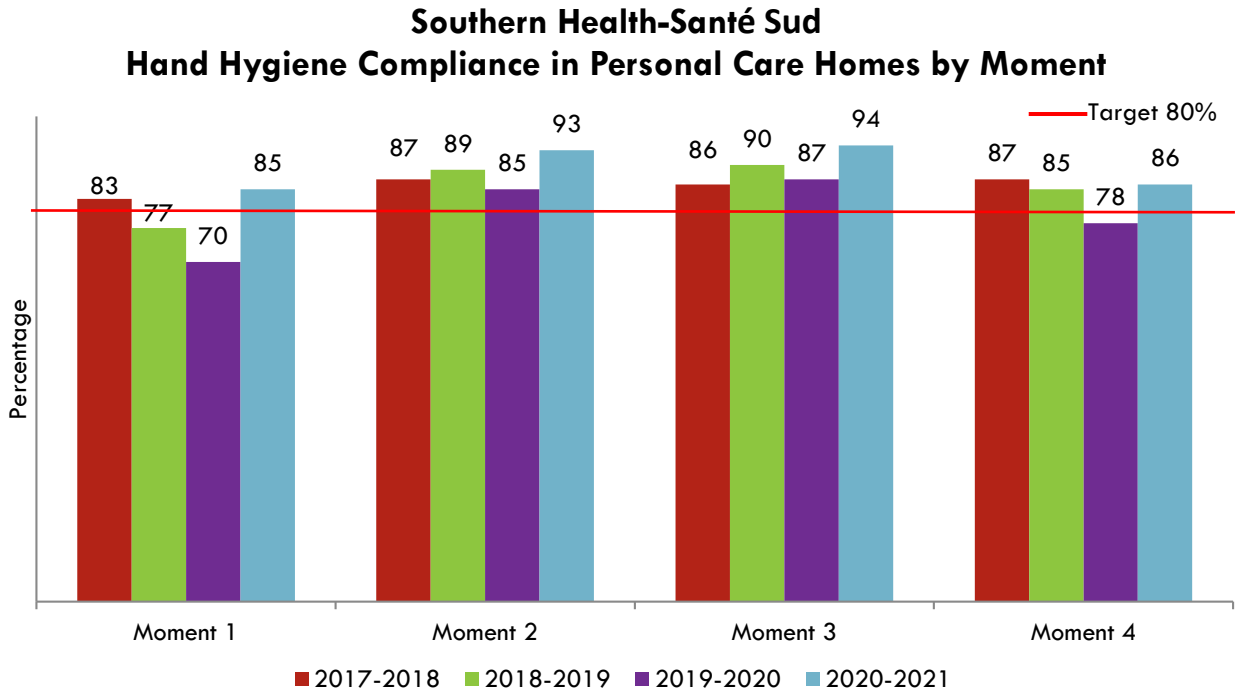
[2] Zoutman DE, et al. (2003). *The state of infection surveillance and control in Canadian acute care hospitals*. American Journal of Infection Control, 31(5). 266-72

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 increased slightly for moments 1 and 4 over time.



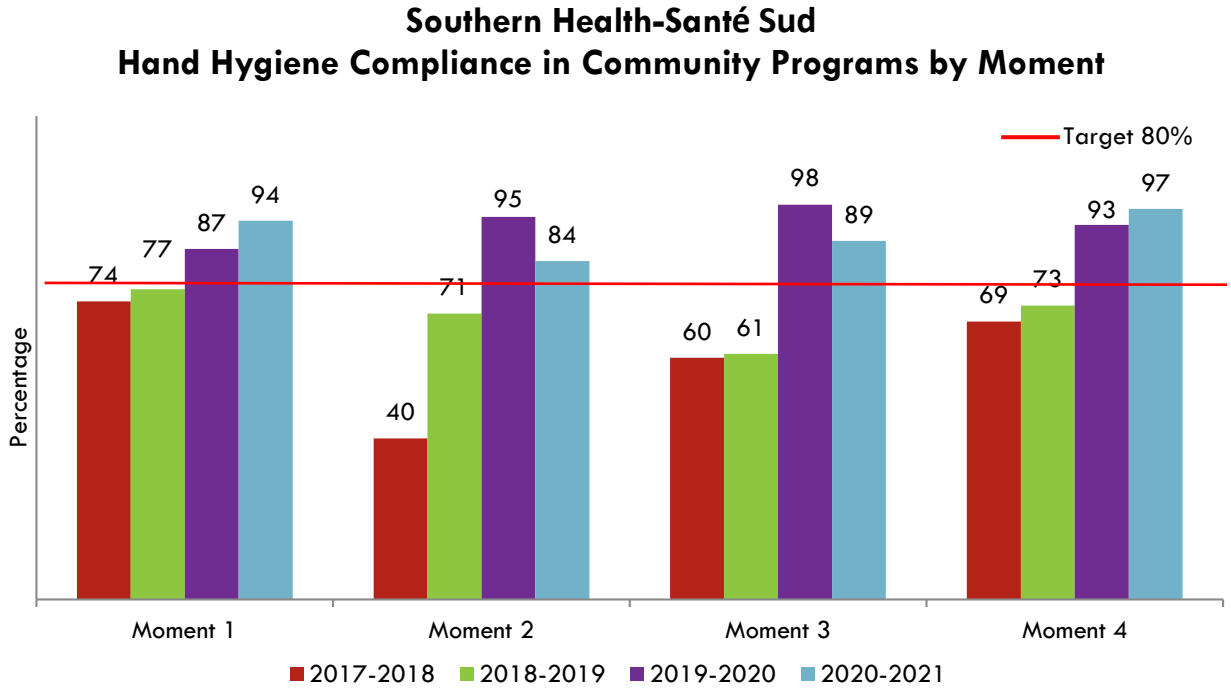
Source: Southern Health-Santé Sud Regional Infection Prevention & Control Indicators 2020-2021

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, all four moments increased during the 2020-2021 period.



Source: Southern Health-Santé Sud Regional Infection Prevention & Control Indicators 2020-2021

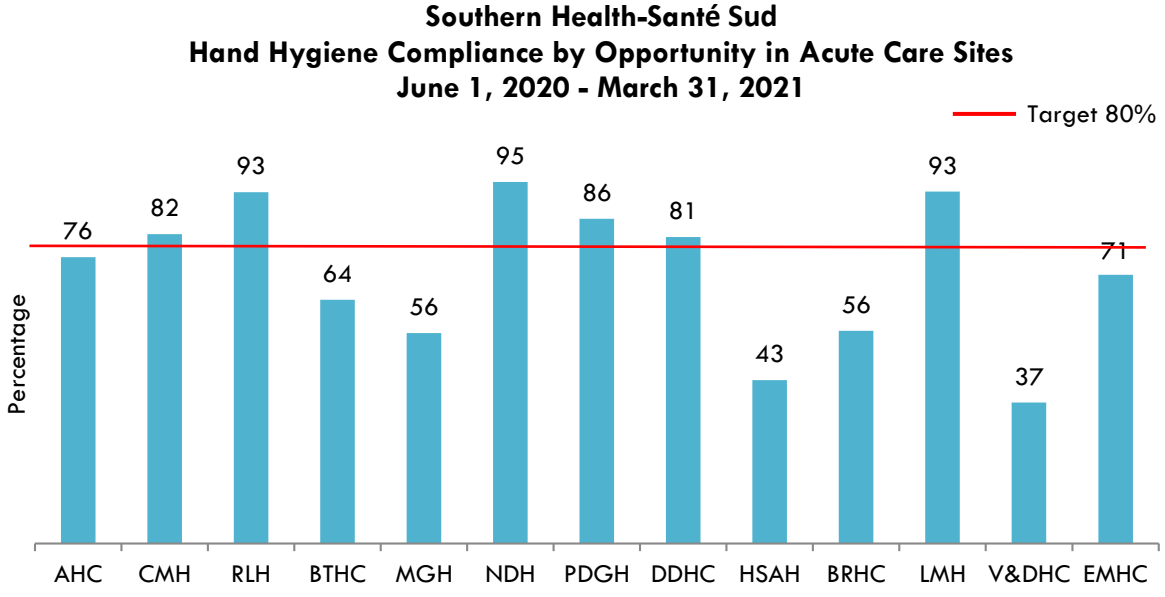
Figure 1c. Overall regional HH compliance by moment reported at Southern Health-Santé Sud community programs for the past four fiscal years. The community programs include Home Care, Emergency Medical Services, Public Health (PH), Primary Care (PC) and Mental Health (MH). In the period of 2020-2021 data was only submitted for Home Care and Primary Care. This graph should be interpreted with caution.



Source: Southern Health-Santé Sud Regional Infection Prevention & Control Indicators 2020-2021

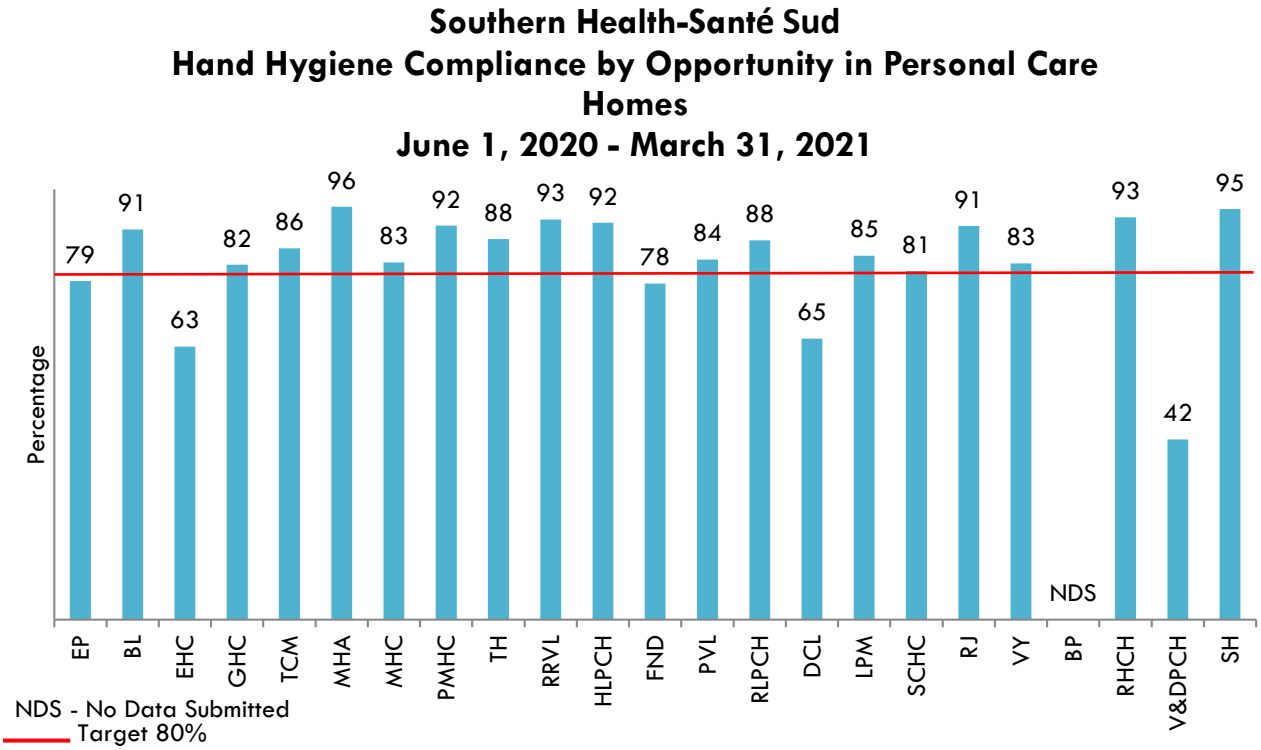
See the Facility Name Legend for the following two graphs.

