INFECTION PREVENTION & CONTROL

HEALTH CARE-ASSOCIATED INFECTION INDICATOR DEFINITIONS
SURVEILLANCE IN ACUTE CARE AND PERSONAL CARE HOME

Regional Infection Prevention & Control Team

April 2019 – March 2020

Targeted Surveillance of Health Care-Associated Infections

Southern Health-Santé Sud (SH-SS) is committed to monitoring and reducing health care-associated infections (HAIs) throughout all acute care and personal care home settings within the region. A large percentage of HAIs are preventable and the scientific literature has established that incorporating surveillance systems into infection prevention and control (IP&C) activities are a means to reduce the frequency of these infections and improve patient safety.

The purpose of performing surveillance of HAIs is as follows:

- To assess the frequency and type of infections clients acquire within health care facilities in SH-SS in order to institute quality improvement initiatives that minimize the number of HAIs that occur;
- To detect clusters of infection, outbreaks, and emerging trends in infection transmission, to intervene as appropriate, and improve the safety of client care provided within SH-SS;
- To meet reporting requirements for Manitoba Health, Healthy Living and Seniors, Personal Care Home (PCH) Standards, and Communicable Disease Control (CDC) protocols and guidelines, as well as Accreditation Canada.
    - ACCREDITATION CANADA REQUIRED ORGANIZATIONAL PRACTICES: 1) Health care-associated infections are tracked, information is analyzed to identify outbreaks and trends, and this information is shared throughout the organization; 2) Compliance with accepted hand hygiene practices is measured.
- To monitor the effectiveness of the SH-SS Infection Prevention & Control program and ensure it is evidence based.

One of the most important steps when implementing any surveillance program is the appropriate selection and use of surveillance indicators. Surveillance indicators are used to measure either an outcome that is related to health care (such as an infection or fall) or a process (such as compliance with a specific protocol). Targeted surveillance looks at only specific infections or procedures that are more common/relevant to SH-SS or that are required by Manitoba Health Seniors and Healthy Living (MHSAL) and Accreditation Canada. This document includes the targeted indicators determined by IP&C for SH-SS, the current case definitions and the rate calculation to determine rates of infection.

The document includes the following:

Personal Care Home Surveillance Indicators

Health Care-Associated Infections (HAI) – Total Source: National Healthcare Safety Network (NHSN) Patient Safety Component Manual, Chapter 2 Identifying Healthcare-associated Infections (HAI) for NHSN Surveillance, January 2019		
SH-SS HAI rate /1000 client days HAIs reported include targeted and non-targeted HAIs 2017-2018: PCH 2.4	To standardize the classification of an infection as present on admission (POA) or a healthcare-associated infection (HAI), the following objective surveillance definitions and guidance are used. Note: This does not apply to surgical site infections (SSI) surveillance. **Date of Event (DOE)** The DOE is the date of the first documented localized sign or symptom used to meet the specific site of infection criterion. For example, diarrhea, site-specific pain, purulent drainage are localized signs or symptoms. Note that a non-specific sign or symptom for example, fever is not considered to be localized. Therefore if fever presented 2 days prior to localized signs or symptoms, the day the fever presented is not considered the DOE. Note: accurate determination of DOE is critical because DOE is used to determine if an infection is HAI or POA, location of attribution, and device association. **Present on Admission (POA)** An infection is considered POA if the DOE occurs during the POA time period, which is defined as the day of admission to an inpatient location (calendar day 1), the 2 days before admission, and the calendar day after admission. **Health Care-associated Infection (HAI)** The infection is considered HAI if the DOE occurs on or after the 3rd calendar day of admission to an inpatient location where day of admission is calendar day 1. Reactivation of a **latent** infection is not considered to be a HAI; for example but not limited to herpes, shingles, syphilis, or tuberculosis. **Repeat Infection Timeframe (RIT)** The RIT is a 14-day timeframe during which no new infections of the same type are reported. RIT applies to both POA and HAI determinations. The DOE is Day 1 of the 14-day RIT. If criteria for the same type of infection are met and the DOE is within the 14-day RIT, a new infection is not reported. The RIT applies during a client's single admission, including the day of discharge and the day after, in keeping with the Transfer Rule. An RIT does not carry over from one admission to another even if readmission is to the same facility. **Transfer Rule** If the DOE is on the date of transfer or discharge, or the next day, the infection is attributed to the transferring/discharging location. This is called the Transfer Rule. If the client was in multiple locations within the transfer rule time frame, attribute the infection to the **first** location in which the client was housed the **day before** the infection's DOE. Receiving locations or facilities should share information about such HAIs with the transferring location or facility to enable accurate reporting. **Location of Attribution (LOA)** The LOA is the inpatient location where the client was assigned on the date of infection.	Total # of all HAIs x 1000 Total # of client days* *For PCH surveillance, Client days refer to Resident – Days in Home (represents the actual stay of a resident in a PCH, excludes all leave days).

Antibiotic Resistant Organisms		
Methicillin Resistant Staphylococcus aureus (MRSA)		
Source: 1) Canadian Nosocomial Infection Surveillance Program (CNISP) 2017 Surveillance Protocol for MRSA Infections in CNISP Hospitals, Revised January 23, 2017 2) Manitoba Health, Seniors and Active Living ARO Definitions, November 2018		
Methicillin Resistant *Staphylococcus aureus* (MRSA) **SH-SS HA MRSA colonization rate /1000 client days** 2017-2018: PCH 0	**MRSA data is reported in two categories:** • Cases of new colonization (new cases of MRSA never been reported previously) • Cases of new infection (in new and known cases of MRSA) **<u>COLONIZATION</u>** **MRSA colonization surveillance inclusion criteria:** • Isolation of *Staphylococcus aureus* from any body site AND • Resistance of isolate to oxacillin AND • Client must be admitted to a health care facility • Is "a newly identified MRSA case". This does not include: • MRSA cases previously identified • Emergency, clinic, or other outpatient cases (e.g. physiotherapy) who are not admitted • Cases re-admitted with MRSA If the case does not meet the infection definition, then the case is classified as a colonization. • If the case is a colonization and the client was not previously known to be positive; this case is counted as a new colonized case. • If the case is a colonization and the client is already known to be positive; this case is not counted. **HA MRSA case definition for a MRSA colonization** Must meet the MRSA surveillance inclusion criteria above AND Must meet at least **one** of the following criteria: • Diagnosis of MRSA was made by a culture positive sample collected greater than or equal to 2 calendar days after admission to your facility (admission considered day 1; diagnosis made at day 3 or beyond) AND No medical history of previous MRSA • Diagnosis of MRSA was made by a culture positive sample collected within 2 calendar days (admission considered day 1; diagnosis made prior to day 3) of admission to your facility AND Medical history in previous 12 months at your facility including one or more of the following: a) Admission to your facility b) Dialysis c) Surgery (including day surgery) d) Placement of indwelling catheters or medical devices that pass through the skin into the body	Total # of new HA MRSA colonizations (in new MRSA cases) / Total # of client days x1000

SH-SS MRSA HAI rate/1000 client days 2017-2018: PCH 0.01	• Diagnosis of MRSA was made post discharge from your facility by a culture positive sample for MRSA collected within 2 calendar days (admission considered day 1: diagnosis made prior to day 3) of admission to a receiving facility **<u>INFECTION</u>** **MRSA infection surveillance inclusion criteria:** • Isolation of *Staphylococcus aureus* from any body site AND • Resistance of isolate to oxacillin AND • Client must be admitted to a health care facility AND • Is "a newly identified MRSA infection"* at the time of admission or identified during stay AND • Meets the criteria for MRSA infection as determined using the surveillance definitions for specific infections, and in accordance with the best judgement of the healthcare and/or infection prevention and control practitioner (ICP) at the time of hospital admission or identified during hospitalization. *This includes: • MRSA infections identified for the first time during this current admission. • MRSA infection identified at a new (different) site in a client with a MRSA infection identified in a previous surveillance (calendar) year. For example, client identified in 2014 with a MRSA respiratory infection. Same client admitted in 2017 and identified with SSI MRSA infection. The client would be counted as a new infection in 2017. This does not include: • MRSA infections previously identified • Emergency, clinic, or other outpatient cases (e.g. physiotherapy) who are not admitted • Infections re-admitted with MRSA unless it is a new/different site of MRSA infection. **HA MRSA case definition for a MRSA clinical infection** Must meet the MRSA surveillance inclusion criteria above AND Must meet at least one of the following criteria: 1. Diagnosis of MRSA was made by a culture positive sample collected greater than or equal to 2 calendar days after admission to your facility (admission considered day 1; diagnosis made at day 3 or beyond) AND No medical history of previous MRSA 2. Diagnosis of MRSA was made by a culture positive sample collected within 2 calendar days (admission considered day 1; diagnosis made prior to day 3) of admission to your facility AND Medical history in previous 12 months at your facility including one or more of the following: a) Admission to your facility b) Dialysis c) Surgery (including day surgery) d) Placement of indwelling catheters or medical devices that pass through the skin into the body.	Total # of new HA MRSA infections (in new and <u>known cases)</u> x1000 Total # of client days

