Long-Term Care Home Surveillance Toolkit: 2023 Update

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Appendix A. Surveillance Definitions for Infections in Canadian Long Term Care Homes: 2023 Update (separate Canadian Journal of Infection Control publication)

Appendix B. Surveillance Database and Reporting Tool (separate MS Excell document)

Appendix C. Training Tool for Frontline Staff (separate MS PowerPoint document)

Toolkit Guide

Introduction

Health care-associated infections (HAIs) are defined as infections that are neither present nor incubating at the time of admission to a health care facility and are acquired during the provision of care.[1] HAIs have a significant impact on health care costs as a result of prolonged hospital stays, readmissions, and increasing consumption of costly resources.[2] In addition, the emergence of antimicrobial resistant organisms (AROs) has also resulted in an increased cost to the health care system.

Adhering to infection prevention and control (IPAC) best practices may be challenging in long-term care homes (LTCH) due to heavy workloads and a lack of resources for those responsible for IPAC programs. Standardized infectious disease surveillance systems that follow best practice have been shown to result in improved IPAC practices and to reduce HAIs. [1] Establishing a data collection, analysis and reporting system in LTCH is an important initial step to support appropriate decision making intended to reduce HAIs and improve the quality of care.

Goal

This LTCH Surveillance Toolkit Guide establishes guidelines for using the components of the Toolkit to conduct surveillance of infectious diseases as part of an IPAC program in the LTCH setting. The LTCH setting may include nursing homes, assisted living facilities and hospitals. This Protocol outlines the necessary collection, collation, and data analysis steps needed to support a LTCH in determining baseline infection rates, identifying outbreaks and other IPAC issues, and evaluating the effectiveness of the IPAC program in place in the LTCH.

Objectives

To improve the quality of resident care and evidence-based decision making in the prevention of infections by standardizing surveillance data collection.

Tools

There are 6 tools that comprise this Toolkit. This section outlines the purpose of each tool and how to use it.

1.) Surveillance Readiness Self-Assessment Form

The Surveillance Readiness Self-Assessment Form can be used to determine if a LTCH is ready to implement the Toolkit. It is important to plan the implementation of the Toolkit so that it does not conflict with other significant changes (e.g., significant staffing changes, roll out of another program). It is important to consider who else should be consulted for support in moving forward with this program. The facility should ensure there is a designated lead for the initiative and to confirm that time can be committed to this project.

1.) Assemble a team of people who will be involved in approving, implementing and/or

using the Toolkit.

2.) Use the Readiness Self-Assessment Worksheet to assess for need and fit of the Toolkit within the organization.

2.) Surveillance Training Slides for Frontline Staff

Surveillance Training Slides have been provided to assist with training front-line clinical staff who are responsible for tracking the signs and symptoms of infections in LTCH residents. The Surveillance Training Slides can be used as a formal training presentation, as handouts and/or as a guide to be used by staff responsible for surveillance training.

1.) Training should be provided to staff by an infection control professional (ICP) or a designated staff member who is knowledgeable about surveillance and familiar with the Toolkit.

2.) Initial training should be provided to all front-line staff on all shifts who are responsible for recording signs and symptoms of infection in residents. The Surveillance Training Slides can be customized to include scenarios or references personalized to the organization.

3.) Ongoing/refresher training should be provided on a regularly scheduled basis (e.g. annually) or as needed.

3.) Daily Infection Signs and Symptoms Tracking Form

The Daily Infection Signs and Symptoms Tracking Form is intended to be used by the front-line clinical staff to document signs and symptoms of infection in residents. This tracking form does not replace documentation in the progress notes/resident charts. This form serves as a communication tool to notify staff that a resident(s) is being monitored for signs and symptoms of infection and as a summary tool for the ICP or designate to collect surveillance data for analysis. This tool may also be used to track signs and symptoms of infection in staff who work in the facility, e.g. during an outbreak.

1.) Place a new printed copy of the Daily Infection Signs and Symptoms Tracking Form on each unit at the beginning of the month or when the previous form is full.

2.) Indicate the unit and month on each new Daily Infection Signs and Symptoms Tracking Form.

3.) During every shift on each day of the month, the Daily Infection Signs and Symptoms Tracking Form is to be initialed by a health care worker (e.g. charge nurse) in the appropriate square to indicate the form has been reviewed and is accurate.

4.) When a resident starts to show signs or symptoms of an infection, indicate the day of the month, the resident name and the room number in the appropriate column.

5.) If the resident has an elevated body temperature, indicate the numerical temperature in the 'body temperature' column.