Figure 1d. Overall HH compliance by opportunity in AC facility in Southern Health-Santé Sud for the fiscal year 2020-2021. Six of the thirteen sites show a HH compliance over the target of 80%.



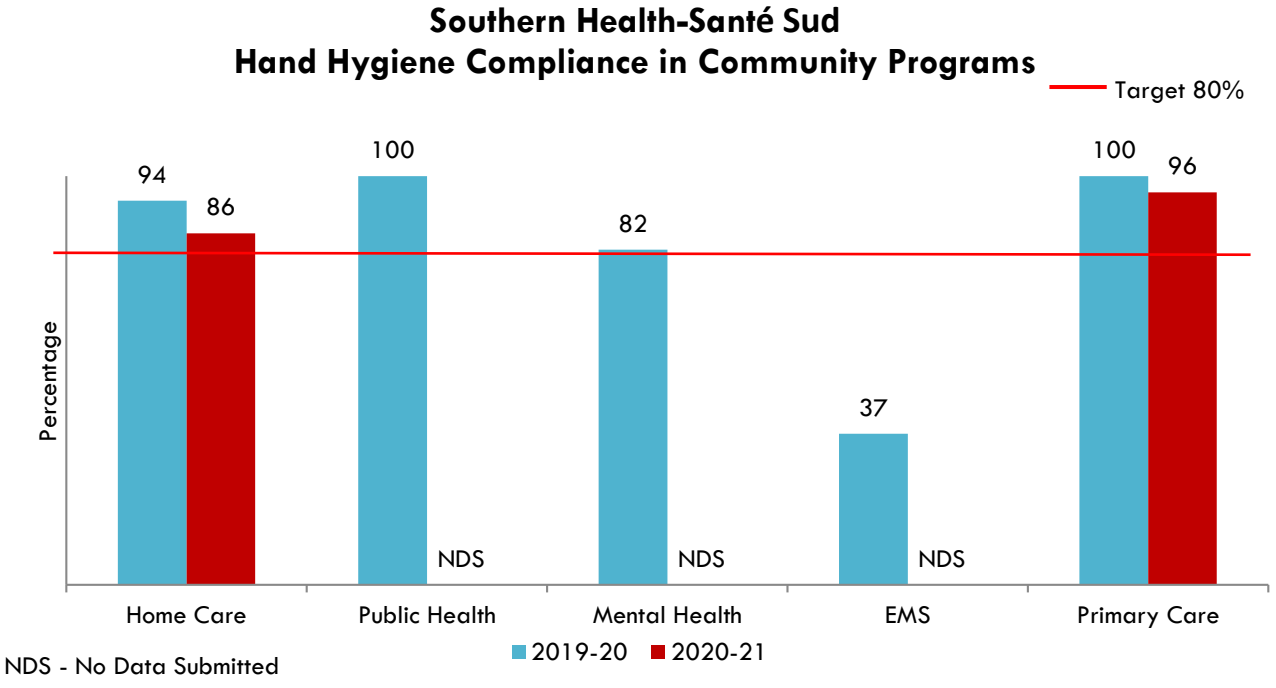
Source: Southern Health-Santé Sud Regional Infection Prevention & Control Indicators 2020-2021

Figure 1e. Overall HH compliance by opportunity in PCH facility in Southern Health-Santé Sud for the fiscal year 2020-2021. Seventeen of the twenty-three PCH sites show a HH compliance over the target of 80%.



Source: Southern Health-Santé Sud Regional Infection Prevention & Control Indicators 2020-2021

Figure 1f. HH compliance by community program in Southern Health-Santé Sud for the fiscal year 2019-2021. Data was submitted for Home Care and Primary Care for the 2020-2021 period. Both Home Care and Primary Care decreased compared to the previous year but still surpassed the target of 80%.



Source: Southern Health-Santé Sud Regional Infection Prevention & Control Indicators 2020-2021

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 MHSAL.

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 2021-2022, the Regional Infection Prevention & Control (IP&C) goals are:

- to continue to monitor hand hygiene compliance with a goal of increasing the number of HH opportunities being audited, and
- to offer HH education to all staff, starting with facilities and programs where HH compliance rates are low.
- to rebrand HH in the region with an education blitz and new posters (including standardization to Shared Health posters), updating HH policy, and participating in the provincial purchase of new HH auditing software with the goal of improving auditing in the region.

SURVEILLANCE

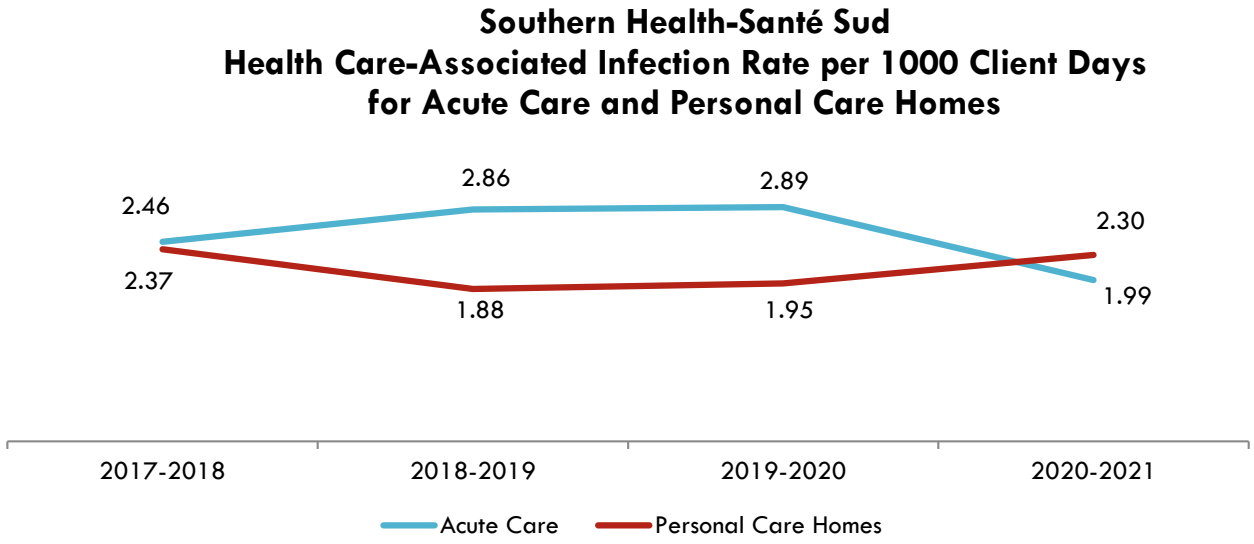
The Regional IP&C program carries out surveillance for a number of quality and patient safety indicators. This section of the report presents information on the targeted indicators.

HEALTH-CARE ASSOCIATED INFECTION (HAI) SURVEILLANCE

In this report, we present rates by 1,000 AC inpatient days and 1,000 PCH resident days. 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.

Descriptions of the surveillance case definitions can be found in the Southern Health-Santé Sud *Infection Prevention & Control: Health Care-Associated Infection Indicator Definitions - Surveillance in Acute Care and Personal Care Home, April 2020-March 2021.*

Figure 2. HAI rates per 1,000 client days in Southern Health-Santé Sud AC and PCH Facilities for the past four fiscal years. HAI rates in PCH have increased in the past year, whereas HAI rates in AC facilities have decreased significantly in the past year.



Source: Southern Health-Santé Sud Regional Infection Prevention & Control Indicators 2020-2021

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

Moving forward for 2021-2022, the Regional Infection Prevention & Control (IP&C) goals are:

- to continue to disseminate the 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.

TARGETED SURVEILLANCE

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. The presence of an indwelling catheter increases the likelihood of bacteremia almost 40 times.[3] UTIs are one of the most common reasons for client hospitalization, and are also the reason for considerable antibiotic use in PCH settings. The regional UTI percentage of all HAIs reported in PCHs for 2020-2021 was 31%, an increase of 8% from last year.

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 health care-associated UTIs in AC are caused by the insertion of

3 Southern Health-Santé Sud Guideline: Diagnosis and Management of Urinary Tract Infections in Personal Care Homes Clinical Guideline (2014).

urinary catheters. It is estimated that each year, more than 13,000 deaths are associated with UTIs.[4] The regional UTI percentage of all HAIs reported in AC for 2020-2021 was 34%, compared to 35% in 2019-2020. The AC rate of UTIs in our facilities is nearly three times higher than the national rate of 12%.

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:

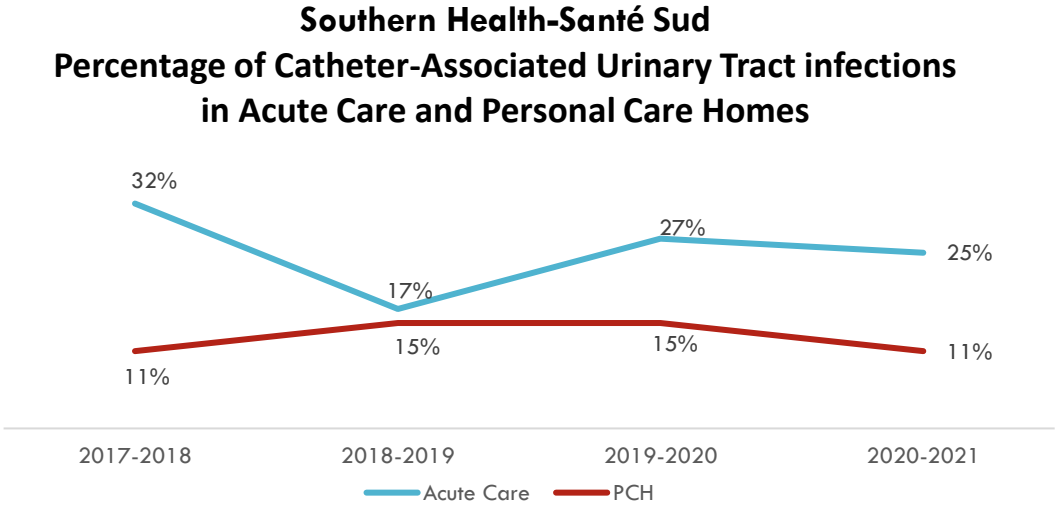
- assist health care workers to accurately identify UTIs and catheter-associated urinary tract infections (CAUTIs);
- prevent or reduce the risk of UTIs and CAUTIs; and
- provide management and treatment options for individuals with UTI or CAUTI.