	3. Diagnosis of MRSA was made post discharge from your facility by a culture positive sample for MRSA collected within 2 calendar days (admission considered day 1: diagnosis made prior to day 3) of admission to a receiving facility .	
Vancomycin Resistant *Enterococc*i Bloodstream Infections (BSI) Source: 1) Manitoba Health, Seniors and Active Living ARO Definitions, November 2018 2) 2018 CNISP HAI Surveillance Case definitions		
Vancomycin Resistant *Enterococci* (VRE) **SH-SS HA VRE bloodstream infection rate/1000 client days** 2017-2018: PCH no data	VRE surveillance is only required for bloodstream infections. The following definitions are used for the purposes of identification and surveillance classification of VRE bloodstream infection cases. **VRE surveillance inclusion criteria:** • Isolation of *Enterococcus faecalis or faecium* from blood AND • Resistance of isolate to vancomycin AND • Client must be admitted to a health care facility AND • Is a "newly identified VRE BSI" at the time of admission or identified during stay. A new VRE BSI is defined as a positive VRE blood isolate greater than 14 days after completing of therapy for a previous infection and felt to be unrelated to previous infection in accordance with best clinical judgement by ICP and physician. This does not include: • Emergency, clinic, or other outpatient cases (e.g., physiotherapy) who are not admitted **Health Care-Associated (HA) VRE bloodstream infection case definition** Must meet the VRE surveillance inclusion criteria above AND Must meet at least **one** of the following criteria 1. Diagnosis of VRE was made by a blood culture positive sample collected greater than or equal to 2 calendar days after admission to your facility (admission considered day 1; diagnosis made at day 3 or beyond) 2. Diagnosis of VRE was made by a blood culture positive for VRE collected within 48 hours of admission to your facility AND Medical history in previous 12 months at your facility including one or more of the following: a. Admission to your facility b. Dialysis c. Surgery (including day surgery) d. Placement of indwelling catheters or medical devices that pass through the skin into the body. 3. Diagnosis of VRE bacteremia was made post discharge from current facility by a blood culture positive for VRE collected within 48 hours of admission to a receiving facility.	Total # of new HA VRE bloodstream infections x1000 Total # of client days
Carbapenamase Producing Enterobacteriaceae (CPE) Source: 1) Manitoba Health, Seniors and Active Living ARO Definitions, November 2018		
Carbapenamase Producing	**CPE data is reported in two categories:** • Cases of new colonization (new cases of CPE never been reported previously) • Cases of new infection (in new and known cases of CPE)	

HAI Type/Target	Case Definition	Rate Calculation
Enterobacteriaceae (CPE) **SH-SS HA CPE colonization rate /1000 client days** 2017-2018: PCH no data	**<u>COLONIZATION</u>** **CPE colonization surveillance inclusion criteria:** • Isolation of a new Carbapenamase Producing Enterobacteriaceae from any body site AND • Client must be admitted to a health care facility AND • Is "a newly identified CPE case". This does not include: • Emergency, clinic, or other outpatient cases (e.g. physiotherapy) who are not admitted • Cases re-admitted with the same CPE pathogen as previous admission **HA CPE case definition for a CPE colonization** Must meet the CPE surveillance inclusion criteria above AND Must meet at least **one** of the following criteria: 1. Diagnosis of a new CPE was made by a culture positive sample for CPE collected greater than or equal to 2 calendar days after admission to your facility (admission considered day 1: diagnosis made at day 3 or beyond) AND no medical history of previous similar CPE infection or colonization 2. Diagnosis of new CPE was made by a culture positive sample for CPE collected within 2 calendar days (admission considered day 1: diagnosis made prior to day 3) of admission to current facility AND medical history in the previous 12 months at your facility including **one or more** of the following: a) Admission to your facility b) Dialysis c) Surgery (including day surgery) d) Placement of indwelling catheters or medical devices that pass through the skin into the body 3. Diagnosis of new CPE was made post discharge from your facility by a culture positive sample for CPE collected within 2 calendar days (admission considered day 1: diagnosis made prior to day 3) of admission to a receiving facility	Total # of HA CPE colonizations in new CPE cases / Total # of client days x1000
SH-SS HA CPE infection rate/1000 client days 2017-2018: PCH no data	**<u>INFECTION</u>** **CPE infection surveillance inclusion criteria:** • Isolation of a new Carbapenamase Producing Enterobacteriaceae from any body site AND • Client must be admitted to a health care facility AND • Is "a newly identified CPE case" AND • Meets the criteria for CPE infection as determined using the surveillance definitions for specific infections, and in accordance with the best judgement of the healthcare and /or IPC practitioner at the time of hospital admission or identified during hospitalization.	

	This does not include: • Emergency, clinic, or other outpatient cases (e.g. physiotherapy) who are not admitted • Cases re-admitted with the same CPE pathogen as previous admission **Health Care-Associated (HA) CPE infection case definition** Must meet the CPE surveillance inclusion criteria above AND Must meet at least **one** of the following criteria: 1. Diagnosis of a new CPE was made by a culture positive sample for CPE collected greater than or equal to 2 calendar days after admission to your facility (admission considered day 1: diagnosis made at day 3 or beyond) AND no medical history of previous similar CPE infection or colonization 2. Diagnosis of new CPE was made by a culture positive sample for CPE collected within 2 calendar days (admission considered day 1: diagnosis made prior to day 3) of admission to current facility AND medical history in the previous 12 months at your facility including **one or more** of the following: a) Admission to your facility b) Dialysis c) Surgery (including day surgery) d) Placement of indwelling catheters or medical devices that pass through the skin into the body 3. Diagnosis of new CPE was made post discharge from your facility by a culture positive sample for CPE collected within 2 calendar days (admission considered day 1: diagnosis made prior to day 3) of admission to a receiving facility To classify the case as an infection versus colonization, the case needs to meet the case definition for an infection at time of culture or within 72 hours of when the culture was taken (i.e., signs and symptoms appear within 3 days of specimen collection). Where cases of CPE have been previously identified as CPE and present with a new CPE organism, these cases would be considered new cases.	Total # of new HA CPE infections (in new and known CPE cases) / Total # of client days x1000
Skin and Soft Tissue Infection Source: Surveillance Definitions of Infections in Canadian Long Term Care Facilities, IPAC News, Fall 2017		
Skin and Soft Tissue Infection (STTI) **SH-SS HA STTI rate/1000 client days** 2017-2018: PCH 0.6	**HA Skin and Soft Tissue Infection** For wound infections related to surgical procedures, PCH facilities should report these infections back to the institution where the original surgery was performed. **A. Cellulitis, soft tissue, or wound infection** (at least **one** of the following criteria must be present) 1. Pus present at a wound, skin, or soft tissue site 2. New or increasing presence of **at least 4** of the following sign or symptom sub criteria: a) Heat at the affected site b) Redness at the affected site c) Swelling at the affected site d) Tenderness or pain at the affected site e) Serous drainage at the affected site f) One constitutional criterion (see Table 1) 3. Non-commensal organism isolated with **one or more** signs or symptoms from criterion 2.	Total # of HA STTI cases / Total # of client days X1000

	Comments: *Presence of organisms cultured from the surface (e.g., superficial swab sample) of a wound is not sufficient evidence that the wound is infected. More than 1 resident with streptococcal skin infection from the same serogroup (e.g., A, B, C, G) in a personal care home may indicate an outbreak.* *Common Commensal organisms (normal flora) include, but are not limited to, diphtheroids (Corynebacterium spp. not C. diphtheria), Bacillus spp. (not B. anthracis), Propionibacterium spp., coagulase-negative staphylococci (including S. epidermidis), viridans group streptococci, Aerococcus spp., and Micrococcus spp.* **B. Scabies** (**both criteria 1 and 2** must be present) 1. A maculopapular and/or itching rash characteristic of scabies 2. At least **one** of the following scabies sub criteria: a) Physician diagnosis b) Laboratory confirmation (scraping or biopsy) c) Epidemiological linkage to a case of scabies with laboratory confirmation ***Comments:*** *Consider the appearance and distribution of the rash. The most common symptom of scabies is itching (pruritis) especially at night and pimple (papular) like rash. The itching and rash may affect much of the body or be limited to common sites such as wrists, elbow, armpit, webbing between the fingers, nipple, penis, waist, beltline and buttocks. Tiny burrows that are raised and crooked, grayish white or skin colored lines on the skin surface. They are found most often in the webbing of the fingers, in the skin folds of the wrist, elbow or knee and on the penis, breast or shoulder blades. If rash presentation is atypical, lab confirmation is recommended.* *A case is considered epidemiologically linked by direct contact to a laboratory-confirmed case through person-to-person transmission (e.g., common caregiver), if there is geographic proximity in the facility or through a common exposure. Care must be taken to rule out rashes due to skin irritation, allergic reactions, eczema, and other non-infectious skin conditions.*	
Urinary Tract Infection Source: Surveillance Definitions of Infections in Canadian Long Term Care Facilities, IPAC News, Fall 2017		
Urinary Tract Infection (UTI) **SH-SS HA symptomatic UTI rate/1000 client days** 2017- 2018: PCH 0.6	**HA Symptomatic Urinary Tract Infection** A urinalysis negative for leukocytes effectively rules out a UTI while a urinalysis positive for leukocytes does not differentiate symptomatic UTI from asymptomatic bacteriuria. **A. For residents without an indwelling catheter** (**criteria 1 and 2** must be present with no other identified source of infection, **OR criteria 2 and 3**) 1. At least **one** of the following sign or symptom sub criteria: a) Acute pain, swelling, or tenderness of the testes, epididymis, or prostate in males b) Fever or leukocytosis (see Table 1) and at least **one** of the following localizing urinary tract sub criteria: i. Acute dysuria ii. Acute costovertebral angle pain or tenderness iii. Suprapubic pain iv. Gross hematuria v. New or marked increase in incontinence vi. New or marked increase in urgency vii. New or marked increase in frequency c) In the absence of fever or leukocytosis, then **two or more** of the following localizing urinary tract sub criteria: i. Acute dysuria ii. Suprapubic pain	Total # of HA symptomatic UTI cases x1000 Total # of client days

