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CNISP·PCSIN

Canadian Nosocomial Infection Surveillance Program (CNISP)

Surveillance Protocol for the Enhanced Hospital Profile (EHP)

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Working Group

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BACKGROUND

Healthcare-associated infections (HAIs) and antimicrobial resistant organisms (AROs) are a major threat to public health due to their increased morbidity, mortality, healthcare cost and burden on hospitals (1). The World Health Organization and Public Health Agency of Canada both include infection prevention and control, and antimicrobial stewardship as key components in their published action plans to combat antimicrobial resistance (AMR) (2,3). Both are informed by data from surveillance of nosocomial infections and microbiological laboratories, including data on the identification and characterization of AROs.

Infection prevention and control in hospitals aims to reduce the number of HAI/ARO infections with strict adherence to standard practice (e.g. hand hygiene, screening, isolation precautions, targeted infection control measures). These efforts combine with those of antimicrobial stewardship, which aims to preserve the future effectiveness of antimicrobials by reducing their misuse and overuse (2,3). Practices may differ between institutions based on local epidemiology, evolving guidelines, areas of controversial measures and various levels of implementation. Variability in practices may affect outcome measurement as well as ultimate rates of infection. The Enhanced Hospital Profile (EHP) provides an opportunity to investigate how differences in these practices affect HAI/ARO rates and clinical outcomes captured by our active surveillance of HAIs/AROs.

Since 2014, the Canadian Nosocomial Infection Surveillance Program (CNISP) has collected data on hospital practices related to the infection prevention and control of HAIs and AROs. These data include the frequency and scope of screening practices for carbapenemase-producing organisms (CPO), methicillin-resistant *Staphylococcus aureus* (MRSA) and vancomycin-resistant *Enterococcus* (VRE). In 2018, CNISP expanded the EHP to collect data on hospital practices related to screening for *Candida auris* (*C. auris*), and laboratory testing and antimicrobial stewardship of AROs. To increase the number of EHP submissions, CNISP has streamlined the EHP. Questions pertaining to hospital antimicrobial stewardship programs and screening for *C. auris* have been removed from the 2023 and 2024 EHPs, respectively. Instead, these questions will be asked separately via targeted surveys.

OBJECTIVES

1. To characterize infection prevention and control, and laboratory practices among CNISP participating hospitals in relation to HAI/ARO prevention.
2. To investigate how differences in infection prevention and control, and laboratory practices affect HAI/ARO rates among CNISP participating hospitals.
3. To associate process variables captured in the EHP with short- and long-term outcomes from CNISP HAI/ARO surveillance.

METHODS

Site Eligibility

All CNISP hospitals are required to participate. It is mandatory for CNISP participating hospitals to submit annual EHP data.

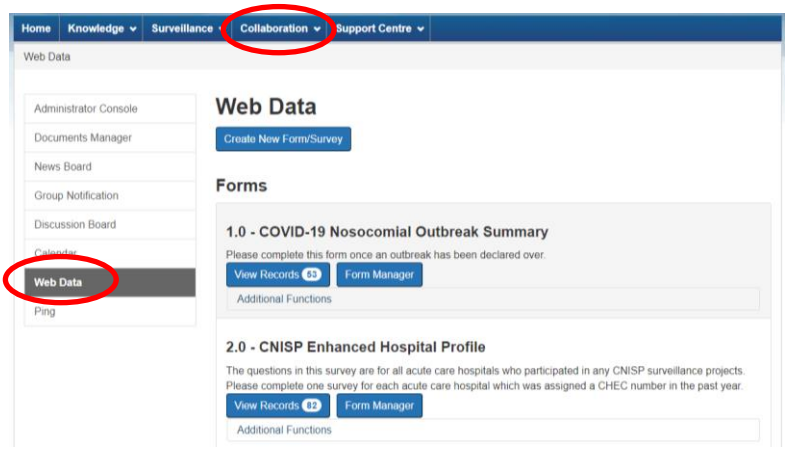
Submission timeline

Data are retrospectively collected and include data from January 1st to December 31st of the previous surveillance year. Data are due by March 31st. For example, data from January 1st 2022 to December 31st 2022 are due by March 31st 2023 as part of the 2022 surveillance year.