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.
- A Urine Trouble education sheet was developed in February 2019 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 3. Percentage of CAUTIs in Southern Health-Santé Sud AC and PCH facilities from April 1, 2017 to March 31, 2021. The CAUTI data for 2019-2020 has been corrected. The CAUTI rate has decreased in AC and in PCH facilities compared to last year.



Source: Southern Health-Santé Sud Regional Infection Prevention & Control Indicators 2020-2021

4 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).

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 with the goal of decreasing the CAUTI rates in all sites across the region.

The good news is that many CAUTIs may be prevented with recommended infection control measures.

The following recommended guidelines will promote the prevention of CAUTIs:

- Insert catheters only for appropriate indications
- Leave catheters in place only as long as needed
- Ensure that only properly trained persons insert and maintain catheters
- Insert catheters using aseptic technique and sterile equipment
- Follow aseptic insertion and maintain a closed drainage system
- Maintain unobstructed flow
- Perform hand hygiene prior to insertion or manipulation of catheter device or site
- Use routine practices when manipulating catheter or collection system.

Key quality improvement strategies to be explored that may ensure appropriate urinary catheter utilization include:

- Implementation of a system of alerts or reminders to remove unnecessary catheters
- Stop orders for urinary catheters
- Nurse-directed removal of unnecessary catheters
- Algorithms for appropriate perioperative catheter management

In addition, information provided in the guideline will support appropriate indications for catheter use and provide examples of inappropriate catheter use. Proper techniques for insertion and maintenance will be included, as well as guidance for regular surveillance.

ANTIBIOTIC RESISTANT ORGANISMS (AROs)

Surveillance for AROs focuses on newly identified cases. The major AROs of concern include Methicillin-Resistant *Staphylococcus aureus* (MRSA) and Carbapenemase-Producing *Enterobacteriaceae* (CPE). Newly identified cases are categorized according to where they were most likely acquired. Cases may be health care-associated, community-acquired, or of unknown origin. Health care-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 may also be 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

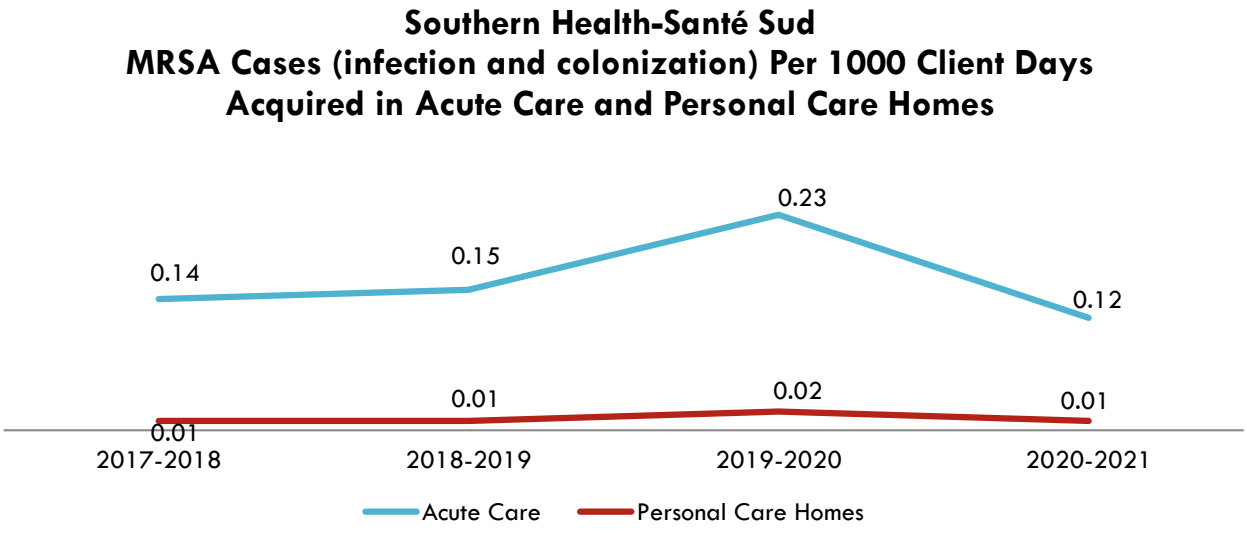
MRSA is a strain of *Staphylococcus aureus* resistant to various antimicrobial agents. Individuals who carry the organism usually on their skin or in their nose without signs of infection are said to be colonized. Sometimes MRSA can cause serious wound, respiratory or bloodstream infections. Clients 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).

The incidence rate for MRSA acquired in AC is 0.12 per 1,000 patient days for the fiscal year 2020-2021, which is substantially lower than the past three years. This rate represents a total of 12 MRSA cases (9 colonizations and 3 infections).

The incidence rate for MRSA acquired in PCH is 0.01 per 1,000 resident days for the reporting year 2020-2021, which is slightly lower than the incidence rates in the past three years. This rate represents a total of 2 MRSA cases (1 colonizations and 1 infections).

Figure 4. MRSA incidence rates per 1,000 client days in Southern Health-Santé Sud AC and PCH facilities from April 1, 2017 to March 31, 2021. The MRSA incidence rate has significantly decreased in AC and slightly decreased in PCH facilities compared to last year.



Source: Southern Health-Santé Sud Regional Infection Prevention & Control Indicators 2020-2021

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.

Clostridioides difficile infection (CDI) incidence rate

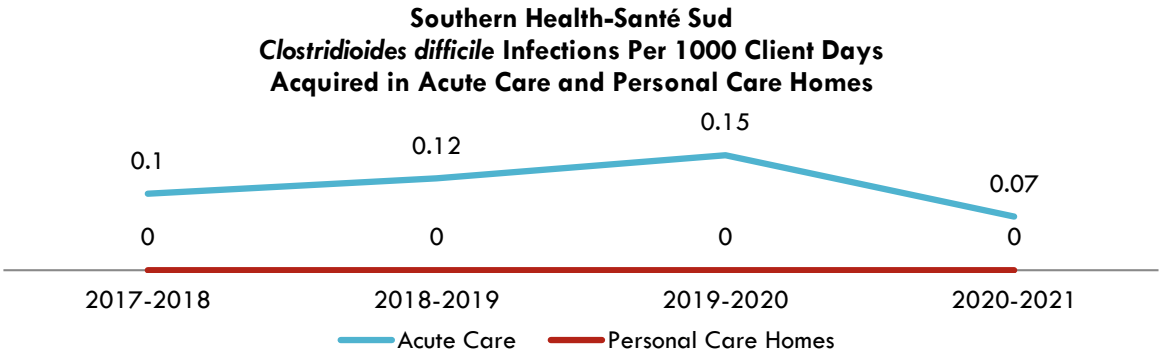
Note: *Clostridioides difficile (C. difficile)* was formerly named *Clostridium difficile.* CDIs are the most frequent cause of health care-associated infectious diarrhea in developed countries.[5] CDIs are often related to antimicrobial therapy, which alters the normal bacteria found in the gastrointestinal 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 health care-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.

The incidence rate for CDIs acquired in AC facilities is 0.07 per 1,000 patient days for the fiscal year 2020-2021, which is lower than the previous year. This rate represents a total of 7 health care-associated CDIs.

The incidence rate for CDIs acquired in PCH facilities is zero for the fiscal year 2020-2021, which is the same incidence rate as the previous three years.

Figure 5. Incidence of CDIs per 1,000 client days acquired in Southern Health-Santé Sud AC and PCH facilities from April 1, 2017 to March 31, 2021. The decrease in AC is distributed by cases at six of the thirteen AC sites.



Source: Southern Health-Santé Sud Regional Infection Prevention & Control Indicators 2020-2021

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

Surgical site infections in acute care

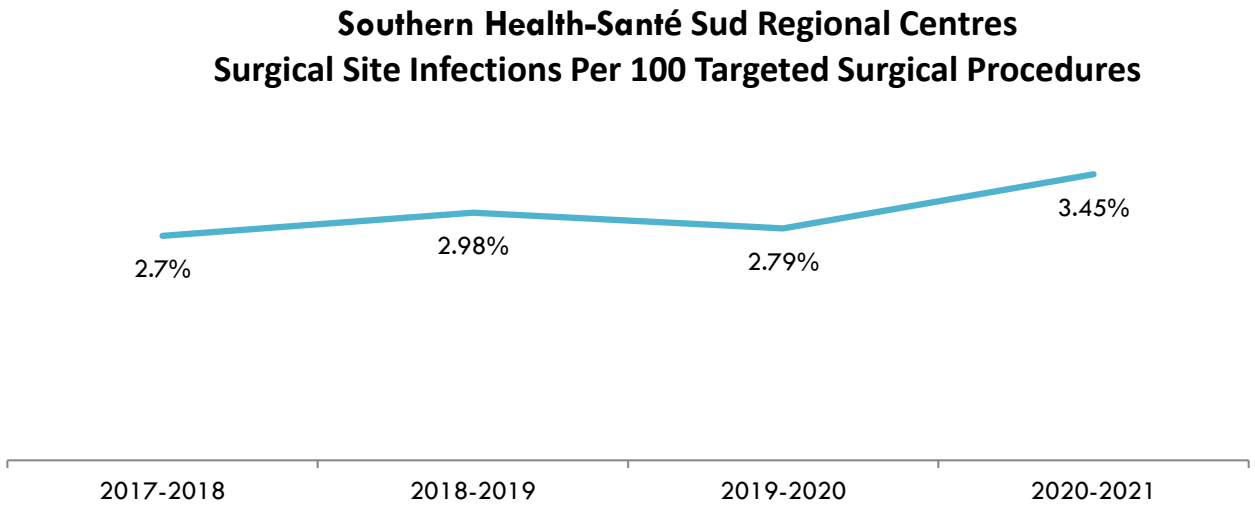
Despite advances in operative techniques and use of prophylactic antibiotics, surgical site infections (SSIs) continue to be a major source of morbidity for clients who undergo operative procedures. SSIs are identified by the development of an infection within a specified period of time following the 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).