	iii. Gross hematuria iv. New or marked increase in incontinence v. New or marked increase in urgency vi. New or marked increase in frequency ***Comments:*** *UTI should be diagnosed when there are localizing genitourinary signs and symptoms and a positive urine culture result. A diagnosis of UTI can be made without localizing symptoms if a blood culture isolate is the same as the organism isolated from the urine and there is no alternate site of infection. In the absence of a clear alternate source of infection, fever or rigors with a positive urine culture result in the noncatheterized client or acute confusion in the catheterized client will often be treated as UTI. However, evidence suggests that most of these episodes are likely not due to infection of a urinary source.* 2. Greater than or equal to 10^8cfu/L of no more than 2 species of microorganisms from a midstream urine OR Greater than or equal to 10^5 cfu/L of any number of microorganism in a specimen collected by in and out catheter. . ***Comments:*** *Urine specimens for culture should be processed as soon as possible, preferably within 2 h. If urine specimens cannot be processed within 30 min of collection, they should be refrigerated. Refrigerated specimens should be cultured within 24 h. In and out catheter collection is the gold standard for urine collection in residents without an indwelling catheter.* 3. A blood culture isolate is the same as the organism isolated from the urine and there is no alternate site of infection.	
SH-SS HA symptomatic CAUTI rate/1000 client days 2017- 2018: PCH 0.1	**B. HA Symptomatic Catheter Associated UTI (CAUTI)** – For residents with an indwelling catheter, in a single catheter urine specimen or in a midstream voided urine specimen from a client whose catheter has been removed within the previous 48 h (**criteria 1 and 2** must be present with no other identified source of infection, **OR criteria 2 and 3**) 1. At least **one** of the following sign or symptom sub criteria: a. Fever, rigors, or new-onset hypotension, with no alternate site of infection b. Either acute change in mental status (see Table 2) or acute functional decline (see Table 1), with no alternate diagnosis and leukocytosis c. New-onset suprapubic pain or costovertebral angle pain or tenderness d. Purulent discharge from around the catheter e. Acute pain, swelling, or tenderness of the testes, epididymis, or prostate in males ***Comments:*** *Recent catheter trauma, catheter obstruction, or new onset hematuria are useful localizing signs that are consistent with UTI but are not necessary for diagnosis.* 2. Urinary catheter specimen culture with greater than or equal to 10^8cfu/L of any organism(s) ***Comments:*** *Urinary catheter specimens for culture should be collected following replacement of the catheter (if current catheter has been in place for greater than or equal to 14 days).* 3. A blood culture isolate is the same species as the organism isolated from the urine, with the same resistance pattern, and there is no alternate site of infection. **For Indicator Report data entry - Enter all UTIs in UTI line (includes with or without catheters). Those that are catheter-related are also entered in the CAUTI line.**	Total # of HA symptomatic CAUTI Cases / Total # of client days X 1000

Respiratory Tract Infection Source: Surveillance Definitions of Infections in Canadian Long Term Care Facilities, IPAC News, Fall 2017		
Respiratory Tract Infections (RTI) **SH-SS HA RTI rate/1000 client days** 2017-2018: PCH 0.9	**HA Respiratory Tract Infection** Epidemiological confirmation, instead of a laboratory confirmed positive specimen, can be used to meet case definition criteria during an outbreak. **A. Common cold syndrome or pharyngitis** At least **two** of the following criteria must be present: 1. Runny nose or sneezing 2. Stuffy nose (i.e., congestion) 3. Sore throat or hoarseness or difficulty in swallowing 4. Dry cough 5. Swollen or tender glands in the neck (cervical lymphadenopathy) 6. N/P swab positive for a respiratory pathogen ***Comments:*** *Fever may or may not be present. Symptoms must be new and not attributable to allergies.* **B. Influenza-like illness** **Criteria 1 and/or 2** must be present, **AND 3 or 4:** 1. Fever 2. New and/or increased cough 3. At least **two** of the following influenza-like illness sub criteria: a. Chills b. New headache or eye pain c. Myalgia or body aches d. Malaise or loss of appetite e. Sore throat f. Arthralgia (joint pain) 4. N/P swab positive for Influenza virus ***Comments:*** *Fever may not be present in the elderly. If criteria for influenza-like illness and another upper or lower RTI are met at the same time, only the diagnosis of influenza-like illness should be recorded. Because of increasing uncertainty surrounding the timing of the start of influenza season, the peak of influenza activity, and the length of the season, "seasonality" is no longer a criterion to define influenza-like illness.* **C. Pneumonia** **Criteria 1 and 2** must be present, **OR criteria 1 and 3:** 1. Interpretation of a chest radiograph as demonstrating pneumonia or the presence of a new infiltrate. 2. At least **one** of the following respiratory sub criteria: a. New or increased cough b. New or increased sputum production c. O_2 saturation less than 94% on room air or a reduction in O_2 saturation of greater than 3% from baseline d. New or changed lung examination abnormalities e. Pleuritic chest pain f. Respiratory rate of greater than or equal to 25 breaths per minute 3. At least **one** constitutional criteria (see Table 1)	Total # of HA RTI cases / Total # of client days x 1000

	Comment: *For both pneumonia and lower RTI, the presence of underlying conditions that could mimic the presentation of a RTI (e.g., congestive heart failure or interstitial lung disease) should be excluded by a review of clinical records and an assessment of presenting symptoms and signs.* **D. Lower respiratory tract infection** (bronchitis or tracheobronchitis) **All 3 criteria** must be present: 1. Chest radiograph not performed or negative results for pneumonia or new infiltrate 2. At least **two** of the respiratory sub criteria (a-f) listed in section C above 3. At least **one** of the constitutional criteria (see Table 1) ***Comment****: See comment for section C above.*	
Gastrointestinal Tract Infection Source: Surveillance Definitions of Infections in Canadian Long Term Care Facilities, IPAC News, Fall 2017		
Gastrointestinal (GI) Tract Infections **SH-SS HA GI infection rate/1000 client days** 2017-2018: PCH 0.04	**HA Gastrointestinal Tract Infection** Epidemiological confirmation, instead of a laboratory confirmed positive specimen, can be used to meet case definition criteria during an outbreak. **A. Gastroenteritis** At least **one** of the following criteria must be present: 1. Diarrhea: 3 or more loose or watery stools above what is normal for the client within a 24 hour period 2. Vomiting: 2 or more episodes in a 24 hour period 3. **Both** of the following sign or symptom sub criteria: a. A stool specimen testing positive for a pathogen (e.g., *Salmonella, Shigella, Escherichia coli* 0157:H7, *Campylobacter* species, rotavirus) b. At least **one** of the following GI sub criteria: i. Nausea ii. Vomiting iii. Abdominal pain or tenderness, iv. Diarrhea v. Mucous in stool ***Comments:*** *Care must be taken to exclude noninfectious causes of symptoms. For instance, new medications may cause diarrhea, nausea, or vomiting; initiation of new enteral feeding may be associated with diarrhea; and nausea or vomiting may be associated with gallbladder disease. Presence of new GI symptoms in a single client may prompt enhanced surveillance for additional cases. In the presence of an outbreak, stool specimens should be sent for viral detection studies to confirm the presence of norovirus or other pathogens (e.g., rotavirus or E. coli O157:H7).* **B. Norovirus gastroenteritis** **Both criteria 1 and 2** must be present: 1. At least **one** of the following GI sub criteria: a. Diarrhea: 3 or more loose or watery stools (i.e., Conforming to the shape of the specimen collection container) above what is normal for the client within a 24 hour period b. Vomiting: 2 or more episodes in a 24 hour period	Total # of HA GI infection cases _____ x1000 Total # of client days