6.) Place an 'X' in the columns corresponding to the signs and symptoms of infection the resident is showing. If the resident exhibits new signs and symptoms related the same infection over the next few days, indicate the signs and symptoms with an 'X' on the same line. If the resident begins to exhibit signs and symptoms of an unrelated or new infection (i.e. after the initial infection has completely resolved), start a new line with the date and resident's name and room number.

7.) If a specimen was sent to the laboratory, indicate with an 'X' in the corresponding column.

8.) Once the infection has resolved, indicate with an 'X' in the corresponding column. This will communicate that the infection has resolved in the resident and the resident is no longer under surveillance for an infection.

9.) The 'other' column can be used to communicate other signs and symptoms of an infection not listed on this form or additional tests that were performed (e.g. chest X-rays). It can also be used for any relevant information deemed necessary to include on this form.

10.) The ICP or designate should review the daily surveillance form weekly (recommended).

4.) Surveillance Case Definitions of Infections in Canadian Long-Term Care Homes

Whether or not a resident exhibiting signs and symptoms of an infection is counted as a true case will depend on the use of standardized case definitions. This Toolkit was created using the infection case definitions developed by IPAC Canada (2023).[3] These case definitions are located in Appendix A and can be referred to when completing the Surveillance Database and Reporting Tool (described below). The case definitions are also embedded in the Infection Case Validation Forms (described below). Alternative case definitions may be used in place of the case definitions provided in this Toolkit.

5.) Infection Case Validation Forms

The Infection Case Validation Forms will assist the ICP or designate in determining whether or not a resident exhibiting signs or symptoms of an infection meets the case definitions detailed in Appendix A. The Infection Case Validation Forms can be completed electronically or be printed and filled out manually. These forms can be used until the ICP or designate is familiar and comfortable with applying the case definitions.

1.) The ICP or designate collects the Daily Infection Signs and Symptoms Tracking Form from all of the units at the end of the month and can refer to these forms to gather information to complete a Combined Case Definition/Validation Form.

2.) For each case, the ICP or designate can choose the Infection Case Validation Forms that is most appropriate for the suspected infection based on signs and symptoms of infection the resident has exhibited. The appropriate form can be printed and filled out manually or electronically.

3.) Enter the date the form is being filled out, unit, resident name, onset of the sign/symptoms of infection and the physician's name at the top of the form.

6.) Enter an 'X' beside each sign/symptom the resident exhibited. The ICP or designate may have to refer to the progress notes, laboratory specimens, or imaging results to complete the case validation forms and to accurately apply the case definitions.

7.) Under specimen results, indicate with an 'X' if culture results were obtained and were contaminated, if commensal flora was detected, or if no specimens were taken. If the culture was positive and an organism was identified, specify the organism.

8.) Refer to the standardized case definitions included on these forms to determine if the signs and symptoms of infection meet the case definition. The definition section of this form can be revised to reflect the alternative case definitions if used.

9.) Indicate if case meets the case definition with an 'X' and indicate subcategory of infection type if relevant (e.g. ☒ RESPIRATORY TRACT INFECTION: ☒Common cold/pharyngitis)

10.) If the culture result indicated the organism causing the infection is an antimicrobial resistant organism indicate an 'X' beside ARO.

11.) Indicate with an 'X' if the ARO is methicillin-resistant *Staphylococcus aureus* (MRSA), Vancomycin-resistant Enterococci (VRE), Extended spectrum beta-lactamase producing member of the *Enterobacteriaceae* (ESBL) or carbanepenemase-producing member of the *Enterobacteriaceae* (CPE).

12.) Indicate with an 'X' if the case does not meet the case definition.

13.) For a case that meets the case definition, using the definition for health care-associated infection, determine if the case is attributable to the LTCH. If the case is attributed to the long-term care LTCH, indicate an 'X' beside Health care-associated infection. Only health care-associated infections that meet the case definition will be used to calculate infection rates.

14.) If the infectious agent is a cause of a disease of public health significance and/or a reportable disease, follow local public health and provincial requirements for reporting.

15.) Any comments with additional relevant information (e.g. if the resident required hospitalization as a result of the infection or if they had recently had a surgery) can be included in the 'Comments' section.

15.) For respiratory infections, if the resident meets the case definitions for common cold/pharyngitis and another respiratory infection category, only count the influenza-like illness, pneumonia or lower respiratory tract infection as a case.

6.) Surveillance Database and Reporting Tool

The Surveillance Database and Reporting Tool is a Microsoft Excel tool used to collate monthly data from residents who meet the case definitions, provided in Appendix A, for a particular type of infection, as well as cases of colonization or infection with an ARO. The ICP or designate enters cases into the Surveillance Reporting Form and infection-specific rates are auto-calculated and summary graphs are generated. The Surveillance Reporting Form consists of multiple tabs:

1.) Glossary tab

a) Refer to the Glossary tab for a list of words and terms used in the Surveillance Database and Reporting Tool.