Southern Health-Santé Sud targeted surveillance of SSIs includes total joint arthroplasty (hip or knee), open hip reduction, open hernia repair, vaginal or abdominal hysterectomy, open colorectal surgery, and caesarian section (C-section). 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. **Please note: Due to the pandemic, there was period of time where elective surgeries were curtailed across the region.** 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.

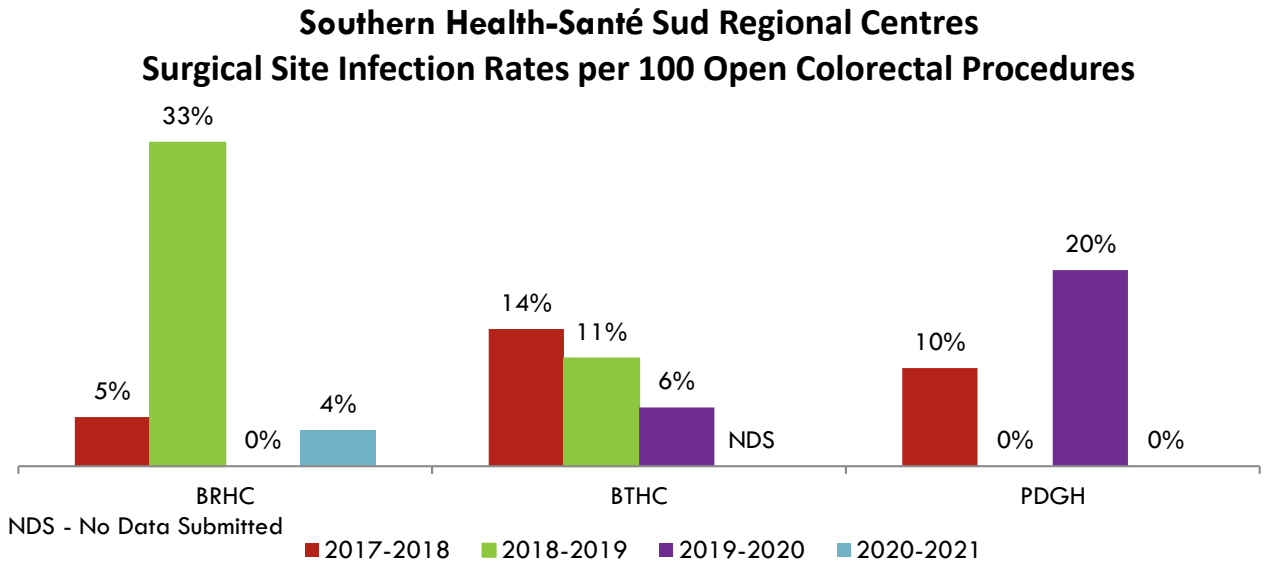
The following six graphs show the SSI rates at the regional centres (BRHC, BTHC and PDGH) for each of the targeted surgical procedures during the past four fiscal years.

Figure 6a. Southern Health-Santé Sud SSI rate per 100 targeted surgical procedures at the three regional centres for the past four fiscal years. The SSI rate per 100 targeted surgical procedures is 3.45%. This rate represents a total of 11 SSIs in two of the regional centres (5 BRHC and 6 PDGH) for the fiscal year 2020-2021. BTHC did not submit any data for the 2020-2021 period.



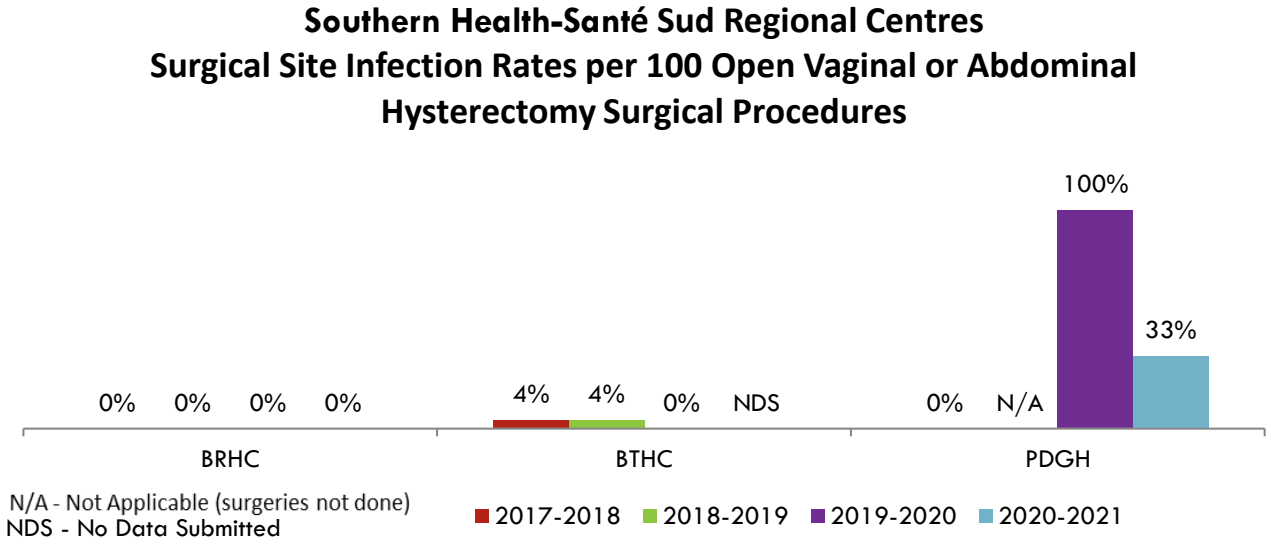
Source: Southern Health-Santé Sud Regional Infection Prevention & Control Indicators 2020-2021

Figure 6b. Southern Health-Santé Sud SSI rates per 100 open colorectal surgical procedures in the three regional centres for the past four fiscal years. One SSI was reported out of a total of 27 open colorectal surgical procedures for BRHC. No infections were reported at PDGH this year. For the 2020-2021 period there was no data submitted for BTHC.



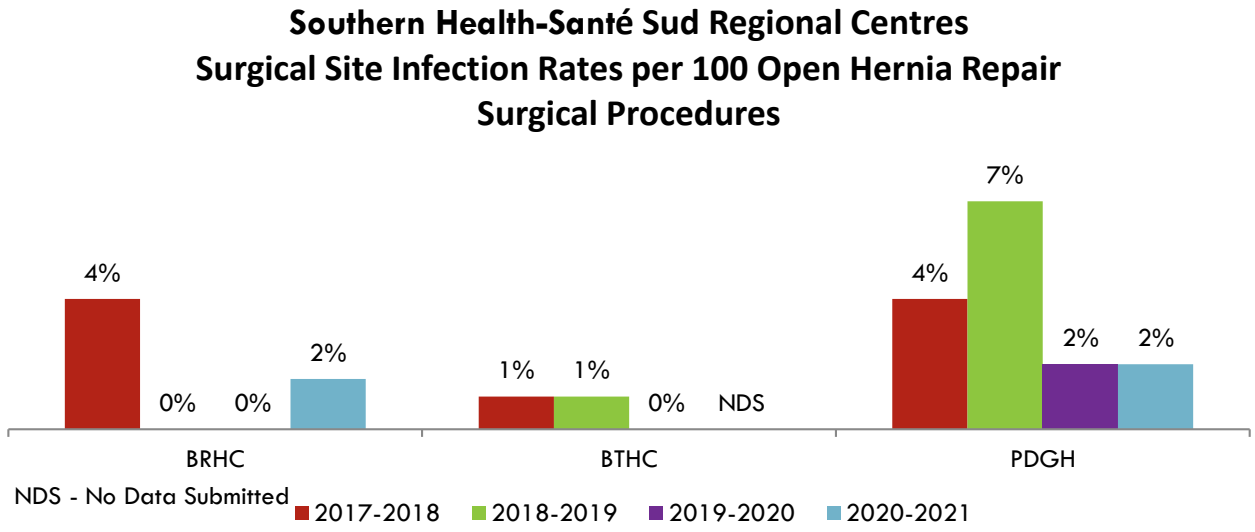
Source: Southern Health-Santé Sud Regional Infection Prevention & Control Indicators 2020-2021

Figure 6c. Southern Health-Santé Sud SSI rates per 100 open vaginal or abdominal hysterectomy surgical procedures in the three regional centres for the past four fiscal years. One SSI was reported out of a total of 3 open vaginal or abdominal hysterectomies at PDGH. No infections were reported at BRHC for this year. For the 2020-2021 period there was no data submitted for BTHC.



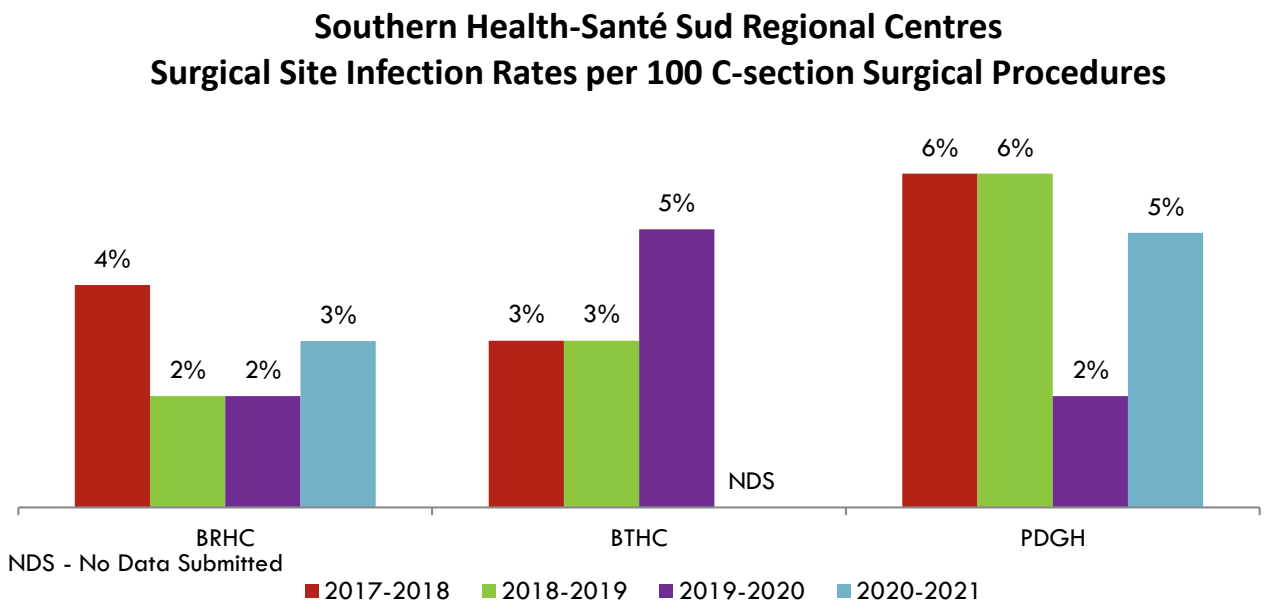
Source: Southern Health-Santé Sud Regional Infection Prevention & Control Indicators 2020-2021

Figure 6d. Southern Health-Santé Sud SSI rates per 100 open hernia repair surgical procedures in the three regional centres for the past four fiscal years. Two SSIs were reported out of a total of 116 open hernia repair surgical procedures at BRHC and PDGH. For the 2020-2021 period there was no data submitted for BTHC.