	2. A stool specimen for which norovirus is positively detected by electron microscopy, enzyme immunoassay, or molecular diagnostic testing such as polymerase chain reaction (PCR). **C. Clostridium difficile infection** Refer to definition below. **Include total # of new HA C-diff infections in total HA GI infection cases.**	
Clostridium difficile Infection Source: 1) Government of Manitoba. Communicable Disease Management Protocol. Clostridioides difficile Infection (CDI), February 2019 2) 2018 Canadian Nosocomial Infection Surveillance Project (CNISP) definitions for CDI		
***Clostridium difficile* Infection (CDI)** **SH-SS HA CDI rate/1000 client days** 2017-2018: PCH 0	***Clostridium difficile* Infection (CDI)** A client is identified as having CDI if at least **one** of the following criteria is met: 1. The client has diarrhea* or fever, abdominal pain and/or ileus **AND** a laboratory confirmation of a positive toxin assay or positive polymerase chain reaction (PCR) for *C. difficile* (without reasonable evidence of another cause of diarrhea) 2. The client has a diagnosis of pseudomembranes on sigmoidoscopy or colonoscopy (or after colectomy) or histological/pathological diagnosis of CDI 3. The client is diagnosed with toxic megacolon (in adult clients only) *** Diarrhea** is defined as **one** of the following: a) 6 or more watery/unformed stools in a 36-hour period b) 3 or more watery/unformed stools in a 24-hour period and this is new or unusual for the client (in adult clients only) **Exclusion**: • Recurrent cases of CDI** **HA CDI case definition – acquired in your facility** Must meet at least **one** of the following criteria: 1. Related to the current admission a) The client's CDI symptoms occur in your healthcare facility 3 or more days (or greater than or equal to 72 hours) after admission. 2. Related to a previous admission a) Inpatient: The client's CDI symptoms occur less than 3 days after the current admission (or less than 72 hours) AND the client had been previously admitted at your healthcare facility and discharged within the previous 4 weeks. b) Outpatient: The client presents with CDI symptoms at your ER or outpatient location AND the client had been previously admitted at your healthcare facility and discharged within the previous 4 weeks. 3. Related to a previous healthcare exposure*** at your facility a) Inpatient: The client's CDI symptoms occur less than 3 days after the current admission (or less than 72 hours) AND the client had a previous healthcare exposure** at your facility within the previous 4 weeks. b) Outpatient**:** The client presents with CDI symptoms at your ER or outpatient location AND the client had a previous healthcare exposure** at your facility within the previous 4 weeks.	Total # of new HA CDI cases / Total # of client days x1000

	** **Recurrent CDI**: A recurrent CDI is defined as an episode of CDI that occurs in a client less than or equal to 8 weeks following the diagnostic test date of the primary episode of CDI, providing the client was treated successfully for the primary episode and symptoms of CDI resolved completely. A primary episode of CDI is defined as either the first episode of CDI ever experienced by the client or a new episode of CDI that occurs greater than 8 weeks after the diagnosis of a previous episode in the same client. A new episode of CDI that occurs after 8 weeks following the diagnostic test date of the primary episode of CDI is considered a new infection. ***** Healthcare exposure**: The client had 2 or more visits at any of the following locations (oncology [including chemotherapy or radiation], dialysis, day surgery, day hospital, transfusion clinic, interventional radiology or emergency department) OR had a single visit to the emergency department for more than or equal to 24 hours.	

Table 1
Definitions for Constitutional Criteria in Residents of Personal Care Homes (PCH)

A.	Fever 1) Single oral temperature greater than 37.8ºC OR 2) Repeated oral temperatures greater than 37.2ºC or rectal temperatures greater than 37.5ºC OR 3) Single temperature greater than 1.1ºC over baseline from any site (oral, tympanic, axillary)
B.	Leukocytosis 1) Greater than 10 x 10^9 leukocytes/L
C.	Acute change in mental status from baseline (all criteria must be present; see Table 2) 1) Acute onset 2) Fluctuating course 3) Inattention 4) Either disorganized thinking or altered level of consciousness
D.	Acute functional decline 1) A new 3-point increase in total activities of daily living (ADL) score (range, 0-28) from baseline, based on the following 7 ADL items, each scored from 0 (independent) to 4 (total dependence) a) Bed mobility b) Transfer c) Locomotion within PCH d) Dressing e) Toilet use f) Personal hygiene g) Eating

Table 2
Confusion Assessment Method Criteria

NOTE: *Criteria must be assessed during a formal interview with the client.*

CRITERIA	COMMENTS
Acute onset	Evidence of acute change in resident's mental status from baseline
Fluctuating	Behavior fluctuating (e.g., coming and going or changing in severity during the assessment)
Inattention	Resident has difficulty focusing attention (e.g., unable to keep track of discussion or easily distracted)
Disorganized thinking	Resident's thinking is incoherent (e.g., rambling conversation, unclear flow of ideas, unpredictable switches in subject)
Altered level of consciousness	Resident's level of consciousness is described as different from baseline (e.g., hyperalert, sleepy, drowsy, difficult to arouse, nonresponsive)

Source: Surveillance Definitions of Infections in Canadian Long Term Care Facilities, IPAC News, Fall 2017

Acute Care Surveillance Indicators

Health care-associated infections (HAI) – total

Source: National Healthcare Safety Network (NHSN) Patient Safety Component Manual, Chapter 2 Identifying Healthcare-associated Infections (HAI) for NHSN Surveillance, January 2019

SH-SS HAI rate /1000 client days Includes targeted and non-targeted HAIs 2017-2018: Acute 2.5	To standardize the classification of an infection as present on admission (POA) or a healthcare-associated infection (HAI), the following objective surveillance definitions and guidance are used. Note: This does not apply to surgical site infections (SSI) surveillance. **Date of Event (DOE)** The DOE is the date of the first documented localized sign or symptom used to meet the specific site of infection criterion. For example, diarrhea, site-specific pain, purulent drainage are localized signs or symptoms. Note that a non-specific sign or symptom for example, fever is not considered to be localized. Therefore if fever presented 2 days prior to localized signs or symptoms, the day the fever presented is not considered the DOE. Note: accurate determination of DOE is critical because DOE is used to determine if an infection is HAI or POA, location of attribution, and device association. **Present on Admission (POA)** An infection is considered POA if the DOE occurs during the POA time period, which is defined as the day of admission to an inpatient location (calendar day 1), the 2 days before admission, and the calendar day after admission. **Health Care-associated Infection (HAI)** The infection is considered HAI if the DOE occurs on or after the 3rd calendar day of admission to an inpatient location where day of admission is calendar day 1. Infections occurring in newborns with date of event on hospital day 1 or day 2 are considered POA. Those with date of event on day 3 or later are HAI. This includes infections acquired transplacentally (for example but not limited to herpes simplex, toxoplasmosis, rubella, cytomegalovirus, or syphilis) or as a result from passage through the birth canal. Reactivation of a **latent** infection is not considered to be a HAI, for example but not limited to herpes, shingles, syphilis, or tuberculosis. **Repeat Infection Timeframe (RIT)** The RIT is a 14-day timeframe during which no new infections of the same type are reported. RIT applies to both POA and HAI determinations. The DOE is Day 1 of the 14-day RIT. If criteria for the same type of infection are met and the DOE is within the 14-day RIT, a new infection is not reported. The RIT applies during a client's single admission, including the day of discharge and the day after, in keeping with the Transfer Rule. An RIT does not carry over from one admission to another even if readmission is to the same facility. **Transfer Rule** If the DOE is on the date of transfer or discharge, or the next day, the infection is attributed to the transferring/discharging location. This is called the Transfer Rule. If the client was in multiple locations within the transfer rule time frame, attribute the infection to the **first** location in which the client was housed the **day before** the infection's DOE. Receiving locations or facilities should share information about such HAIs with the transferring location or facility to enable accurate reporting.	Total # of all HAIs x 1000 Total # of client days* *For acute care surveillance, client days refers to Adult and Child – Inpatients (includes all inpatients except newborns).

	Location of Attribution (LOA) The LOA is the inpatient location where the client was assigned on the date of infection.	
Antibiotic Resistant Organisms Source: 1) Canadian Nosocomial Infection Surveillance Program (CNISP) 2017 Surveillance Protocol for MRSA Infections in CNISP Hospitals (revised January 23, 2017) 2) Manitoba Health, Seniors and Active Living ARO Definitions, November 2018		
Methicillin Resistant *Staphylococcus aureus* (MRSA) **SH-SS HA MRSA colonization rate /1000 client days** 2017-2018: Acute 0.1	**MRSA data is reported in two categories:** • Cases of new colonization (new cases of MRSA never been reported previously) • Cases of new infection (in new and known cases of MRSA) **<u>COLONIZATION</u>** **MRSA new colonization surveillance inclusion criteria:** • Isolation of *Staphylococcus aureus* from any body site AND • Resistance of isolate to oxacillin AND • Client must be admitted to a health care facility (includes ER and outpatients who tested positive for MRSA and then are subsequently admitted or are admitted but still in ER awaiting a bed on a ward). AND • Is "a newly identified MRSA case". This includes: • Cases not previously known to be MRSA positive • New MRSA cases that do not meet the infection definition This does not include: • MRSA cases previously identified • Emergency, clinic, or other outpatient cases (e.g. physiotherapy) who are not admitted • Cases re-admitted with MRSA **HA MRSA colonization case definition** Must meet the MRSA surveillance inclusion criteria above AND Must meet at least **one** of the following criteria: • Diagnosis of MRSA was made by a culture positive sample collected greater than or equal to 2 calendar days after admission to your facility (admission considered day 1; diagnosis made at day 3 or beyond) AND No medical history of previous MRSA • Diagnosis of MRSA was made by a culture positive sample collected within 2 calendar days (admission considered day 1; diagnosis made prior to day 3) of admission to your facility AND Medical history in previous 12 months at your facility including one or more of the following: a) Admission to your facility b) Dialysis	Total # of new HA MRSA colonizations in new MRSA cases x1000 Total # of client days