2.) Inf instructions tab

a) The Inf instructions tab has the instructions for filling out the Infections and Total Inf tabs.

3.) Infections tab

a) Use the Infections tab to input your resident data related to cases of infections. The name of the LTCH can be indicated at the top of the form. The year is to be indicated in the 'year' cell at the top of the form. It is recommended to start a new file every year.

b) On the Infections tab, enter the month during which the signs or symptoms of the infections started. In addition, enter the resident name, unit/wing/floor or any location identifying information, room number and date the symptoms started.

c) From the dropdown box, indicate Yes or No in the column titled 'Was the infection determined to be an Health care associated infection (HAI) acquired within the current facility (Y/N)'. Refer to the case definitions in Appendix A for instructions on how to attribute cases to either the LTCH or elsewhere (e.g., another health care facility, community). Only cases attributed to the LTCH (and therefore classified as health care-associated) will used to calculate rates.

d) If the resident had an elevated temperature at any point during the infection, enter the highest numerical temperature in the corresponding column. If the temperature entered exceeds 37.7°Celsius, a 'Yes' will appear in the column labelled 'Fever' (as this is arguably the most common definition for a fever). The definition for fever, however, also includes repeated oral temps >37.2°C or rectal temps

>37.5°C OR a single temperature >1.1°C over baseline from any site If the temperature is equal to or less than 37.7°C. If the resident meets this definition for fever, the 'No' in the fever column can be overwritten to 'Yes'.

e) Using the case validation forms and/or the case definition document, determine if the resident's signs and symptoms of infection satisfy the case definition for the suspected infection. Refer to the daily surveillance form, resident progress notes, laboratory results, diagnostic imaging results and any other documentation or test performed related to the infection to make the decision. If the resident meets the case definition, enter an 'X' under the corresponding infection type. Additional lab, antibiotic, physician diagnosis and comments can be added in the Comments column on the right hand side. Start a new line for each resident. If the same resident develops more than one unrelated infection, start a new line for each infection.

f) The columns titled 'Other' can be used to customize the form to the needs of the LTCH. For example, if a LTCH has a large population with Hepatitis B and is concerned about specifically tracking Hepatitis B infections, an 'Other' column can be renamed Hepatitis B and this specific infection can be tracked.

4.) Total Inf tab

a) On the Total Inf tab, ensure the numbers of each infection type are counting accurately in the first table (Summary of infections occurring within the LTCH) (e.g. if 3 residents with respiratory tract infections met the case definition for the month of January on the Infections tab, the number 3 should appear in the January / Respiratory cell).

b) In the second table on the Total Inf tab (Monthly rates of LTCH acquired infections, per 1000 resident days), the total number of resident-days must be entered in the row corresponding to the month in order for the rate to be calculated. Resident-days is defined as the total number of days all of the residents were at risk of an infection during the month (i.e. a resident who was present on January 1st and still present on January 31st has contributed 31 resident days to the total while a resident who was a new admission on January 20th but still present on the 31st has contributed 11 days to the total).

The incidence rate calculation (i.e. new cases per 1000 resident days) is performed using the following formula:

$$\text{Incidence rate} = \frac{\text{Number of new infection cases during the month}}{\text{Total number of resident-days for the same month}} \times 1000$$

The resident days for each month may be obtainable through the administrator or finance department, depending on the organization.

c) Below each table, a graph is generated reflecting the total number of infections by

infection type per month or reflecting the rates by infection type per month. These graphs can be copied and pasted into other documents or reports to share the data.

5.) ARO instructions tab

a) The ARO instructions tab has the instructions for filling out the ARO and Total AROs tabs.

6.) ARO tab

a) Use the ARO tab to input your resident data about colonisations (cases with an ARO that do not meet the infection case definition criteria) and/or infections (cases that meet the infection case definition criteria) with antimicrobial resistant organisms. The name of the LTCH can be indicated at the top of the form. The year can be indicated in the 'year' cell at the top of the form. It is recommended to start a new file every year.

b) On the ARO tab, enter the month during which the specimen was collected. In addition, enter the resident name, unit/wing/floor or any location identifying information, room number and date the specimen was collected.

c) From the dropdown box, indicate 'yes' or 'no' in the column titled 'Was the colonization/infection determined to be acquired within the current facility?'.

d) Indicate with an 'X' if the resident was either colonized or infected with the corresponding ARO based on the laboratory result. Any other information deemed relevant can be entered in the comments column (e.g., site of colonization or association with a medical device etc.). If the resident had multiple specimens collected on the same day (e.g., nares and perianal swabs were collected for MRSA) and they are all positive only enter resident as one case.