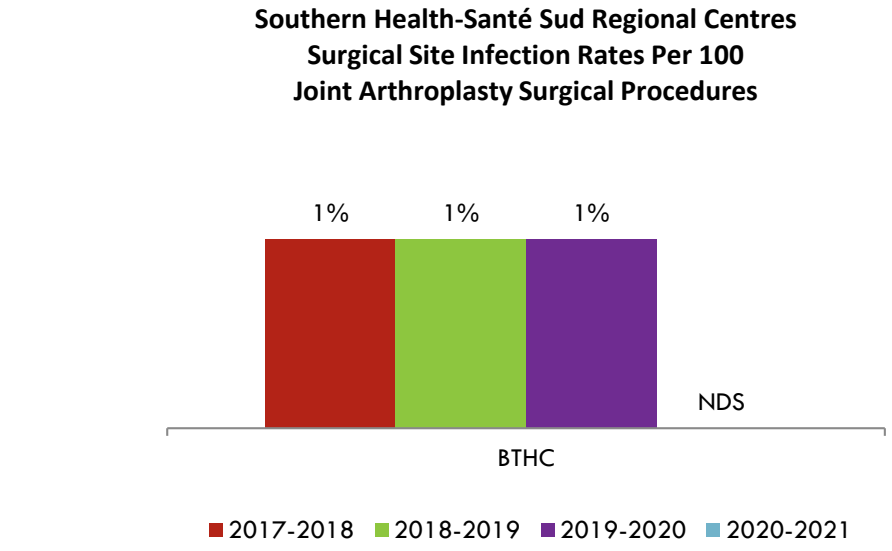
Source: Southern Health-Santé Sud Regional Infection Prevention & Control Indicators 2020-2021

Figure 6e. Southern Health-Santé Sud SSI rates per 100 C-section surgical procedures in the three regional centres for the past four fiscal years. Six SSIs (2 BRHC and 4 PDGH) were reported out of a total of 148 C-section surgical procedures at BRHC and PDGH. For the 2020-2021 period there was no data submitted for BTHC.



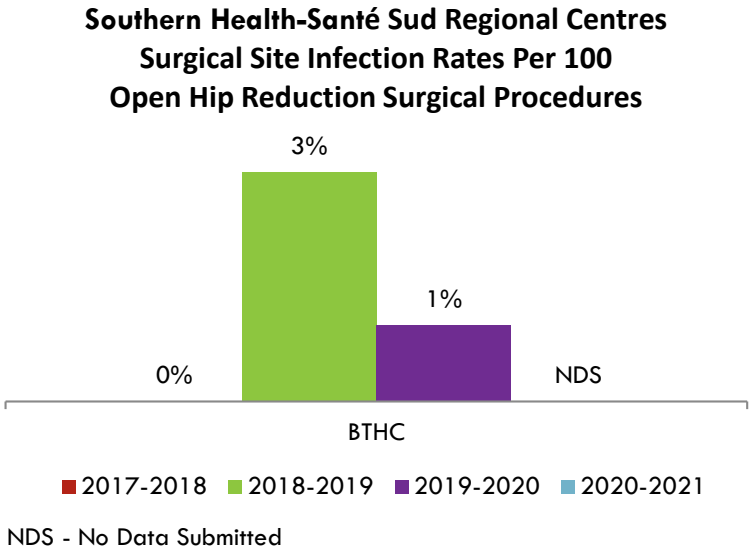
Source: Southern Health-Santé Sud Regional Infection Prevention & Control Indicators 2020-2021

Figure 6f. Southern Health-Santé Sud SSI rates per 100 joint arthroplasty surgical procedures in BTHC because it is the only regional centre that performs joint arthroplasty surgical procedures. In the period of 2020-2021 data was not submitted for joint arthroplasty surgical procedures and surgical site infections.



Source: Southern Health-Santé Sud Regional Infection Prevention & Control Indicators 2020-2021

Figure 6g. Southern Health-Santé Sud SSI rates per 100 open hip reduction surgical procedures in the three regional centres for the past four fiscal years. For 2020-2021 there was no data submitted for the BTHC.



Source: Southern Health-Santé Sud Regional Infection Prevention & Control Indicators 2020-2021

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, 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, as well as maintaining normothermia during the surgical procedure.

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.

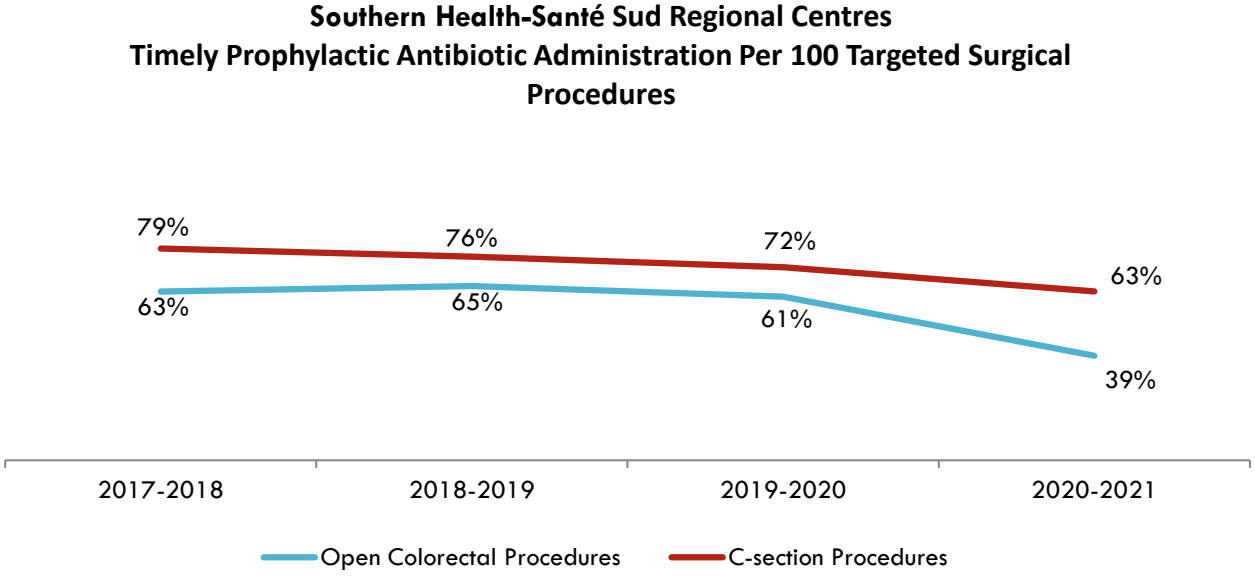
Please note: The infection prevention strategy rates at BRHC have dropped substantially over the past two years. The responsibility for completion of the SSI reports was placed back on the surgical team and reports were submitted inconsistently or not complete. This process will need further assessment to ensure consistent reporting at all regional surgical centers.

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).

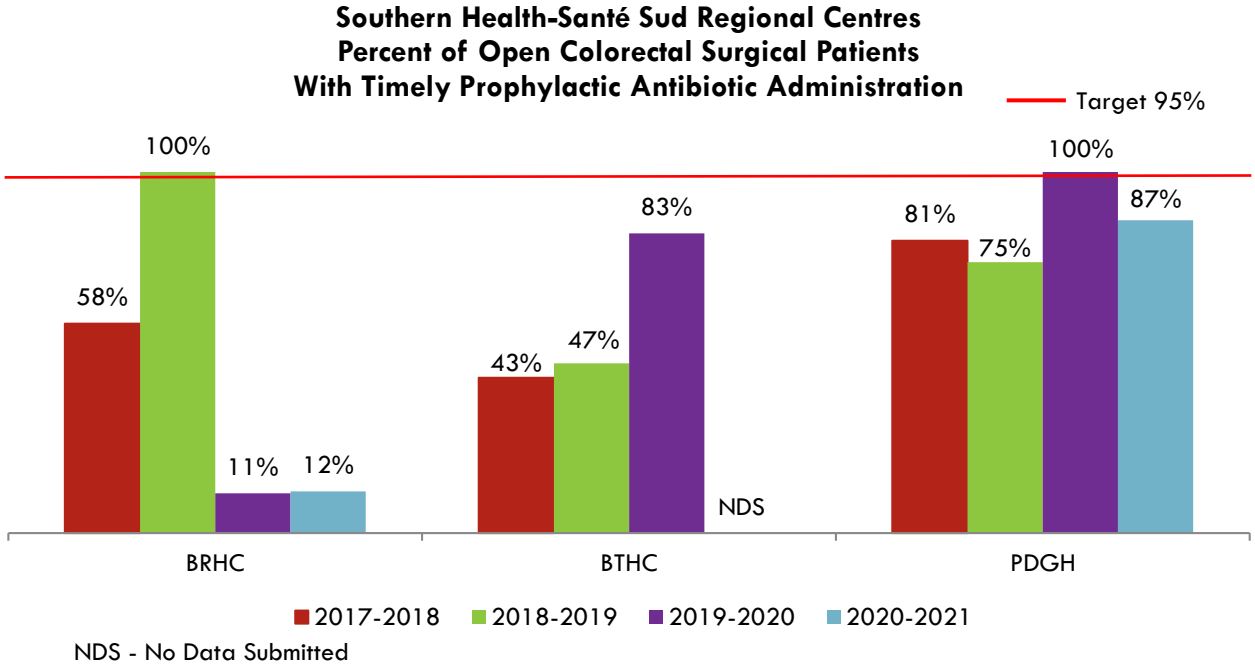
The target rates for timely prophylactic antibiotic administration and maintaining normothermia is 95% or higher as per Safer Healthcare Now (SHN), Prevent Surgical Site Infections: Getting Started Kit, March 2011.

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 for open colorectal procedures in the two sites that submitted data (BRHC and PDGH) has decreased by 22% and C-section procedures in the two regional centres has decreased by 9% compared to the previous year. For 2020-2021 there was no data submitted for the BTHC. This graph should be interpreted with caution.