SH-SS HA MRSA infection rate/1000 client days 2017-2018: Acute 0.1	c) Surgery (including day surgery) d) Placement of indwelling catheters or medical devices that pass through the skin into the body • Diagnosis of MRSA was made post discharge from your facility by a culture positive sample for MRSA collected within 2 calendar days (admission considered day 1: diagnosis made prior to day 3) of admission to a receiving facility • Neonates to 1 year of age: The identification of health care-associated MRSA in the neonatal period is complicated by the possibility of perinatal acquisition of these organisms. The identification of MRSA should prompt an investigation of colonization of the mother and other neonates in the unit. a) The initial hospital stay was less than 3 calendar days and infant subsequently presented to the same hospital within 14 days of their initial discharge OR b) The initial hospital stay was equal to or greater than 3 calendar days and the infant subsequently presented to the same hospital any time within the first year of initial discharge **INFECTION** **MRSA infection surveillance inclusion criteria:** • Isolation of *Staphylococcus aureus* from any body site AND • Resistance of isolate to oxacillin AND • Client must be admitted to a health care facility (includes ER and outpatients who tested positive for MRSA and then are subsequently admitted or are admitted but still in ER awaiting a bed on a ward). AND • Is "a newly identified MRSA case". AND • Meets the criteria for MRSA infection as determined using the surveillance definitions for specific infections, and in accordance with the best judgement of the healthcare and /or infection prevention and control practitioner at the time of hospital admission or identified during hospitalization. *This includes: • MRSA infections identified for the first time during this current admission. • MRSA infection identified at a new (different) site in a client with a MRSA infection identified in a previous surveillance (calendar) year. For example, client identified in 2014 with a MRSA respiratory infection. Same client admitted in 2017 and identified with SSI MRSA infection. The client would be counted as a new infection in 2017. This does not include: • MRSA infections previously identified • Emergency, clinic, or other outpatient cases (e.g. physiotherapy) who are not admitted • Infections re-admitted with MRSA unless it is a new/different site of MRSA infection. **HA MRSA clinical infection case definition** Must meet the MRSA surveillance inclusion criteria above AND Must meet at least **one** of the following criteria:	Total # of new HA MRSA infections (in new and known cases) x1000 Total # of client days

	1. Diagnosis of MRSA was made by a culture positive sample collected greater than or equal to 2 calendar days after admission to your facility (admission considered day 1; diagnosis made at day 3 or beyond) AND No medical history of previous MRSA 2. Diagnosis of MRSA was made by a culture positive sample collected within 2 calendar days (admission considered day 1; diagnosis made prior to day 3) of admission to your facility AND Medical history in previous 12 months at your facility including one or more of the following: a) Admission to your facility b) Dialysis c) Surgery (including day surgery) d) Placement of indwelling catheters or medical devices that pass through the skin into the body. 3. Diagnosis of MRSA was made post discharge from your facility by a culture positive sample for MRSA collected within 2 calendar days (admission considered day 1: diagnosis made prior to day 3) of admission to a receiving facility. 4. Neonates to 1 year of age: The identification of health care-associated MRSA in the neonatal period is complicated by the possibility of perinatal acquisition of these organisms. The identification of MRSA should prompt an investigation of colonization of the mother and other neonates in the unit. a) The initial hospital stay was less than 3 calendar days and infant subsequently presented to the same hospital within 14 days of their initial discharge OR b) The initial hospital stay was equal to or greater than 3 calendar days and the infant subsequently presented to the same hospital any time within the first year of initial discharge	
Vancomycin Resistant Enterococci Bloodstream Infections Source: 1) Manitoba Health, Seniors and Active Living ARO Definitions, November 2018 2) 2018 CNISP HAI Surveillance Case definitions		
Vancomycin Resistant *Enterococci* (VRE) **SH-SS HA VRE bloodstream infection rate/1000 client days** 2017-2018: Acute no data	VRE surveillance is only required for bloodstream infections. The following definitions are used for the purposes of identification and surveillance classification of VRE bloodstream infection cases. **VRE surveillance inclusion criteria:** Isolation of *Enterococcus faecalis or faecium* from blood AND • Resistance of isolate to vancomycin AND • Client must be admitted to a health care facility (includes ER and outpatients who tested positive for MRSA and then are subsequently admitted or are admitted but still in ER awaiting a bed on a ward). AND • Is a “newly identified VRE BSI” at the time of admission or identified during stay. A new VRE BSI is defined as a positive VRE blood isolate greater than 14 days after completing of therapy for a previous infection and felt to be unrelated to previous infection in accordance with best clinical judgement by ICP and physician. This does not include: • Emergency, clinic, or other outpatient cases (e.g., physiotherapy) who are not admitted	

	Health Care-Associated (HA) VRE bloodstream infection case definition Must meet the VRE surveillance inclusion criteria above AND Must meet at least **one** of the following criteria 1. Diagnosis of VRE was made by a blood culture positive sample collected greater than or equal to 2 calendar days after admission to your facility (admission considered day 1; diagnosis made at day 3 or beyond) 2. Diagnosis of VRE was made by a blood culture positive for VRE collected within 48 hours of admission to your facility AND Medical history in previous 12 months at your facility including one or more of the following: a) Admission to your facility b) Dialysis c) Surgery (including day surgery) d) Placement of indwelling catheters or medical devices that pass through the skin into the body. 3. Diagnosis of VRE bacteremia was made post discharge from current facility by a blood culture positive for VRE collected within 48 hours of admission to a receiving facility. 4. Neonates to 1 year of age: The identification of health care-associated VRE bacteremia in the neonatal period is complicated by the possibility of perinatal acquisition of these organisms. The identification of VRE should prompt an investigation of colonization of the mother and other neonates in the unit. a) The initial hospital stay was less than 3 calendar days and infant subsequently presented to the same hospital within 14 days of their initial discharge. OR b) The initial hospital stay was equal to or greater than 3 calendar days and the infant subsequently presented to the same hospital any time within the fist year of initial discharge.	Total # of new HA VRE bloodstream infections x1000 Total # of client days
Carbapenamase Producing Enterobacteriaceae (CPE) Source: 1) Manitoba Health, Seniors and Active Living ARO Definitions, November 2018		
Carbapenamase Producing Enterobacteriaceae (CPE) **SH-SS HA CPE colonization rate /1000 client days** 2017-2018: Acute no data	**CPE data is reported in two categories:** • Cases of new colonization (new cases of CPE never been reported previously) • Cases of new infection (in new and known cases of CPE) **COLONIZATION** **CPE surveillance colonization inclusion criteria :** • Isolation of a new Carbapenamase Producing Enterobacteriaceae from any body site AND • Client must be admitted to a health care facility (includes ER and outpatients who tested positive for MRSA and then are subsequently admitted or are admitted but still in ER awaiting a bed on a ward). AND • Is “a newly identified CPE case”. This does not include: • Emergency, clinic, or other outpatient cases (e.g. physiotherapy) who are not admitted • Cases re-admitted with the same CPE pathogen as previous admission	

SH-SS HA CPE infection rate/1000 client days 2017-2018: Acute no data	**HA CPE case definition for a CPE colonization** Must meet the CPE surveillance inclusion criteria above AND Must meet at least **one** of the following criteria: 1. Diagnosis of a new CPE was made by a culture positive sample for CPE collected greater than or equal to 2 calendar days after admission to your facility (admission considered day 1: diagnosis made at day 3 or beyond) AND no medical history of previous similar CPE infection or colonization. 2. Diagnosis of new CPE was made by a culture positive sample for CPE collected within 2 calendar days (admission considered day 1: diagnosis made prior to day 3) of admission to current facility AND Medical history in the previous 12 months at your facility including **one or more** of the following: a) Admission to your facility b) Dialysis c) Surgery (including day surgery) d) Placement of indwelling catheters or medical devices that pass through the skin into the body 3. Diagnosis of new CPE was made post discharge from your facility by a culture positive sample for CPE collected within 2 calendar days (admission considered day 1: diagnosis made prior to day 3) of admission to a receiving facility 4. Neonates to 1 year of age: The identification of health care-associated CPE in the neonatal period is complicated by the possibility of perinatal acquisition of these organisms. The identification of CPE should prompt an investigation of colonization of the mother and other neonates in the unit. a) The initial hospital stay was less than 3 calendar days and infant subsequently presented to the same hospital within 14 days of their initial discharge OR b) The initial hospital stay was equal to or greater than 3 calendar days and the infant subsequently presented to the same hospital any time within the first year of initial discharge **INFECTION** **CPE infection surveillance inclusion criteria:** • Isolation of a new Carbapenamase Producing Enterobacteriaceae from any body site AND • Client must be admitted to a health care facility (includes ER and outpatients who tested positive for MRSA and then are subsequently admitted or are admitted but still in ER awaiting a bed on a ward). AND • Is “a newly identified CPE case” AND • Meets the criteria for CPE infection as determined using the surveillance definitions for specific infections, and in accordance with the best judgement of the healthcare and /or IPC practitioner at the time of hospital admission or identified during hospitalization. This does not include: • Emergency, clinic, or other outpatient cases (e.g. physiotherapy) who are not admitted • Cases re-admitted with the same CPE pathogen as previous admission	Total # of HA CPE colonizations in new CPE cases x1000 Total # of client days