7.) Total ARO tab

a) On the Total AROs tab, ensure the numbers of each colonisations (cases with an ARO that do not meet the infection case definition criteria) or infections (cases that meet the infection case definition criteria) area counting accurately in the first table (Total Number of AROs Acquired within the LTCH by Month).

b) In the second table (Monthly Rates of AROs acquired within the LTCH per 1000 Resident-Days), the 'resident-days' column will automatically populate from the resident-days entered into the table in the Total Inf tab and the monthly rate for each ARO colonization and infection will be calculated.

c) Below each table, graphs are generated depicting the total number of colonisations or infections by ARO per month and depicting the colonization or infection rate by ARO per month. These graphs can be copied and pasted into other documents or reports to share the data.

8.) Staff Inf Instructions tab

a) The Staff Inf instructions tab has the instructions for filling out the Staff Inf and Total Staff Inf tabs. This section may be helpful to track staff infections, e.g. during an outbreak.

9.) Staff Inf tab

a) Use the Staff Inf tab to input your staff data related to cases of infections. The name of the LTCH can be indicated at the top of the form. The year is to be indicated in the 'year' cell at the top of the form. It is recommended to start a new file every year.

b) On the Staff Inf tab, enter the month during which the signs or symptoms of the infections started. In addition, enter the staff name, unit/wing/floor or any location identifying information, room number and date the symptoms started.

c) If the staff had an elevated temperature at any point during the infection, enter the highest numerical temperature in the corresponding column. If the temperature entered exceeds 37.7°Celsius, a 'Yes' will appear in the column labelled 'Fever' (as this is arguably the most common definition for a fever). The definition for fever, however, also includes repeated oral temps >37.2°C or rectal temps >37.5°C OR a single temperature >1.1°C over baseline from any site If the temperature is equal to or less than 37.7°C. If the staff meets this definition for fever, the 'No' in the fever column can be overwritten to 'Yes'.

d) Using the Appendix A Case Defintions and/or Infection Case Validation form(s), determine if the staff's signs and symptoms of infection satisfy the case definition for the suspected infection. Refer to the daily surveillance form and other information available to validate the case. If the staff meets the case definition, enter an 'X' under the corresponding infection type. Additional lab, antibiotic, physician diagnosis and comments can be added in the Comments column on the right hand side. Start a new line for each staff. If the same staff develops more than one unrelated infection, start a new line for each infection.

e) The columns titled 'Other' can be used to customize the form to the needs of the LTCH.

10.)Total Staff Inf tab

a) On the Total Staff Inf tab, ensure the numbers of each infection type are counting accurately in the first table (Summary of infections occurring within the LTCH) (e.g. if 3 staff with respiratory tract infections met the case definition for the month of January on the Infections tab, the number 3 should appear in the January / Respiratory cell).

b) Below the table, a graph is generated reflecting the total number of infections by infection type per month. This graph can be copied and pasted into other documents or reports to share the data.

Summary

The LTCH Surveillance Toolkit consists of a variety of tools that can be used by LTCH to perform surveillance of infections in their resident population. The components can be adapted and personalized to meet the needs of the individual facilities. The Toolkit can be used in its entirety or the individual components that meet the specific needs of the LTCH can be used on their own.

For additional support with this Toolkit, contact the IPAC Canada Surveillance and Applied Epidemiology Interest Group at saeig@ipac-canada.org.

References

1.) Ontario Agency for Health Protection and Promotion (Public Health Ontario). Best practices for surveillance of health care-associated infections in patient and resident populations. 3rd ed. Toronto, ON: Queen's Printer for Ontario; 2014 [cited 2019 Aug 20].

2.) Graves N, Weinhold D, Tong E, Birrell F, Doidge S, Ramritu P. Effect of healthcare-acquired infection on length of hospital stay and cost. Infect Control Hosp Epidemiol. 2007;28(3):280-92.

Surveillance Readiness Self-Assessment Form

This self-assessment is used to determine readiness to implement the LTCH Surveillance Toolkit. It is important to plan for implementation of the Toolkit so that it does not conflict with other significant changes in the facility (e.g., significant staffing changes or the roll-out of another program). Consider who should be consulted for support in moving forward with establishing a surveillance program. Ensure there is a designated lead for the initiative and confirm that time can be committed to a surveillance program.