Data submission

Please submit data electronically on CNPHI via Web Data as shown below. The data collection form is found on CNPHI > Collaboration Centre > Web Data > Enhanced Hospital Profile Form.

On CNPHI, click the "Collaboration" tab at the top. On the left-hand side, click "Web Data", and you will see the CNISP Enhanced Hospital Profile form on this page.



The questions in this profile apply to all hospitals participating in any surveillance project. One profile can be submitted for a network of hospitals if the same information applies to all hospitals in the network.

The profile contains three tabs:

1. **Hospital information**
2. **Infection prevention and control practices**

   E.g. Number of infection control professionals and epidemiologists, screening practices for select HAIs/AROs (VRE, MRSA, CPO).
3. **Laboratory practices**

   E.g. Diagnostic testing methods for *C. difficile* and CPO

Ideally, hospitals will submit data annually for all three tabs. However, if data on laboratory practices cannot be ascertained in a timely manner, please submit data for hospital information, and infection prevention and control in the meantime. Once data on laboratory practices has been ascertained, please re-visit the profile to complete these outstanding data. The Wed Data form can be modified after submission.

Analysis

Data will be reported through PHAC surveillance reports, presentations, publications, and published on the PHAC and/or AMMI website.

ETHICS

Surveillance is a routine component of quality assurance and patient care in Canadian healthcare institutions and therefore informed consent is not required. All data submitted to the Agency are kept strictly confidential. While this surveillance project is observational and does not involve any alteration in patient care, ethics approval may be sought at some hospital sites, if necessary.

PRIVACY

Any data released by CNISP will be in summary format and will not identify individual hospitals. Hospital administrators should be made aware that national and/or regional reporting of aggregate data will occur.

REFERENCES

1. Murray CJ, Ikuta KS, Sharara F, Swetschinski L, Robles Aguilar G, Gray A, et al. Global burden of bacterial antimicrobial resistance in 2019: a systematic analysis. Lancet. 2022 Feb 12;399(10325):629–55.
2. Government of Canada. Tackling Antimicrobial Resistance and Antimicrobial Use: A Pan-Canadian Framework for Action. 2017; Available from: https://www.canada.ca/en/health-canada/services/publications/drugs-health-products/tackling-antimicrobial-resistance-use-pan-canadian-framework-action.html
3. World Health Organization. Global action plan on antimicrobial resistance. 2016; Available from: https://www.who.int/publications/i/item/9789241509763

Appendix 1 - Questionnaire

These questions are for all acute care hospitals who participated in any CNISP surveillance projects in the previous surveillance year. Please complete a separate survey for each site where responses differ. One profile can be submitted for a network of hospitals if the same information applies to all hospitals in the network. If the latter applies, you can list the site numbers separated by a comma in the first question (see below).

HOSPITAL INFORMATION

CHEC Site Number(s):
Please complete a separate survey for each site where responses differ.

Surveillance Year:
Please indicate the surveillance year (ex. 2020).

INFECTION CONTROL AND PREVENTION

1. Please indicate each individual site's full-time equivalent (FTE) for the staff members indicated below:

- Medical Director for Infection Prevention and Control _____
- Infection Control Professionals _____
- Epidemiologic Support (e.g., epidemiologists, analysts, biostatisticians) _____

2. For the specified surveillance year, did this hospital conduct screening[1] for VRE?

o No
If no, what year did this hospital stop screening patients for VRE? _____

o Yes
If yes, screening conducted on…

o all patients on admission

o high risk patients on admission, please select all that apply:

- o patients who previously tested positive
- o patients with known exposure (i.e. outbreak, close contact)
- o patients with a previous hospital admission in the last 12 months
- o ICU patients
- o transplant patients (includes solid organ, bone marrow and stem cell transplant)
- o hematology/oncology patients
- o dialysis patients (includes hemodialysis and peritoneal dialysis)
- o other not included above, please specify: _____

o patients on transfer from another healthcare facility (includes long-term care)

o patients during hospitalization (e.g. periodic/prevalence screens, etc.), please select all that apply:

- o ICU patients
- o transplant patients (includes solid organ, bone marrow and stem cell transplant)

o hematology/oncology patients
o dialysis patients (includes hemodialysis and peritoneal dialysis)
o patients on acute medical wards
o patients on general surgical wards
o patients on specialized surgical wards
o other not included above, please specify: _____

o other, please specify: _____

For the specified surveillance year, did this hospital have a policy to screen contacts of newly identified VRE cases?

o Yes
If yes, screening of:
o only close contacts (i.e. same room)
o all ward contacts
o other, please specify: _____

o No

For the specified surveillance year, did this hospital have a policy to put additional precautions (i.e. gown, gloves) in place for patients with VRE?

o Yes
o Yes, but only patients with active infections
o No

For the specified surveillance year, did this hospital have a policy to put room allocations in place for patients with VRE most of the time? Please select all that apply.

o No policy
o Private room
o Cohort (patients with VRE are all cared for in the same room)
o Bedside isolation if multi bed rooms
o Patients with VRE are not isolated or accommodated differently than other patients
(and therefore may share a room with a patient who is not VRE positive)
o Other, please specify: _____

3. For the specified surveillance year, did this hospital conduct screening[1] for MRSA?

o No

o Yes
If yes, screening conducted on…

o all patients on admission

[1] *Screening is defined as a process to identify patients at risk for being colonized with antibiotic resistant organisms and, if risk factors are identified, obtaining appropriate specimens. Source: Provincial Infectious Diseases Advisory Committee (PIDAC) available at URL : https://www.publichealthontario.ca/en/eRepository/PIDAC-IPC_Annex_A_Screening_Testing_Surveillance_AROs_2013.pdf*

o high risk patients on admission, please select all that apply:

- o patients who previously tested positive
- o patients with known exposure (i.e. outbreak, close contact)
- o patients with a previous hospital admission in the last 12 months
- o ICU patients
- o transplant patients (includes solid organ, bone marrow and stem cell transplant)
- o hematology/oncology patients
- o dialysis patients (includes hemodialysis and peritoneal dialysis)
- o patients who have risk factors for community-associated MRSA (e.g. IV drug use, homelessness, reside in communities with high prevalence of MRSA)
- o other not included above, please specify: _____

o patients on transfer from another healthcare facility (includes long-term care)

o patients during hospitalization (e.g. periodic screens, etc.), please select all that apply:

- o ICU patients
- o transplant patients (includes solid organ, bone marrow and stem cell transplant)
- o hematology/oncology patients
- o dialysis patients (includes hemodialysis and peritoneal dialysis)
- o patients on acute medical wards
- o patients on general surgical wards
- o patients on specialized surgical wards
- o other not included above, please specify: _____

o other, please specify: _____

For the specified surveillance year, did this hospital have a policy to put room allocations in place for patients with MRSA most of the time? Please select all that apply.

o No policy
o Private room
o Cohort (patients with MRSA are all cared for in the same room)
o Bedside isolation if multi bed rooms
o Patients with MRSA are not isolated or accommodated differently than other patients (and therefore may share a room with a patient who is not MRSA positive)
o Other, specify: _____

4. For the specified surveillance year, did this hospital conduct screening[2] for CPOs (i.e. CPE and CPA)?

o No

o Yes
If yes, screening conducted on…

- o all patients on admission

[2] *Screening is defined as a process to identify patients at risk for being colonized with antibiotic resistant organisms and, if risk factors are identified, obtaining appropriate specimens. Source: Provincial Infectious Diseases Advisory Committee (PIDAC) available at URL : https://www.publichealthontario.ca/en/eRepository/PIDAC-IPC_Annex_A_Screening_Testing_Surveillance_AROs_2013.pdf*

o high risk patients on admission, please select all that apply:

- o patients who previously tested positive
- o patients with a history of travel outside of Canada in the past 12 months (please specify from which country/region:_____)
- o patients hospitalized outside of Canada in the past 12 months (please specify in which country/region: _____)
- o patients with known exposure (i.e. outbreak, close contact)
- o patients with a previous hospital admission in Canada in the past 12 months
- o ICU patients
- o transplant patients (solid organ, bone marrow and stem cell transplant)
- o hematology/oncology patients
- o dialysis patients (includes hemodialysis and peritoneal dialysis)
- o other not included above, please specify: _____

o patients on transfer from another healthcare facility (includes long-term care)

o patients during hospitalization (e.g. periodic screens, etc.), please select all that apply:

- o ICU patients
- o transplant patients (includes solid organ, bone marrow and stem cell transplant)
- o hematology/oncology patients
- o dialysis patients (includes hemodialysis and peritoneal dialysis)
- o patients on acute medical wards
- o patients on general surgical wards
- o patients on specialized surgical wards
- o other not included above, please specify: _____

o other, please specify: _____

For the specified surveillance year, did this hospital have a policy to put room allocations in place for patients with a CPO most of the time? Please select all that apply.

o No policy
o Private room
o Cohort (patients with a CPO are all cared for in same room)
o Bedside isolation if multi bed rooms
o Patients with a CPO are not isolated or accommodated differently than other patients (and therefore may share a room with a patient who is not CPO positive)
o Other, specify: _____

LABORATORY PRACTICES

1. What is the current *C. difficile* testing method for this hospital?

o GDH followed by PCR confirmation
o GDH with EIA for Toxin A/B _____
o EIA for Tox A/B alone
o PCR alone
o PCR followed by EIA for Toxin A/Bo Other, please specify: _____

2. What are the current CPO screening methods for this hospital? Please select all that apply.

o MIC/disk testing for a carbapenem
o Chromogenic agar plate - ChromID CARBA smart
o Chromogenic agar plate - Brilliant CRE
o In house McConkey with carbapenem
o Other: _____
o N/A (we don't screen)

What are the current CPO confirmatory testing methods for this hospital? Please select all that apply.

o PCR
o Immunochromatographic lateral flow assay (e.g. Carba5, RESIST-4)
o ROSCOE neo-rapid carba
o Phenotypic testing - mCIM
o Phenotypic testing - CARBA-NP
o Phenotypic testing - Beta-CARBA
o Phenotypic testing - Other: _____
o Other: _____

Which of the following carbapenamases does your hospital or provincial reference lab confirm?

o KPC
o NDM
o VIM
o IMP
o GES
o NMC-A/IMI
o SME
o OXA-24
o OXA-48
o OXA-58
o OXA-237
o OXA-143
o All of the above
o None of the above (lab does not characterize carbapenemases)

3. Total number of unique enterococcal blood culture isolates (bacteremias) identified from inpatients only in this hospital from January-December, for the specified surveillance year (excluding repeat isolates): _____

Total number of CPO screening tests performed in the specified surveillance year in this hospital: _____

Total number of VRE screening tests performed in the specified surveillance year in this hospital: _____

Total number of MRSA screening tests performed in the specified surveillance year in this hospital: _____

4. Which respiratory viruses does your hospital test for? Please select all that apply.

o Influenza A
If yes, are you able to subtype Influenza A? o yes o no

o Influenza B
o Enterovirus
o Rhinovirus
o Enterovirus/Rhinovirus
o RSV
o Parainfluenza 1
o Parainfluenza 2
o Parainfluenza 3
o Parainfluenza 4
o Metapneumovirus
o Adenovirus
o Bocavirus
o Corona229E
o CoronaHKU1
o CoronaNL63
o CoronaOC43
o SARS CoV-2
o All of the above

Do you test all admissions with respiratory tract infections symptoms?

o Yes
o No
If no, please select the strategy or strategies that apply to your hospital:

o admissions with severe RTI (e.g. ICU)
o admissions of immunocompromised hosts
o all nosocomial respiratory tract infections
o selected nosocomial respiratory tract infections
o restricted to ID
o other strategies, please specify: _____

Which platform(s) does your hospital use to test for viral respiratory infections?