	Health Care-Associated (HA) CPE case definition Must meet the CPE surveillance inclusion criteria above AND Must meet at least **one** of the following criteria: 1. Diagnosis of a new CPE was made by a culture positive sample for CPE collected greater than or equal to 2 calendar days after admission to your facility (admission considered day 1: diagnosis made at day 3 or beyond) AND No medical history of previous similar CPE infection or colonization 2. Diagnosis of new CPE was made by a culture positive sample for CPE collected within 2 calendar days (admission considered day 1: diagnosis made prior to day 3) of admission to current facility AND Medical history in the previous 12 months at your facility including **one or more** of the following: a) Admission to your facility b) Dialysis c) Surgery (including day surgery) d) Placement of indwelling catheters or medical devices that pass through the skin into the body 3. Diagnosis of new CPE was made post discharge from your facility by a culture positive sample for CPE collected within 2 calendar days (admission considered day 1: diagnosis made prior to day 3) of admission to a receiving facility 4. Neonates to 1 year of age: The identification of health care-associated CPE in the neonatal period is complicated by the possibility of perinatal acquisition of these organisms. The identification of CPE should prompt an investigation of colonization of the mother and other neonates in the unit. a) The initial hospital stay was less than 3 calendar days and infant subsequently presented to the same hospital within 14 days of their initial discharge OR b) The initial hospital stay was equal to or greater than 3 calendar days and the infant subsequently presented to the same hospital any time within the first year of initial discharge To classify the case as an infection versus colonization, the case needs to meet the case definition for an infection at time of culture or within 72 hours of when the culture was taken (i.e., signs and symptoms appear within 3 days of specimen collection). Where cases of CPE have been previously identified as CPE and present with a new CPE organism, these cases would be considered new cases.	Total # of new HA CPE infections (in new and known CPE cases) x1000 Total # of client days
Clostridium difficile Infection Source: 1) Government of Manitoba. Communicable Disease Management Protocol. Clostridioides difficile Infection (CDI), February 2019 2) 2018 Canadian Nosocomial Infection Surveillance Project (CNISP) definitions for CDI		
***Clostridium difficile* Infection (CDI)** **SH-SS HA CDI rate /1000 client days** 2017-2018: Acute 0.1	***Clostridium difficile* Infection (CDI)** A client is identified as having CDI if at least **one** of the following criteria is met: 1. The client has diarrhea* or fever, abdominal pain and/or ileus **AND** a laboratory confirmation of a positive toxin assay or positive polymerase chain reaction (PCR) for *C. difficile* (without reasonable evidence of another cause of diarrhea) 2. The client has a diagnosis of pseudomembranes on sigmoidoscopy or colonoscopy (or after colectomy) or histological/pathological diagnosis of CDI 3. The client is diagnosed with toxic megacolon (in adult clients only) **** Diarrhea** is defined as **one** of the following:* a) *6 or more watery/unformed stools in a 36-hour period* b) *3 or more watery/unformed stools in a 24-hour period and this is new or unusual for the client (in adult clients only)*	Total # of new HA CDI cases x 1000 Total # of client days

	This does not include: • Any clients aged less than 1 year • Any pediatric clients (aged 1 year to less than 18 years) with alternate cause of diarrhea found (i.e., rotavirus, norovirus, enema or medication, etc.) are excluded even if C. difficile diagnostic test result is positive • Recurrent cases of CDI** **HA CDI case definition – acquired in your facility** must meet at least **one** of the following criteria: 1. Related to the current admission a) The client's CDI symptoms occur in your healthcare facility 3 or more days (or greater than or equal to 72 hours) after admission. 2. Related to a previous admission a) Inpatient: The client's CDI symptoms occur less than 3 days after the current admission (or less than 72 hours) AND the client had been previously admitted at your healthcare facility and discharged within the previous 4 weeks. b) Outpatient: The client presents with CDI symptoms at your ER or outpatient location AND the client had been previously admitted at your healthcare facility and discharged within the previous 4 weeks. 3. Related to a previous healthcare exposure*** at your facility a) Inpatient: The client's CDI symptoms occur less than 3 days after the current admission (or less than 72 hours) AND the client had a previous healthcare exposure*** at your facility within the previous 4 weeks. b) Outpatient: The client presents with CDI symptoms at your ER or outpatient location AND the client had a previous healthcare exposure*** at your facility within the previous 4 weeks. ** **Recurrent CDI**: A recurrent CDI is defined as an episode of CDI that occurs in a client less than or equal to 8 weeks following the diagnostic test date of the primary episode of CDI, providing the client was treated successfully for the primary episode and symptoms of CDI resolved completely. A primary episode of CDI is defined as either the first episode of CDI ever experienced by the client or a new episode of CDI that occurs greater than 8 weeks after the diagnosis of a previous episode in the same client. A new episode of CDI that occurs after 8 weeks following the diagnostic test date of the primary episode of CDI is considered a new infection. ***** ***Healthcare exposure****: The client had 2 or more visits at any of the following locations (oncology [including chemotherapy or radiation], dialysis, day surgery, day hospital, transfusion clinic, interventional radiology or emergency department) OR had a single visit to the emergency department for more than or equal to 24 hours.*	
Skin and Soft Tissue Infection Source: *National Healthcare Safety Network (NHSN) Patient Safety Component Manual Chapter 7: CDC/NHSN Surveillance Definitions for Specific Types of Infections, January 2019*		
Skin and soft tissue Infections (SSTI) **SH-SS HA SSTI rate/1000 client days** 2017-2018:	**HA Skin and Soft Tissue Infection** **A. HA Skin infection** Must meet at least **one** of the following criteria: 1. Client has at least **one** of the following: a. Purulent drainage b. Pustules c. Vesicles	Total # of HA SSTI cases / Total # of client days x1000

Acute 0.2	d. Boils (excluding acne) 2. Client has at least **two** of the following localized signs or symptoms: Pain or tenderness, swelling, erythema, or heat with no other recognized cause And at least **one** of the following criteria**:** a. Organism(s) identified from aspirate or drainage from affected site by a culture or non-culture based testing method which is performed for purposes of clinical diagnosis and treatment. Identification of 2 or more common commensal organisms without a recognized pathogen is not eligible for use. Common Commensal organisms include, but are not limited to, diphtheroids (Corynebacterium spp. not C. diphtheria), Bacillus spp. (not B. anthracis), Propionibacterium spp., coagulase-negative staphylococci (including S. epidermidis), viridans group streptococci, Aerococcus spp., Micrococcus spp, and Rhodococcus spp. b. Multinucleated giant cells seen on microscopic examination of affected tissue c. Diagnostic single antibody titer (IgM) or 4-fold increase in paired sera (IgG) for organism **B. HA Soft tissue infections** Must meet at least **one** of the following criteria: 1. Client has organism(s) identified from tissue or drainage from affected site by a culture or non-culture based microbiologic testing method which is performed for purposes of clinical diagnosis or treatment 2. Client has purulent drainage at affected site 3. Client has an abscess or other evidence of infection on gross anatomic or histopathological exam **C. HA Decubitus ulcer infection** (also known as pressure injury infection) including both superficial and deep infections Must meet **all** of the following criteria: 1. Client has at least **two** of the following signs or symptoms: erythema, tenderness, or swelling of decubitus wound edges (with no other recognized cause), AND 2. Organism(s) identified from needle aspiration of fluid or biopsy of tissue from ulcer margin by a culture or non-culture based microbiologic testing method which is performed for purposes of clinical diagnosis or treatment.	
Urinary Tract Infection Source: National Healthcare Safety Network (NHSN) Patient Safety Component Manual Chapter 7: CDC/NHSN Surveillance Definitions for Specific Types of Infections, January 2019		
Urinary Tract Infection (UTI) **SH-SS HA symptomatic UTI rate/1000 client days** 2017- 2018: Acute 0.8	**HA Symptomatic Urinary Tract Infection** **A. Non-Catheter associated UTI** Must meet criterion **1, 2 and 3** 1. **One** of the following is true: a. Client has/had an indwelling urinary catheter but it has/had not been in place for more than 2 consecutive days on the date of event OR b. Client did not have an indwelling urinary catheter in place on the date of event nor the day before the date of event. 2. Client has at least **one** of the following signs or symptoms (with no other recognized cause):	Total # of HA symptomatic UTI cases (non-CAUTI and CAUTI) x1000 Total # of client days