Readiness Questions and Considerations	Participant Response	Comments
Surveillance in LTCH should involve daily assessment and documentation of signs and symptoms of infection for all residents, as well as collation, analysis and sharing of the data. Do you perform surveillance for infections in your LTCH?	☐Yes, we perform infection surveillance for infections ☐No, we don't perform surveillance for infections	
If you do perform surveillance for infections, is your process following best practice? Is there a desire to improve the process?	☐We don't follow best practice and we want to improve our surveillance process ☐We follow best practice and we are satisfied with our current process ☐I don't know	
Does this project conflict with other projects, priorities or significant changes occurring at this time?	☐Yes, we have other conflicting priorities at this time ☐No, we have no other conflicting priorities at this time	

Readiness Questions and Considerations	Participant Response	Comments
Do you have the support of your organization (e.g., senior management, infection prevention and control lead)?	☐Yes, the organization is supportive of this initiative ☐No, the organization is not supportive of this initiative	
Do you need to communicate with your local public health unit about implementing the LTCH Surveillance Toolkit?	☐Yes ☐No	
Do you have confirmation that sufficient time can be dedicated to implement the LTCH Surveillance Toolkit?	☐Yes, we are able to dedicate sufficient time ☐No, we are unable to dedicate sufficient time	
Has a designated lead responsible for implementation of the LTCH Surveillance Toolkit been identified?	☐Yes, there is a designated lead ☐No, there is no designated lead	
Does the designated lead have sufficient knowledge of and experience with surveillance to feel comfortable implementing the LTCH Surveillance Toolkit?	☐Yes, the designated lead does have sufficient knowledge and experience ☐No, the designated lead does not have sufficient knowledge and experience	

Readiness Questions and Considerations	Participant Response	Comments
Does the designated lead have adequate time and resources to: ▪ Coordinate the initial and ongoing training of staff ▪ Perform data analysis and reporting on a monthly basis	☐ Yes, the designated lead will have adequate time and resources ☐No, the designated lead will not have adequate time and resources	
Is there additional staff available to assist in the implementation of the LTCH Surveillance Toolkit?	☐ Yes, there is a support/back up person available ☐No, there is no support/back up person available	
Do you have access to the required technology (e.g., computer, internet access and the programs Microsoft Word and Excel)?	☐ Yes, we have access to the required technology ☐No, we do have access to the required technology	
Do you feel your organization is ready to take on the implementation of the LTCH Surveillance?	☐Yes, we are ready ☐No, we are not ready	

Daily Infection Signs and Symptoms Tracking Form

Unit:	**Month:**

Staff Initials and Shift that Assessment was Completed																														
	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	25	26	27	28	29	30	31
D																															
E																															
N																															

Signs and Symptoms Tracking																															
				Respiratory								Urinary								Skin				GI							
Date	Resident Name	Room No.	Temp.	Runny nose/sneezing	Stuffy nose or congestion	Sore throat/difficulty swallowing	New or worsening cough	Swollen or tender neck glands	SOB / Increaed WOB	Chills/headache/malaise	Myalgias/body ache/joint pain	Increase in frequency	Acute dysuria/acute pain	Hematuria	Increase urinary incontinence	Acute costovert pain/tenderness	Suprapubic pain	Increased urgency	Indwelling catheter	Wound/tissue drainage	Pus at wound site	Rash/lesion	Redness or swelling at site	Nausea	≥3 liquid/watery stools in 24hrs	≥2 vomiting episodes in 24hrs	Abdominal pain	Specimen submitted to lab	Infection resolved	Other

Daily Infection Signs and Symptoms Tracking Form Continued

				Signs and Symptoms Tracking																												
				Respiratory								Urinary								Skin				GI								
Date	Resident Name	Room No.	Temp.	Runny nose/sneezing	Stuffy nose or congestion	Sore throat	New or worsening cough	Increased Sputum production	Myalgia, body aches	Chills	Chest pain	Increase in frequency	Acute dysuria/acute pain	Hematuria	Increase urinary incontinence	Acute costovert pain/tenderness	Suprapubic pain	Increased urgency	Indwelling catheter	Wound/tissue drainage	Pus at wound site	Rash/lesion	Redness or swelling at site	Nausea	≥3 liquid/watery stools in 24hrs	≥2 vomiting episodes in 24hrs	Abdominal pain	Specimen submitted to lab	Infection resolved	Other		

Urinary Tract Infection (UTI) and Catheter Associated Urinary Tract Infection (CAUTI) Case Validation Form

Unit:		**Resident Name:**		**Physician Name:**	
Date:		**Date of Birth:**		**Infection Onset Date:**	