o Extended viral panel: Biofire Film Array
o Extended viral panel: Seegene
o Extended viral panel: Luminex (Verigene/NxTag)
o Extended viral panel: Homemade
o Limited respiratory panel (Influenza/Covid/RSV): Genexpert Xpress (Cepheid)
o Limited respiratory panel (Influenza/Covid/RSV): Diasorin (Simplexa)
o Limited respiratory panel (Influenza/Covid/RSV): Roche Cobas
o Limited respiratory panel (Influenza/Covid/RSV): Luminex (Verigene)
o Limited respiratory panel (Influenza/Covid/RSV): IMDx (Abbot)
o Limited respiratory panel (Influenza/Covid/RSV): IDNow
o Limited respiratory panel (Influenza/Covid/RSV): Qiagen
o Limited respiratory panel (Influenza/Covid/RSV): Quidel
o Limited respiratory panel (Influenza/Covid/RSV): Homemade
o Other, please specify:_____

Appendix 2 – Data dictionary

Hospital information

CHEC Site #

This will be the **3-character** alphanumeric number assigned to your institution. It will always begin with the two digit number assigned to your CHEC member e.g., 07, 15, and a letter assigned by the CHEC member for that specific institution e.g., A, B, C, etc. The CHEC site # for each institution should always be the same for all the CHEC/CNISP surveillance projects and will always have all three alphanumeric digits reported as the CHEC site #, e.g., 07A, 15A.

Surveillance Year.

Please indicate the surveillance year (ex. 2020) of the report you are filling out.

Infection Prevention and Control

1. **Number of medical staff (medical directors, infection control professionals, epidemiologists)**

   Please indicate if you have these medical staff at your hospital and how many full-time equivalent (FTE) staff of each type in your hospital.

2. **VRE screening in the surveillance year.**

   Please check yes or no if your hospital conducted screening for VRE in the surveillance year. Screening is defined as a process to identify patients at risk for being colonized or infected with an antibiotic resistant organism (VRE) and, if risk factors are identified, obtaining appropriate specimens.

   a. **If no, please specify which year your hospital stopped screening for VRE screening**.

   b. If yes, who was screening conducted on.

   Please indicate which type of patient VRE screening was conducted on: all patients on admission, high risk patients on admission, patients on transfer from another healthcare facility, patients during hospitalization, and/or other. If other is selected, please specify.

   c. **If high risk patients on admission, specify who.**

   Patients who previously tested positive, patients with known exposure (i.e. outbreak, close contact), ICU patients, transplant patients (includes solid organ, bone marrow and stem cell transplant), hematology/oncology patients, dialysis patients (includes hemodialysis and peritoneal dialysis), patients with a previous hospital admission (< 12 months) and/or other. If other is selected, please specify.

   d. If patients during hospitalization, specify who.

ICU patients, transplant patients (includes solid organ, bone marrow and stem cell transplant), hematology/oncology patients, dialysis patients (includes hemodialysis and peritoneal dialysis), patients on acute medical wards, patients on general surgical wards, patients on specialized surgical wards and/or other. If other is selected, please specify.

Contacts of VRE cases

Please indicate if your hospital screened contacts of newly identified VRE cases in the specific surveillance year. If yes, please specify what type of contacts were screened.

Additional precautions for VRE

Please indicate if your hospital took additional precautions (e.g. gown or gloves) for patients colonized or infected with VRE.

Room allocations for patients colonized or infected with VRE

Please select the room allocations put in place for patients colonized or infected with VRE.

3. MRSA screening in the surveillance year.

Please check yes or no if your hospital conducted screening for MRSA in the surveillance year.

a. If yes, who was screening conducted on.

Please indicate which type of patient MRSA screening was conducted on: all patients on admission, patients on transfer from another healthcare facility (includes long-term care), high risk patients on admission, patients during hospitalization (e.g. periodic screens, etc.) and/or other. If other is selected, please specify.

b. If high risk patients on admission, specify who.