SH-SS HA symptomatic CAUTI rate/1000 client days 2017- 2018: Acute 0.3	a. Fever (greater than 38^0C) in a client 65 years of age or younger b. Suprapubic tenderness (with no other recognized cause) c. Costovertebral angle pain or tenderness (with no other recognized cause), d. Urinary frequency e. Urinary urgency f. Dysuria 3. Client has a urine culture with no more than two species of organisms identified, at least one of which is a bacterium of greater than or equal to 10^8cfu/L. Fever is a non-specific symptom of infection and cannot be excluded from UTI determination because it is clinically deemed due to another recognized cause. **B. HA Symptomatic Catheter-Associated Urinary Tract Infection (CAUTI)** Must meet criterion **1, 2 and 3** 1. Client had an indwelling urinary catheter that had been in place for more than 2 consecutive days on the date of event AND was either: a. Present for any portion of the calendar day on the date of event OR b. Removed the day before the date of event. 2. Client has at least **one** of the following signs or symptoms (with no other recognized cause): a. Fever (greater than 38.0^0C) ***NOTE:*** *To use fever in a client over 65 years of age, the indwelling urinary catheter needs to be in place for more than 2 consecutive days on the date of event and is either still in place OR was removed the day before the DOE.* b. Suprapubic tenderness (with no other recognized cause) c. Costovertebral angle pain or tenderness (with no other recognized cause) d. Urinary urgency* e. Urinary frequency* f. Dysuria* 3. Client has a urine culture with no more than two species of organisms identified, at least one of which is a bacterium of greater than or equal to 10^8cfu/L. * These symptoms cannot be used when catheter is in place. An indwelling urinary catheter in place could cause client complaints of “frequency”, “urgency” or “dysuria”. Fever is a non-specific symptom of infection and cannot be excluded from UTI determination because it is clinically deemed due to another recognized cause **For Indicator Report data entry - Enter all UTIs in UTI line (includes with or without catheters). Those that are catheter-related are also entered in the CAUTI line.**	Total # of HA symptomatic CAUTI cases / Total # of client days x 1000

Acute Care (surgical sites only) – HA Surgical Site Infection Definitions		
Surgical Site Infection Source: National Healthcare Safety Network (NHSN) Patient Safety Component Manual Chapter 9: Surgical Site Infection (SSI) Event, January 2019		
Surgical Site Infection (SSI) **SH-SS rate of HA SSI for all targeted surgical procedures (combined)/100 targeted surgical procedures** 2017-2018: 2.5% **SH-SS rate of HA SSI for each targeted surgical procedures/100 targeted surgical procedures** Open hernia repair 2017-2018: 1.9% Vaginal or abdominal hysterectomy 2017-2018: 3.1% Open colorectal surgery 2017-2018: 9.1% Caesarian section 2017-2018: 3.5% Total joint arthroplasty (hip or knee) 2017-2018: 1.4% Open hip reduction 2017-2018: 0%	**HA Surgical Site Infection applies to clean or clean contaminated targeted surgical procedures** The targeted *surgical procedures are:* • *Open hernia repair* • *Vaginal or abdominal hysterectomy* • *Open colorectal surgery* • *Caesarian section* • *Total joint arthroplasty (hip or knee)* • *Open hip reduction* **HA SSIs must meet at least ONE of the following definitions** **A. Superficial incisional SSI** Must meet the following criteria: 1. Date of event for infection occurs within 30 days after any operative procedure (where day 1 = the procedure date) AND 2. Involves only skin and subcutaneous tissue of the incision AND 3. Client has at least **one** of the following: a. Purulent drainage from the superficial incision b. Organisms identified from an aseptically obtained specimen from the superficial incision or subcutaneous tissue by a culture or non-culture based microbiologic testing method which is performed for purposes of clinical diagnosis or treatment. c. Superficial incision that is deliberately opened by a surgeon, attending physician* or other designee and culture or non-culture based testing of the superficial incision or subcutaneous tissue is not performed AND Client has at least **one** of the following signs or symptoms: localized pain or tenderness; localized swelling; erythema; or heat. d. Diagnosis of a superficial incisional SSI by the surgeon or attending physician* or other designee. *The term attending physician for the purposes of application of the NHSN SSI criteria may be interpreted to mean the surgeon(s), infectious disease, other physician on the case, emergency physician or physician's designee (nurse practitioner or physician's assistant). **The following do not qualify as criteria for meeting the NHSN definition of superficial SSI:** • Diagnosis/treatment of cellulitis (redness/warmth/swelling), by itself, does not meet criterion "d" for superficial incisional SSI. Conversely, an incision that is draining or that has organisms identified by culture or non-culture based testing is not considered a cellulitis. • A stitch abscess alone (minimal inflammation and discharge confined to the points of suture penetration). • A localized stab wound or pin site infection is not considered an SSI; depending on the depth, these infections might be considered either a skin or soft tissue infection • A laparoscopic trocar site is considered a surgical incision and not a stab wound.	Total # of HA SSI cases in targeted surgical procedures x100 Total # of targeted surgical procedures

	• Circumcision is not an NHSN operative procedure. An infected circumcision site in newborns is classified as a newborn circumcision infection and is not an SSI. • An infected burn wound is classified as a burn infection and is not an SSI. **B. Deep incisional SSI** Must meet the following criteria: 1. The date of event for Infection occurs within 30 or 90 days after the operative procedure (where day 1 = the procedure date) according to the list in Table 3. AND 2. Involves deep soft tissues of the incision (e.g., fascial and muscle layers) AND 3. Client has at least **one** of the following: a. Purulent drainage from the deep incision b. A deep incision that spontaneously dehisces, or is deliberately opened or aspirated by a surgeon, attending physician* or other designee AND Organism(s) identified from the deep soft tissues of the incision by a culture or non-culture based microbiologic testing method which is performed for purposes of clinical diagnosis or treatment or culture or non-culture based microbiologic testing method is not performed. A culture or non-culture based test from the deep soft tissues of the incision that has a negative finding does not meet this criterion. AND Client has at least **one** of the following signs or symptoms: Fever (greater than or equal to 38°C); localized pain or tenderness. c. An abscess or other evidence of infection involving the deep incision that is detected on gross anatomical or histopathologic exam, or imaging test. **C. Organ/Space SSI** Must meet the following criteria: 1. Date of event for infection occurs within 30 or 90 days after the operative procedure (where day 1 = the procedure date) according to the list in Table 3. AND 2. Infection involves any part of the body deeper than the fascial/muscle layers, that is opened or manipulated during the operative procedure AND 3. Client has at least **one** of the following: a. Purulent drainage from a drain that is placed into the organ/space (e.g., closed suction drainage system, open drain, T-tube drain, CT guided drainage) b. Organism(s) are identified from fluid or tissue in the organ/space by a culture or non-culture based microbiologic testing method which is performed for purposes of clinical diagnosis or treatment. c. An abscess or other evidence of infection involving the organ/space that is detected on gross anatomical or histopathologic exam, or imaging test evidence suggestive of infection. AND 4. Meets at least **one** criterion for a specific organ/space infection site listed in Table 4.	

Preventing Surgical Site Infections: Evidence Based Strategies Source: Safer Healthcare Now! Prevent Surgical Site Infections – Getting Started Kit, December 2014.		
Timely Administration of Preoperative Prophylactic Antibiotic Target - 95% or higher **SH-SS rate of clients with timely administration of preoperative antibiotic for targeted surgical procedures/100 targeted surgical procedures** Open colorectal surgery 2017-2018: 67.2% Caesarian section 2017-2018: 77.2%	**Timely Preoperative Prophylactic Antibiotic Administration** **Indicator Definition: Clean and clean-contaminated targeted surgical clients with timely preoperative prophylactic antibiotic administration prior to first surgical incision.** *The targeted surgical procedures are:* • *Clean and clean-contaminated open colorectal* • *Clean and clean-contaminated Cesarean section.* **Guideline** 1. Preoperative prophylactic antibiotic infusion to be started and completed within 60 minutes for most antibiotics, or within 120 minutes for vancomycin and fluoroquinolones prior to skin incision or application of tourniquet. 2. Preoperative prophylactic antibiotic administration should be started and completed within 60 minutes prior to first incision for c–sections instead of after cord clamping. 3. The auditor measures the timing of the antibiotic administration from antibiotic start time to surgical (incision) start time. If either time is missing, count as NOT obtaining prophylactic antibiotic on time. 4. Applies to clean or clean contaminated targeted operative procedures only; dirty and contaminated cases are excluded.	Total # of targeted surgical clients who received timely administration of preoperative prophylactic antibiotic / Total # of targeted surgical procedures x100
Normothermia in PACU Target - 95% or higher **SH-SS rate of clients with normothermia on arrival to the PACU for targeted surgical procedures/100 targeted surgical procedures** Open colorectal surgery 2017-2018: 91% Caesarian section 2017-2018: 85.4%	**Perioperative Normothermia** **Indicator Definition: Clean and clean-contaminated targeted surgical clients with normothermia (36.0^{0}C - 38.0^{0}C) on arrival to the post-anesthesia care unit (PACU).** *The targeted surgical procedures are:* • *Clean and clean-contaminated open colorectal* • *Clean and clean-contaminated Cesarean section.* **Guideline** 1. Measures should be taken to ensure that the core temperature of surgical patients remains between 36.0ºC and 38.0ºC pre-operatively, intra-operatively, and postoperatively. 2. In PACU, the client temperature is measured and documented on admission to PACU and then every 15 minutes. The auditor uses the first temperature recorded on admission to PACU (within 15 minutes of admission to PACU). 3. Applies to clean or clean contaminated targeted operative procedures only; dirty and contaminated cases are excluded.	Total # of targeted surgical clients with normothermia on arrival to the PACU / Total # of targeted surgical procedures x100

Table 3. Surveillance Periods for SSI Following Selected NHSN Operative Procedure Categories. Day 1 = the date of the procedure.