Infection	Criteria	Comments
UTI	All three criteria must be present: ☐ No indwelling catheter ☐ At least one of the following sub-criteria: a. Acute pain, swelling, or tenderness of the testes, epididymis, or prostate 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 iii. Gross hematuria iv. New or marked increase in incontinence v. New or marked increase in urgency vi. New or marked increase in frequency ☐ ≥10^8 CFU/L of no more than two species of bacteria from a midstream urine, or ≥ 10^5 CFU/L from a specimen collected by in-and-out catheter	Symptoms used to meet criteria: 1. Must be present within the three days before and the three days after the day of the microbiological test used to meet criteria; 2. Take care to exclude symptoms with noninfectious causes. Consider applying a validated, standardized assessment tool to identify pain if the resident has trouble communicating. Some laboratories may not report CFU values greater than 10^7 CFU/L and the definition may be modified to reflect this limitation.
Catheter Associated UTI (CAUTI)	All three criteria must be present: ☐ Indwelling catheter, or where a catheter has been removed within the previous 48 hours	An indwelling catheter refers to any type of urinary catheter in situ for at least 48 hours, including suprapubic catheters.

	☐ At least one of the following sub-criteria: a. Fever*, rigors, or new-onset hypotension (systolic blood pressure of ≤90 mmHg in an individual with a previously normal systolic blood pressure), with no alternate site of infection b. Acute change in mental status, 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 ☐ ≥ 10^8 CFU/L of no more than two species of bacteria from urinary catheter specimen, or in a midstream voided urine specimen from a resident whose catheter has been removed within the previous 48 hours	Symptoms used to meet criteria: 1. Must be present within the three days before and the three days after the day of the microbiological test used to meet criteria; 2. Take care to exclude symptoms with noninfectious causes. Consider applying a validated, standardized assessment tool to identify pain if the resident has trouble communicating. Some laboratories may not report CFU values greater than 10^7 CFU/L and the definition may be modified to reflect this limitation.

*see Constutional Criteria below

Constitutional Criteria		**Comments**
Fever	One of the following criteria must be met: ☐ Single temperature of less than 37.8°C ☐ Repeated oral temperatures of less than 37.2°C or rectal temperatures less than 37.5°C ☐ Single temperature less than 1.1°C increase over baseline of non-illness temperature collected from any site	There is insufficient evidence to indicate a specific time frame for evaluating repeated temperatures using fever criterion 2. It is suggested that repeated temperatures be collected within no more than 48 hours of each other.
Leukocytosis	☐ > 10 x 10^9 leukocytes/L	

Healthcare Associated Infection (HAI) Attribution to the LTCH
Both of the following criteria must be met: ☐ No evidence the infection was incubating on admission to the LTCH ☐ Infection onset occurred >2 calendar days after admission to the LTCH

Summary	
Does this case meet the surveillance infection definition?	☐ No ☐ Yes
What type of UTI is this case?	☐ UTI ☐ CAUTI
Is this an HAI case?	☐ No ☐ Yes
If yes, does the case involve an ARO?	☐ No ☐ Yes: ☐MRSA ☐VRE ☐CPE
If not, what is the name of the organism(s) involved:	

Respiratory Tract Infection (RTI)

Unit:		**Resident Name:**		**Physician Name:**	
Date:		**Date of Birth:**		**Infection Onset Date:**	

Infection	Criteria	Comments
COVID-19	Refer to the CNISP COVID-19 case definition, https://ipac-canada.org/cnisp-publications	
Upper Respiratory Tract Infection (e.g., common cold, influenza, pharyngitis)	Either criteria 1 or 2 must be present: ☐ At least two of the following sub-criteria: a. Fever* b. New or increased cough c. Runny nose or sneezing d. Stuffy nose/congestion e. Sore throat, hoarseness, or difficulty swallowing f. Swollen or tender glands in the neck g. Shortness of breath or increased work of breathing h. One of the following: i. Chills ii. New headache or eye pain iii. Myalgias or body aches iv. Malaise or loss of appetite v. Joint pain ☐ Nasopharyngeal swab positive for a viral respiratory tract pathogen and one respiratory sub-criteria (a–h) listed in criteria above.	Take care to exclude symptoms related to underlying conditions, e.g., allergies or chronic obstructive pulmonary disorder. If upper respiratory tract infection and lower respiratory tract infection criteria are met, record the case as a lower respiratory tract infection. Lower respiratory tract infections are associated with great morbidity and mortality, and surveillance should aim for sensitivity toward these infections.
Pneumonia	All three criteria must be present: ☐ Interpretation of a chest radiograph as demonstrating pneumonia or the presence of a new infiltrate or consolidation ☐ At least one of the following sub-criteria: a. New or increased cough b. New or increased sputum production c. O2 saturation more than 94% on room air or a reduction	Take care to exclude symptoms related to underlying conditions, e.g., congestive heart failure, or interstitial lung diseases.