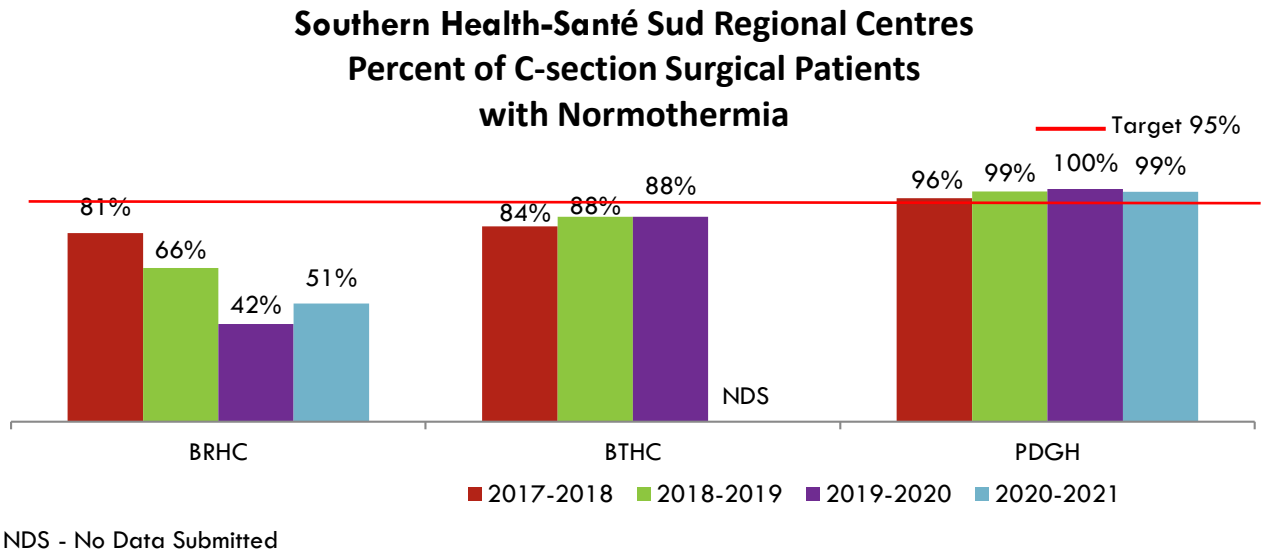
Source: Southern Health-Santé Sud Regional Infection Prevention & Control Indicators 2020-2021

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 2020-2021 rate of open colorectal surgical clients receiving timely prophylactic antibiotic administration has decreased in PDGH but increased slightly in BRHC. Compared to 2019-2020 the rate at PDGH has shifted below the target of 95%. The rate at BRHC is still well below the recommended SHN target of 95% identified by red line. For 2020-2021 there was no data submitted for the BTHC.



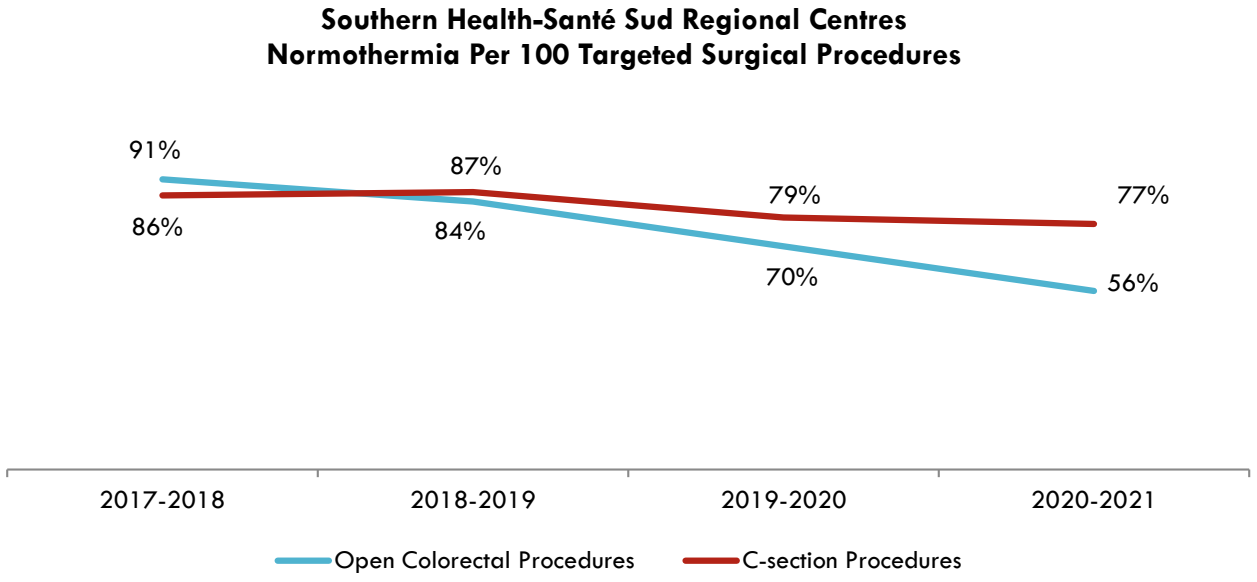
Source: Southern Health-Santé Sud Regional Infection Prevention & Control Indicators 2020-2021

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 2020-2021 rates of C-section surgical clients receiving timely prophylactic stayed the same from the previous year at PDGH, while the rates decreased at BRHC. The rates of the two regional centres that submitted data remain below the recommended SHN target of 95%. For 2020-2021 there was no data submitted for the BTHC.



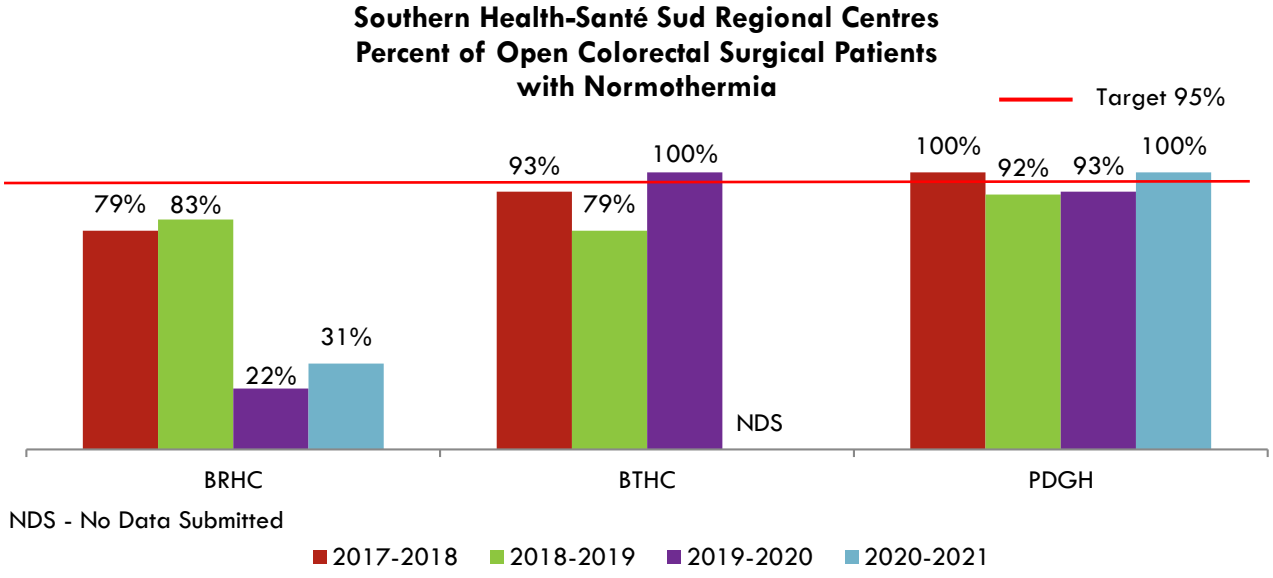
Source: Southern Health-Santé Sud Regional Infection Prevention & Control Indicators 2020-2021

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 decreased by 14% in the regional centres from the previous year. The rate of maintaining normothermia for C-section surgical procedures has decreased by 2% in the regional centres from the previous year. For 2020-2021 there was no data submitted for the BTHC. This graph should be interrupted with caution.



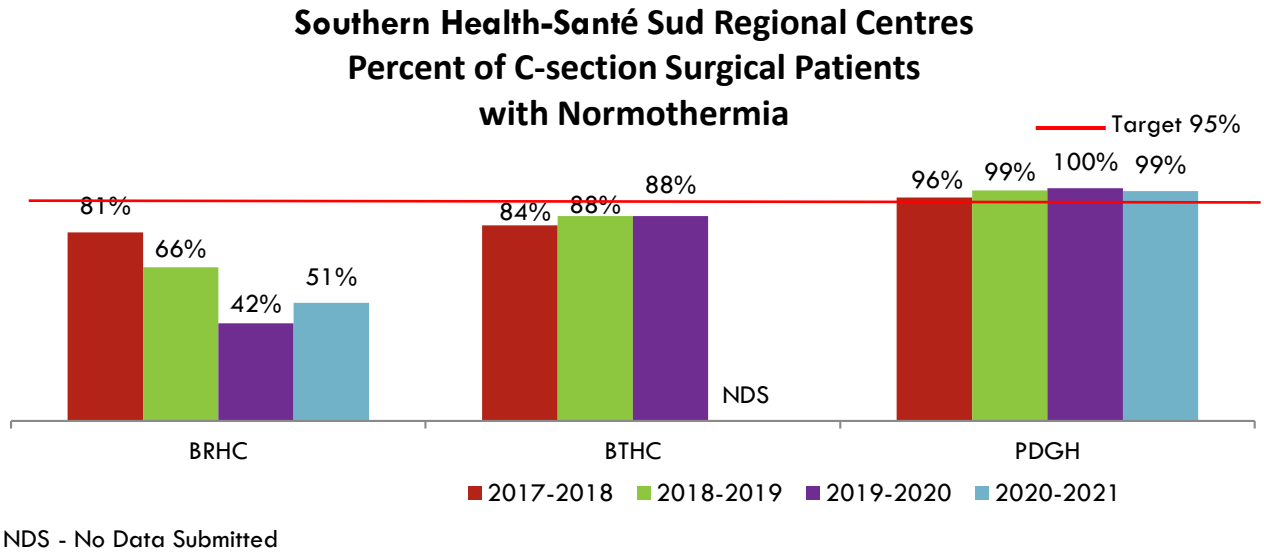
Source: Southern Health-Santé Sud Regional Infection Prevention & Control Indicators 2020-2021

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 2020-2021 rates of open colorectal surgical clients maintaining normothermia during open colorectal surgical procedures increased for BRHC and PDGH. The rate in PDGH is above the recommended SHN target of 95%. For 2020-2021 there was no data submitted for the BTHC.



Source: Southern Health-Santé Sud Regional Infection Prevention & Control Indicators 2020-2021

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 2020-2021 rates of C-section surgical clients maintaining normothermia during C-section surgical procedures have decreased slightly at PDGH, but increased at BRHC. The rate at PDGH is above target while the rates at BRHC remains below the recommended SHN target of 95%. There was no data submitted for BTHC for 2020-2021.