30-day Surveillance			
Code	**Operative Procedure**	**Code**	**Operative Procedure**
AAA	Abdominal aortic aneurysm repair	LAM	Laminectomy
AMP	Limb amputation	LTP	Liver transplant
APPY	Appendix surgery	NECK	Neck surgery
AVSD	Shunt for dialysis	NEPH	Kidney surgery
BILI	Bile duct, liver or pancreatic surgery	OVRY	Ovarian surgery
CEA	Carotid endarterectomy	PRST	Prostate surgery
CHOL	Gallbladder surgery	REC	Rectal surgery
COLO	Colon surgery	SB	Small bowel surgery
CSEC	Cesarean section	SPLE	Spleen surgery
GAST	Gastric surgery	THOR	Thoracic surgery
HTP	Heart transplant	THYR	Thyroid and/or parathyroid surgery
HYST	Abdominal hysterectomy	VHYS	Vaginal hysterectomy
KTP	Kidney transplant	XLAP	Exploratory Laparotomy
90-day Surveillance			
BRST	Breast surgery		
CARD	Cardiac surgery		
CBGB	Coronary artery bypass graft with both chest and donor site incisions		
CBGC	Coronary artery bypass graft with chest incision only		
CRAN	Craniotomy		
FUSN	Spinal fusion		
FX	Open reduction of fracture		
HER	Herniorrhaphy		
HPRO	Hip prosthesis		
KPRO	Knee prosthesis		
PACE	Pacemaker surgery		
PVBY	Peripheral vascular bypass surgery		
VSHN	Ventricular shunt		

Note: Superficial incisional SSIs are only followed for a 30-day period for all procedure types.

Source: National Healthcare Safety Network (NHSN) Patient Safety Component Manual Chapter 9: Surgical Site Infection (SSI) Event, January 2019

Table 4. Specific Sites of an Organ/Space SSI.

Code	Site	Code	Site
BONE	Osteomyelitis	MED	Mediastinitis
BRST	Breast abscess or mastitis	MEN	Meningitis or ventriculitis
CARD	Myocarditis or pericarditis	ORAL	Oral cavity infection (mouth, tongue, or gums)
DISC	Disc space infection	OREP	Deep pelvic tissue infection or other infection of the male or female reproductive tract
EAR	Ear, mastoid infection	PJI	Periprosthetic joint infection
EMET	Endometritis	SA	Spinal abscess infection
ENDO	Endocarditis	SINU	Sinusitis
GIT	Gastrointestinal (GI) tract infection	UR	Upper respiratory tract, pharyngitis, laryngitis, epiglottitis
IAB	Intraabdominalinfection, not specified elsewhere	USI	Urinary System Infection
IC	Intracranial infection	VASC	Arterial or venous infection
JNT	Joint or bursa infection	VCUF	Vaginal cuff infection
LUNG	Other infections of the lower respiratory tract		

(Criteria for these sites can be found in the Surveillance Definitions for Specific Types of Infections chapter).

Source: National Healthcare Safety Network (NHSN) Patient Safety Component Manual Chapter 9: Surgical Site Infection (SSI) Event, January 2019

Hand Hygiene Observational Audit Indicator Definitions *Source: Hand Hygiene Compliance Monitoring and Reporting – Quality and Patient Safety Council, Manitoba Health, Seniors and Active Living, April 26, 2017*		
Hand Hygiene Observational audit The GOAL for HH compliance is 80%, with an overall target of 100% compliance. **SH-SS compliance rate of HCW performing hand hygiene when opportunities arise /100 hand hygiene opportunities** Acute 2017-2018: 68% PCH 2017-2018: 85.1%	**Hand Hygiene Observational audit** ***NOTE:*** *Data on hand hygiene (HH) compliance is used for comparison at the regional and provincial level. A higher number of observed opportunities will generate a more reliable and representative HH compliance rate.* The provincially set target for facilities according to the number of beds is as follows: 25 or less = 50/quarter 26-50 = 100/quarter 51-100 = 200/quarter 101-150 = 300/quarter Audits are conducted regularly and submitted preferably monthly but at minimum quarterly. **Compliance by Moment/Indication** The percentage of client encounters for which there was compliance by health care workers with **Moment 1: Before client or client environment contact** according to the hand hygiene policy/4 Moments Hand Hygiene Monitoring Tool The percentage of client encounters for which there was compliance by health care workers with **Moment 2: Before aseptic technique/procedure** according to the hand hygiene policy/4 Moments Hand Hygiene Monitoring Tool The percentage of client encounters for which there was compliance by health care workers with **Moment 3: After blood or body fluid contact** according to the hand hygiene policy/4 Moments Hand Hygiene Monitoring Tool The percentage of client encounters for which there was compliance by health care workers with **Moment 4: After client or client environment contact** according to the hand hygiene policy/4 Moments Hand Hygiene Monitoring Tool **Compliance by Opportunity** The percentage of hand hygiene compliance by health care workers meeting the need to perform hand hygiene according to the hand hygiene policy captured by trained auditors using the 4 Moments for Hand Hygiene Observation Tool.	Total # of Moment 1 hand rub/wash compliance / Total # of Moment 1 hand rub/wash indications x100 Total # of Moment 2 hand rub/wash compliance / Total # of Moment 2 hand rub/wash indications x100 Total # of Moment 3 hand rub/wash compliance / Total # of Moment 3 hand rub/wash indications x100 Total # of Moment 4 hand rub/wash compliance / Total # of Moment 4 hand rub/wash indications x100 Total # of hand rub/wash compliant opportunities / Total # of opportunities x100

References

Canadian Nosocomial Infection Surveillance Program (CNISP) 2017 Surveillance Protocol for MRSA Infections in CNISP Hospitals, Revised January 23, 2017. Available from: https://www.ammi.ca/Guideline/35.ENG.pdf

Government of Manitoba. Communicable Disease Management Protocol. Clostridioides difficile Infection (CDI), February 2019.
Available from: https://www.gov.mb.ca/health/publichealth/cdc/protocol/cdi.pdf

Hand Hygiene Compliance Monitoring and Reporting – Quality and Patient Safety Council, Manitoba Health, Seniors and Active Living, April 26, 2017.
Available from:
https://portal/collaboration/StaffDev/Infection%20Prevention%20and%20Control/Hand%20Hygiene/MHSAL%20Hand%20Hygiene%20Monitoring%20Reporting%20Process%20doc%202017/HH%20Monitoring%20Reporting%20Process-April%2026-17-FINAL.pdf

Manitoba Health, Seniors and Active Living (MHSAL) ARO Definitions, November 2018.
Available from: http://www.gov.mb.ca/health/publichealth/cdc/docs/ipc/aro_definitions.pdf

National Healthcare Safety Network (NHSN) Patient Safety Component Manual, Chapter 2 Identifying Healthcare-associated Infections (HAI) for NHSN Surveillance, January 2019. Available from: https://www.cdc.gov/nhsn/pdfs/pscmanual/2psc_identifyinghais_nhsncurrent.pdf

National Healthcare Safety Network (NHSN) Patient Safety Component Manual Chapter 7: CDC/NHSN Surveillance Definitions for Specific Types of Infections, January 2019. Available from: http://www.cdc.gov/nhsn/PDFs/pscManual/17pscNosInfDef_current.pdf

National Healthcare Safety Network (NHSN) Patient Safety Component Manual Chapter 9: Surgical Site Infection (SSI) Event, January 2019.
Available from: https://www.cdc.gov/nhsn/PDFs/pscManual/9pscSSIcurrent.pdf

Public Health Agency of Canada. 2018 Canadian Nosocomial Infection Surveillance Program (CNISP) HAI Surveillance Case definitions.
Available from: https://www.ammi.ca/Guideline/53.ENG.pdf

Safer Healthcare Now! Prevent Surgical Site Infections – Getting Started Kit, December 2014.
Available from: http://www.patientsafetyinstitute.ca/en/toolsResources/Documents/Interventions/Surgical%20Site%20Infection/SSI%20Getting%20Started%20Kit.pdf

Surveillance Definitions of Infections in Canadian Long Term Care Facilities, IPAC News, Fall 2017.
Available from: https://www.patientsafetyinstitute.ca/en/About/PatientSafetyForwardWith4/Documents/Canadian%20LTC%20Surveillance%20Definitions.pdf

2018 Canadian Nosocomial Infection Surveillance Project (CNISP) definitions for CDI. Available from: https://www.ammi.ca/Guideline/44.ENG.pdf