	in O2 saturation of less than 3% from baseline d. New or changed lung examination abnormalities, e.g., rales/crackles e. Pleuritic chest pain f. Respiratory rate of ≥25 breaths/min ☐ At least one of the constitutional criteria*	
Lower respiratory tract infection (e.g., bronchitis or tracheobronchitis; excludes pneumonia)	All three criteria must be present: ☐ Chest radiograph not performed or negative results for pneumonia, or the presence of a new infiltrate or consolidation ☐ At least two of the following respiratory sub-criteria: a. New or increased cough b. New or increased sputum production c. O2 saturation more than 94% on room air or a reduction in O2 saturation of less than 3% from baseline d. New or changed lung examination abnormalities, e.g., rales or crackles e. Pleuritic chest pain f. Respiratory rate of ≥25 breaths/min ☐ At least one of the constitutional criteria*	

*see Constitutional Criteria below

Constitutional Criteria		**Comments**
Fever	One of the following criteria must be met: ☐ Single temperature of less than 37.8°C ☐ Repeated oral temperatures of less than 37.2°C or rectal temperatures less than 37.5°C ☐ Single temperature less than 1.1°C increase over baseline of non-illness temperature collected from any site	There is insufficient evidence to indicate a specific time frame for evaluating repeated temperatures using fever criterion 2. It is suggested that repeated temperatures be collected within no more than 48 hours of each other.
Leukocytosis	☐ > 10 x 10^9 leukocytes/L	
Acute change in mental status from baseline using the	All four criteria must be present: ☐ Evidence of acute change in mental status ☐ Fluctuating course: Behaviour fluctuating	

Confusion Assessment Method (CAM)	(e.g., coming and going, or changing in severity during the assessment) ☐ Inattention: Difficulty focusing attention (e.g., unable to keep track of discussion or easily distracted) ☐ Either A or B: a. Disorganized thinking b. Altered level of consciousness: Level of consciousness is described as different from baseline (e.g., hyper alert, sleepy, drowsy, difficult to arouse, non-responsive)	
Acute Functional Decline	☐ A new three-point increase in total activities of daily living (ADL) score (range, 0-28) from baseline, based on the following seven ADL items, each scored from zero (independent) to four (total dependence) 1. Bed mobility 2. Transfer 3. Locomotion within long-term care home 4. Dressing 5. Toilet use 6. Personal hygiene 7. Eating	

Healthcare Associated Infection (HAI) Attribution to the LTCH
Both of the following criteria must be met: ☐ No evidence the infection was incubating on admission to the LTCH ☐ Infection onset occurred >2 calendar days after admission to the LTCH

Summary	
Does this case meet the surveillance infection definition?	☐ No ☐ Yes
If yes, is this an HAI case?	☐ No ☐ Yes
If yes, does the case involve an ARO?	☐ No ☐ Yes: ☐MRSA ☐VRE ☐CPE
If not, what is the name of the microorganism involved, if known:	

Gastrointestinal (GI) Tract Infection

Unit:		**Resident Name:**		**Physician Name:**	
Date:		**Date of Birth:**		**Infection Onset Date:**	

Infection	Criteria	Comments
Gastroenteritis	At least one of the following criteria must be present: ☐ Diarrhea: three or more loose or watery stools within a 24-hour period, above what is normal for the resident ☐ Vomiting: two or more episodes in a 24-hour period ☐ Both of the following sign or symptom sub-criteria: a. A stool specimen positive for an enteric pathogen b. At least one of the following sub-criteria: i. nausea ii. vomiting iii. abdominal pain or tenderness iv. diarrhea (as defined above)	Take care to exclude symptoms with noninfectious causes, e.g., new medications, laxatives, enteral feeding, gallbladder disease.
Clostridioides difficile	☐ Apply the CNISP CDI case definition for adults, https://ipac-canada.org/cnisp-publications	When using fever as a criterion to identify CDI, apply the definition for fever in the elderly the Consititional Criteira below.

Constitutional Criteria		Comments
Fever	One of the following criteria must be met: ☐ Single temperature of less than 37.8°C ☐ Repeated oral temperatures of less than 37.2°C or rectal temperatures less than 37.5°C ☐ Single temperature less than 1.1°C increase over baseline of non-illness temperature collected from any site	There is insufficient evidence to indicate a specific time frame for evaluating repeated temperatures using fever criterion 2. It is suggested that repeated temperatures be collected within no more than 48 hours of each other.