NDS - No Data Submitted

Source: Southern Health-Santé Sud Regional Infection Prevention & Control Indicators 2020-2021

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

Moving forward for 2021-2022, the Regional IP&C goals are:

- to continue 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 work with the BRHC surgical program, providing education and emphasizing the need for documentation and consistent reporting of the infection prevention strategies put in place to decrease SSIs.
- to review process to ensure consistent reporting at all regional surgical centers.

OUTBREAKS

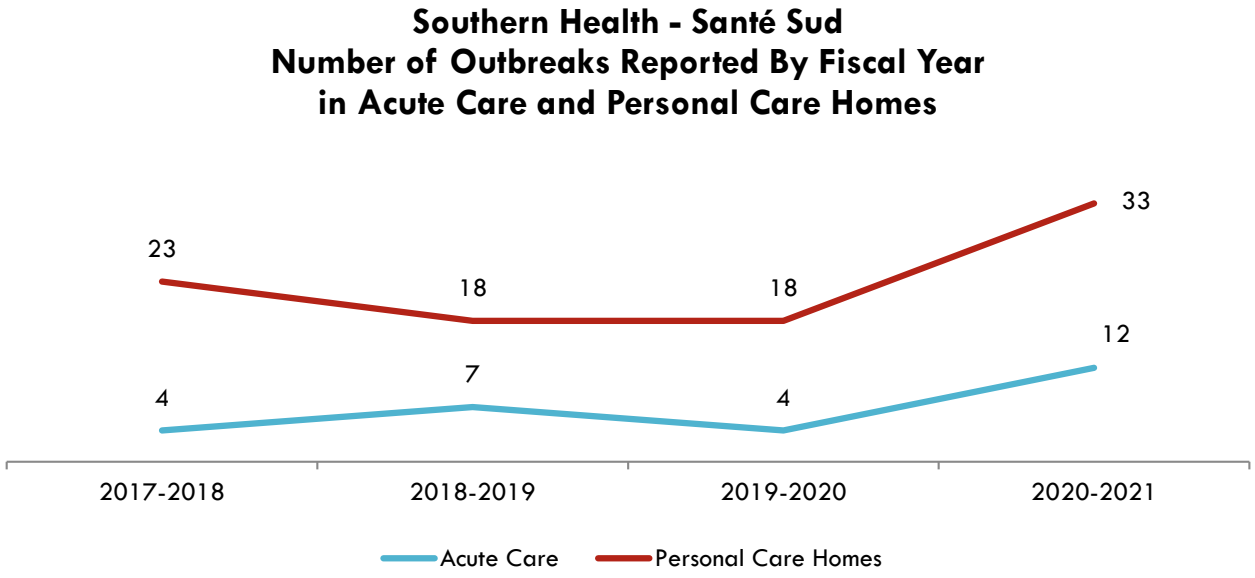
The IP&C program provides support to Southern Health-Santé Sud AC and PCH facilities that are experiencing outbreaks, including affiliated sites.

OUTBREAK SUMMARY

From June 2020 to March 2021, a total of 45 outbreaks were reported in Southern Health-Santé Sud facilities, 12 in AC and 33 in PCH. This is a significant increase from the 22 outbreaks in the previous year, but likely due to the COVID-19 outbreaks. The two viruses responsible for majority of the respiratory outbreaks this year were COVID-19 and Rhinovirus. All outbreaks are reported to the Canadian Network for Public Health Intelligence (CNPHI).

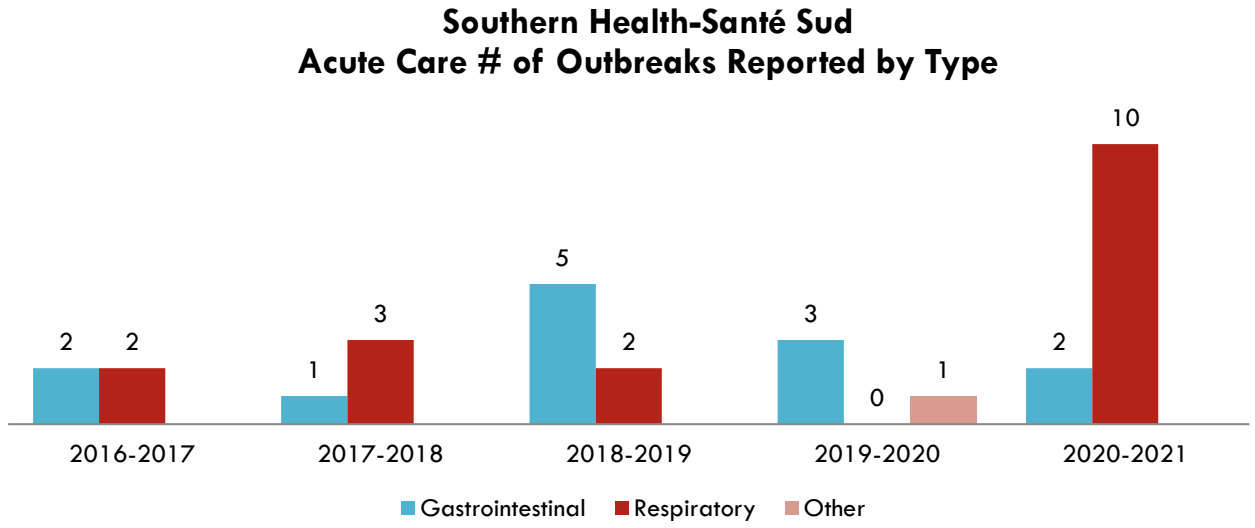
When comparing the number of outbreaks from year to year, it is important to keep in mind the changing prevalence of gastrointestinal and respiratory pathogens in the community.

Figure 8a. Number of outbreaks in Southern Health-Santé Sud AC and PCH facilities per fiscal year since 2017. In 2020-2021, there was a significant increase in the number of AC and PCH outbreaks.



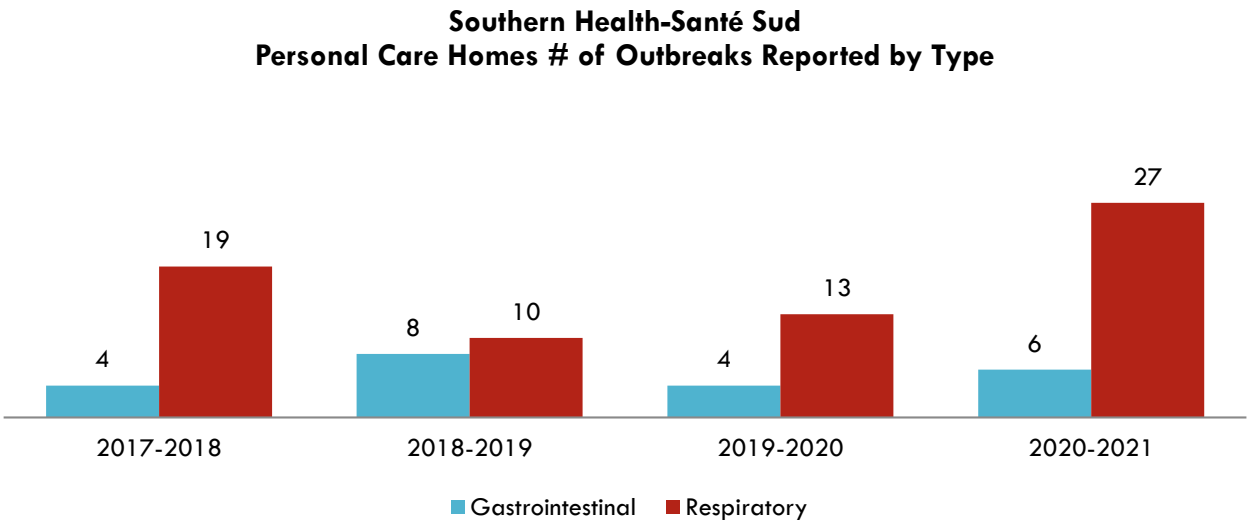
Source: Southern Health-Santé Sud Regional Infection Prevention & Control Indicators 2020-2021

Figure 8b. The number of outbreaks reported by type in Southern Health-Santé Sud AC facilities per fiscal year since 2017. In 2020-2021 there were 12 outbreaks, which is higher than the previous year. Of the 12 outbreaks reported in AC, two were gastrointestinal in nature, and ten were respiratory in a nature. The COVID-19 virus was responsible for all 10 respiratory outbreaks.



Source: Southern Health-Santé Sud Regional Infection Prevention & Control Indicators 2020-2021

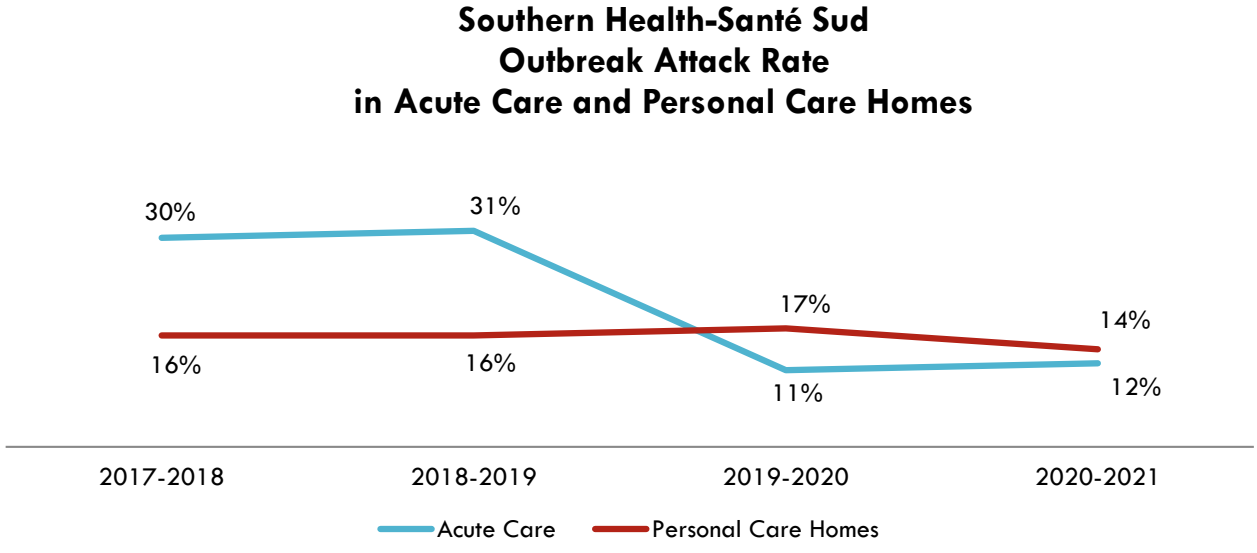
Figure 8c. The number of outbreaks reported by type in Southern Health-Santé Sud PCH facilities per fiscal year since 2016. In 2020-2021, PCH sites reported a total of 33 outbreaks, which is significantly higher compared to the previous year. Of the 33 outbreaks reported, 6 were gastrointestinal outbreaks and 27 were respiratory outbreaks. The COVID-19 virus was responsible for 18 respiratory outbreaks.