Patients who previously tested positive, patients with known exposure (i.e. outbreak, close contact), ICU patients, transplant patients (includes solid organ, bone marrow and stem cell transplant), hematology/oncology patients, dialysis patients (includes hemodialysis and peritoneal dialysis), patients with a previous hospital admission (< 12 months), patients who have risk factors for community-associated MRSA (e.g. IV drug use, homelessness, reside in communities with high prevalence of MRSA) and/or other. If other is selected, please specify.

c. If patients during hospitalization, specify who.

ICU patients, transplant patients (includes solid organ, bone marrow and stem cell transplant), hematology/oncology patients, dialysis patients (includes hemodialysis and peritoneal dialysis), patients on acute medical wards, patients on general surgical wards, patients on specialized surgical wards and/or other. If other is selected, please specify.

Room allocations for patients colonized or infected with MRSA

Please select the room allocations put in place for patients colonized or infected with MRSA.

4. CPO screening in the surveillance year.

Please check yes or no if your hospital conducted screening for CPO (i.e. CPE, CPA) in the surveillance year.

a. If yes, who was screening conducted on.

Please indicate which type of patient CPO screening was conducted on: all patients on admission, patients on transfer from another healthcare facility (includes long-term care), high risk patients on admission, patients during hospitalization (e.g. periodic screens, etc.) and/or other. If other is selected, please specify.

b. If high risk patients on admission, specify who.

Patients who previously tested positive, patients with a history of travel outside of Canada in the past 12 months, patients hospitalized outside of Canada in the past 12 months, patients with known exposure (i.e. outbreak, close contact), ICU patients, transplant patients (solid organ, bone marrow and stem cell transplant), hematology/oncology patients, dialysis patients (includes hemodialysis and peritoneal dialysis), patients with a previous hospital admission in Canada (< 12 months) and/or other. If other is selected, please specify.

c. If patients with a history of travel/hospitalization outside of Canada, please specify the country/region.

d. If patients during hospitalization, specify who.

ICU patients, transplant patients (includes solid organ, bone marrow and stem cell transplant), hematology/oncology patients, dialysis patients (includes hemodialysis and peritoneal dialysis), patients on acute medical wards, patients on general surgical wards, patients on specialized surgical wards and/or other. If other is selected, please specify.

Room allocations for patients colonized or infected with CPO.

Please select the room allocations put in place for patients colonized or infected with a CPO.

Laboratory Practices

1. *C. difficile* lab testing

Please select the current laboratory testing method for *C. difficile* at your hospital. If a combination of methods are used, please specify which tests are used exactly.

2. CPO lab testing

Please select the current CPO screening and confirmatory testing methods at your hospital. Please specify which carbapenemase(s) your hospital or provincial reference lab identifies/confirms.

3. Screening isolates

Please indicate the number of unique enterococcal blood culture isolates from bloodstream infections identified

among inpatients in this hospital from January – December of the surveillance year. Please exclude repeat isolates.

Please indicate the total number of screening tests performed by your hospital in the surveillance year for CPO, VRE and MRSA.

4. Viral respiratory illness

a. Please specify the respiratory viruses your hospital tests for.

Influenza A, Influenza B, Enterovirus, Rhinovirus, Enterovirus/Rhinovirus, RSV, Parainfluenza 1, Parainfluenza 2, Parainfluenza 3, Parainfluenza 4, Metapneumovirus, Adenovirus, Bocavirus, Corona229E, CoronaHKU1, CoronaNL63, CoronaOC43, SARS-CoV-2

b. If you test for influenza A, please specify if you are able to perform subtyping (e.g. H3N2, H1N1).

c. Please specify if you test all admissions with respiratory tract infections?

d. If you do NOT test all admissions with respiratory tract infections, please specify which patient population(s) your hospital tests.

Admissions with severe RTI (e.g. ICU), admissions of immunocompromised hosts, all nosocomial respiratory tract infections, selected nosocomial respiratory tract infections, restricted to ID and/or other. If other, please specify.

e. Please specify the platform(s) your site uses to test for viral respiratory infections.