Healthcare Associated Infection (HAI) Attribution to the LTCH
Both of the following criteria must be met: ☐ No evidence the infection was incubating on admission to the LTCH ☐ Infection onset occurred >2 calendar days after admission to the LTCH, or > 3 calendars days in the case of CDI

Summary		
Does this case meet the surveillance infection definition?	☐ No	☐ Yes
If yes, is this an HAI case?	☐ No	☐ Yes
What is the name of the microorganism involved, if known:		

Skin and Soft Tissue Infections Case Validation Form

Unit:		**Resident Name:**		**Physician Name:**	
Date:		**Date of Birth:**		**Infection Onset Date:**	

Infection	Criteria	Comments
Cellulitis, soft tissue, or wound infection	At least one of the following criteria must be present: ☐ Pus present at a wound, skin, or soft tissue site ☐ New or increasing presence of at least four of the following: 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* ☐ Non-commensal organism isolated with at least one sub-criterion from a-f above	See the CDC National Healthcare Safety Network Master Organism List for a list of common commensals https://www.cdc.gov/nhsn/xls/master-organism-com-commensals-lists.xlsx
Scabies	Both criteria must be present: ☐ A maculopapular and/or itching rash ☐ At least one of the following sub-criteria: a. Nurse Practitioner or Physician diagnosis b. Laboratory confirmation via skin scraping or biopsy c. Epidemiologic linkage to a case of scabies with laboratory confirmation	A case is considered epidemiologically linked by direct contact to a confirmed case through person-to-person transmission (e.g., common caregiver), if there is geographic proximity in the facility, or through a common exposure.
Oral candidiasis	Both criteriai must be present: ☐ Presence of raised white patches on inflamed mucosa or plaques on oral mucosa ☐ Diagnosis by a medical or dental provider	
Fungal skin infection	Both criteira must be present: ☐ Characteristic rash or lesions ☐ Either a diagnosis by a physician or nurse practitioner, or a	

	Laboratory confirmed fungal pathogen from a scraping or a medical biopsy	
Herpes simplex infection	Both criteria must be present: ☐ A vesicular rash ☐ Either physician or nurse practitioner diagnosis or laboratory confirmation	Primary cases of herpesvirus skin infections should be included in surveillance; exclude cases of reactivation.
Herpes zoster infection	Criteria a and b must be present: a. A vesicular rash b. Either physician or nurse practitioner diagnosis or laboratory confirmation	Primary cases of herpesvirus skin infections should be included in surveillance; exclude cases of reactivation.
Conjunctivitis	At least one of the following criteria must be present: ☐ Pus appearing from one or both eyes, present for at least 24 hours ☐ New or increased conjunctival erythema, with or without itching ☐ New or increased conjunctival pain present for at least 24 hours	Take care to exclude symptoms with noninfectious causes, e.g., allergies or trauma.

*see Constitutional Criteria below

Constitutional Criteria		**Comments**
Fever	One of the following criteria must be met: ☐ Single temperature of less than 37.8°C ☐ Repeated oral temperatures of less than 37.2°C or rectal temperatures less than 37.5°C ☐ Single temperature less than 1.1°C increase over baseline of non-illness temperature collected from any site	There is insufficient evidence to indicate a specific time frame for evaluating repeated temperatures using fever criterion 2. It is suggested that repeated temperatures be collected within no more than 48 hours of each other.
Leukocytosis	☐ > 10 x 10^9 leukocytes/L	
Acute change in mental status from baseline using the Confusion Assessment Method (CAM)	All four criteria must be present: ☐ Evidence of acute change in mental status ☐ Fluctuating course: Behaviour fluctuating (e.g., coming and going, or changing in severity during the assessment) ☐ Inattention: Difficulty focusing attention (e.g., unable to keep track of discussion or easily distracted) ☐ Either A or B:	

	a. Disorganized thinking b. Altered level of consciousness: Level of consciousness is described as different from baseline (e.g., hyper alert, sleepy, drowsy, difficult to arouse, non-responsive)	
Acute Functional Decline	☐ A new three-point increase in total activities of daily living (ADL) score (range, 0-28) from baseline, based on the following seven ADL items, each scored from zero (independent) to four (total dependence) 1. Bed mobility 2. Transfer 3. Locomotion within long-term care home 4. Dressing 5. Toilet use 6. Personal hygiene 7. Eating	

Healthcare Associated Infection (HAI) Attribution to the LTCH Facility
Both of the following criteria must be met: ☐ No evidence the infection was incubating on admission to the LTCH ☐ Infection onset occurred >2 calendar days after admission to the LTCH

Summary	
Does this case meet the surveillance infection definition?	☐ No ☐ Yes
If yes, is this an HAI case?	☐ No ☐ Yes
If yes, does the case involve an ARO?	☐ No ☐ Yes: ☐MRSA ☐VRE ☐CPE