Source: Southern Health-Santé Sud Regional Infection Prevention & Control Indicators 2020-2021

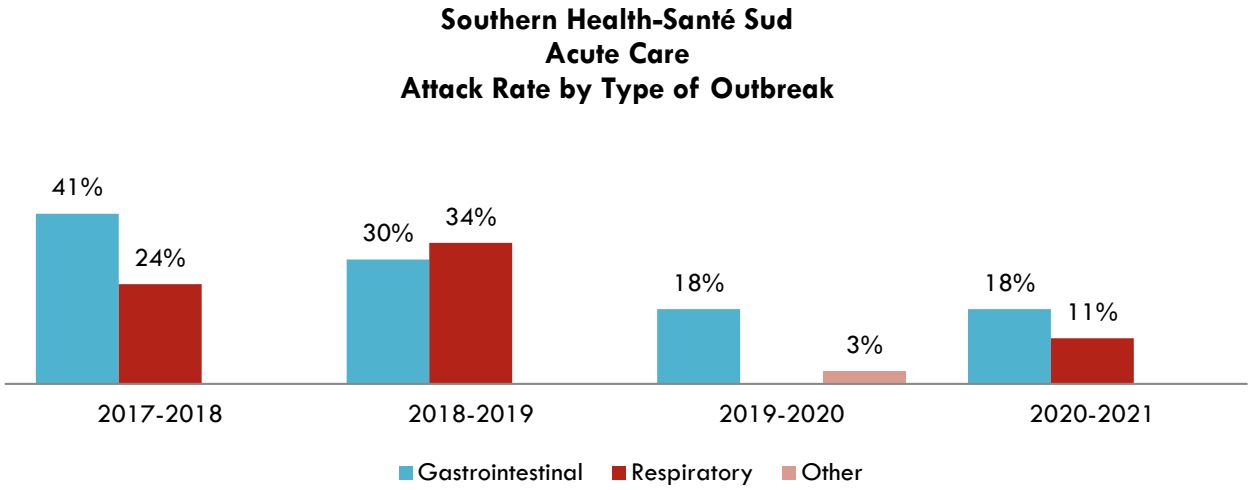
While the endemic level of viruses may increase the risk of outbreaks, the presence of effective infection control measures to rapidly detect transmission and initiate appropriate interventions can reduce the severity of an outbreak, both in terms of the number of people affected and duration of illness. "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 from April 1, 2017 to March 31, 2021. During 2020-2021, the outbreak attack rate decreased by 3% in PCH and increased by 1% in AC.



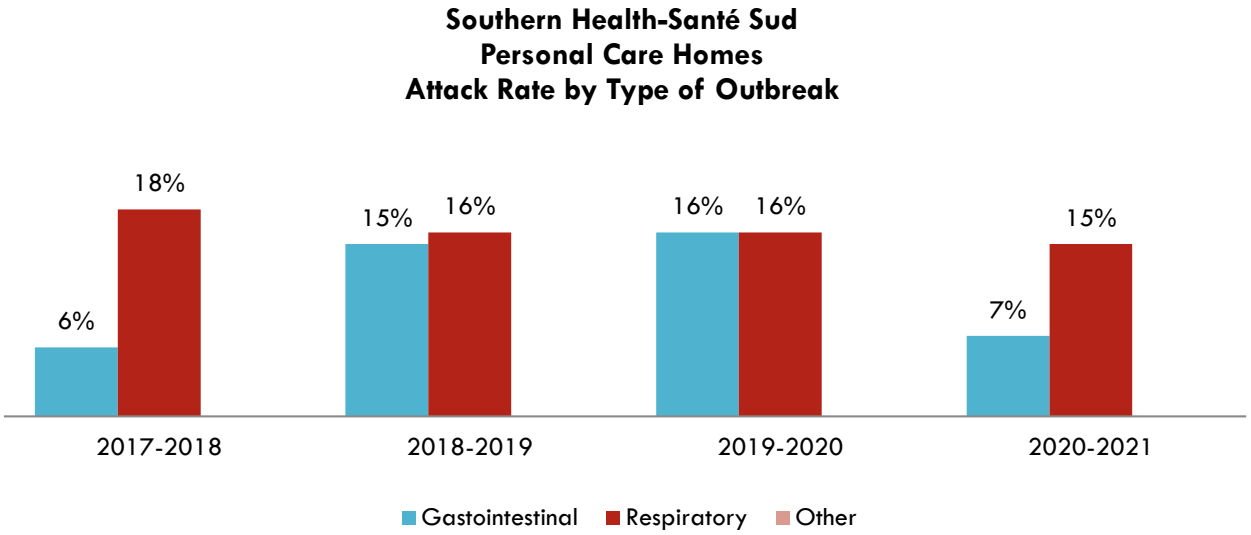
Source: Southern Health-Santé Sud Regional Infection Prevention & Control Indicators 2020-2021

Figure 8e. The percentage of reported client illness by outbreak type in Southern Health-Santé Sud AC facilities from April 1, 2017 to March 31, 2021. The percentage of clients ill during gastrointestinal outbreaks stayed the same from the previous year. All of the clients ill during respiratory outbreaks were due to COVID-19 virus.



Source: Southern Health-Santé Sud Regional Infection Prevention & Control Indicators 2020-2021

Figure 8f. The percentage of reported client illness by outbreak type in Southern Health-Santé Sud PCH facilities from April 1, 2017 to March 31, 2021. The percentage of clients ill during outbreaks has decreased for gastrointestinal outbreaks and respiratory outbreaks. Of the percentage of clients ill during respiratory outbreaks, the vast majority were due to COVID-19 virus.



Source: Southern Health-Santé Sud Regional Infection Prevention & Control Indicators 2020-2021

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. Outbreak management is standardized across the region and well understood by staff members. Southern Health-Santé Sud continues to follow Provincial direction for the management of COVID-19 outbreaks. 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.

EDUCATION

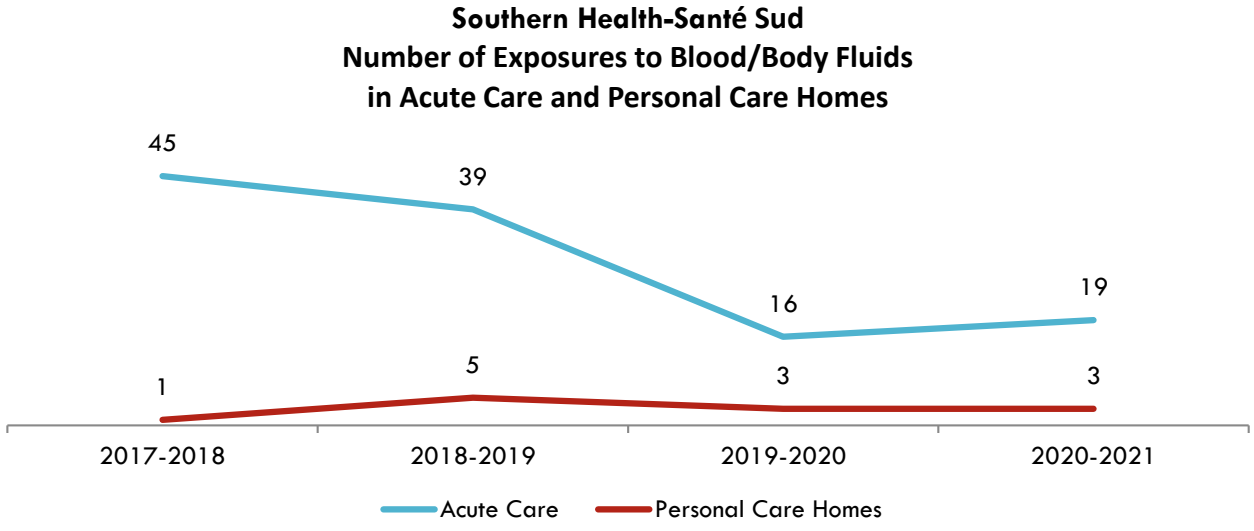
Education is a key component of the IP&C practitioner's role. Education regarding IP&C principles and practices is provided to Southern Health-Santé Sud staff primarily through the following venues: Regional and Facility Orientation for all new employees, Regional Clinical Orientation for all new nursing employees and senior practicum nursing students, annual IP&C education days, and ongoing in-service education.

Due to the COVID-19 pandemic, no regional IP&C education day was held in 2020-2021.

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

The Regional IP&C Program participated in making revisions to the post-exposure prophylaxis policy in January 2020. 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.

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 2020-2021, the number of exposures to blood/body fluids in AC increased, and the number of exposures in PCH did not change.



Source: Southern Health-Santé Sud Regional Infection Prevention & Control Indicators 2020-2021

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.

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 2020-2021:

- Providing IC Construction education for contractors/maintenance staff throughout the region;
- Participating on two major capital projects – PCH renovation/addition projects at Rest Haven Care Home and Boyne Lodge;
- Providing construction advice to other ICPs across the province upon consultation; and
- Providing ongoing direction to ICPs in the region when dealing with construction projects at their facilities.

MOVING FORWARD INTO 2021-2022

Southern Health-Santé Sud is committed to the following priorities for 2021-2022:

- Rebrand HH in the region with an education blitz and new posters (including standardization to Shared Health posters), updating HH policy, and participating in the provincial purchase of new HH auditing software with the goal of improving auditing in the region.
- 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.
    - Offer HH education to facility staff where HH compliance rates are low.
- Develop the capacity and capability of the IP&C team members and designates by providing current relevant information, including COVID-19 information.
    - Provide regular IP&C updates at Regional Staff Development/IP&C Team, Regional IP&C Team meetings and weekly team COVID-19 calls.
    - 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.
- Revise the PCH UTI Guideline, creating a combined UTI Guideline for both AC and PCH facilities with the goal of decreasing the CAUTI rates in all sites across the region.
- Continue to disseminate 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.
    - Work with the BRHC surgical program, providing education and emphasizing the need for documentation and consistent reporting of the infection prevention strategies (i.e., timely prophylactic antibiotic administration, maintaining normothermia) to decrease SSIs.
    - Review process to ensure consistent reporting by all surgical centres.
- 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.
- Seek input from staff, service providers, volunteers, clients and families on components of the IP&C program.
- Provide IP&C education & support to all facilities/staff regarding COVID-19 during global pandemic.

Additional Attachments on HPS

- Facility Name Legend
- Infection Prevention and Control Indicators for Surveillance in Practice Settings – case definitions – April 2020-March 2021