- Extended viral panel: Biofire Film Array
- Extended viral panel: Seegene
- Extended viral panel: Luminex (Verigene/NxTag)
- Extended viral panel: Homemade
- Limited respiratory panel (Influenza/Covid/RSV): Genexpert Xpress (Cepheid)
- Limited respiratory panel (Influenza/Covid/RSV): Diasorin (Simplexa)
- Limited respiratory panel (Influenza/Covid/RSV): Roche Cobas
- Limited respiratory panel (Influenza/Covid/RSV): Luminex (Verigene)
- Limited respiratory panel (Influenza/Covid/RSV): IMDx (Abbot)
- Limited respiratory panel (Influenza/Covid/RSV): IDNow
- Limited respiratory panel (Influenza/Covid/RSV): Qiagen
- Limited respiratory panel (Influenza/Covid/RSV): Quidel
- Limited respiratory panel (Influenza/Covid/RSV): Homemade
- Other

Revision History

Date	Revisions Made
November 2018 (captures changes prior to 2018)	**Hospital characteristics:** 1. Added the following questions - Do you have a Medical Director for Infection Prevention and Control (IPAC) for this acute care hospital? - Do you have active epidemiologic support for this acute care hospital? 2. Removed the following questions - Is this facility a teaching hospital? - Which of the following services does your hospital provide? (Check all that apply) - If you are reporting data for a NICU, what level of Neonatal care** do you provide? **VRE** **3.** Added response options to VRE screening question 4. Added the following questions - For the specified surveillance year, did this hospital screen contacts of newly identified VRE cases? - For the specified surveillance year, in this hospital were additional precautions (i.e. gown, gloves) put in place for patients colonized/infected with VRE? - For the specified surveillance year, in this hospital were any of the following room allocations put in place for patients colonized with VRE most of the time? Please select all that apply **MRSA** **5.** Added response options to MRSA screening question 6. Added the following questions - For the specified surveillance year, in this hospital were additional precautions (i.e. gown, gloves) put in place for patients colonized with MRSA? - For the specified surveillance year, in this hospital were any of the following room allocations put in place for patients with MRSA most of the time? Please select all that apply - Are patients with MRSA routinely prescribed decolonization treatment? **CPOs** 7. Added the following questions - For the specified surveillance year, did this hospital conduct screening3 for CPOs (i.e. CPE and CPA)? - For the specified surveillance year, in this hospital were any of the following room allocations put in place for patients with a CPO most of the time? Please select all that that apply - What are the current CPO screening methods for this hospital? Please select all that apply: - What are the current CPO confirmatory testing methods for this hospital? Please select all that apply: - Which of the following carbapenamases does your hospital or provincial reference lab confirm? **C . Auris** 8. Added the following questions - For the specified surveillance year, did this hospital conduct screening4 for C. auris? - Which types of Candida isolates does this hospital lab identify to the species level? (check as many as applicable) - For which types of Candida isolates does this hospital perform (or send to reference lab for) antifungal susceptibility testing? (check as many as applicable) - Does this hospital have a laboratory procedure/SOP for processing screening swabs from patients to detect colonization with C. auris (e.g. for exposed contacts of a case)? **CDI** 9. Added the following questions

	- For the specified surveillance year, did this hospital conduct screening of inpatients for CDI upon admission? **ASP** 10. Added the following questions - Do you currently have a formal Antimicrobial Stewardship Program (ASP) for this hospital? - Do you currently have formal surveillance of quantitative antimicrobial use for this hospital? **Antibiogram** 11. Added the following questions - Is an annual antibiogram produced for this hospital? - Do you participate in the CNISP antibiogram surveillance?
November 2022 (captures changes from 2018-2022)	**C . Auris** 1. Added questions related to testing practices among roommates and wardmates during hospital stay - How frequently are roommates/wardmates of a positive C.auris patient tested during the above follow up period (either in practice or according to policy)? - How long does your hospital follow roommates/wardmates of a positive C. auris patient (either in practice or according to policy)? 2. Added several response options to C.auris screening question 3. Added the following question - If this hospital performs surveillance for C. auris, what specimens are collected? **MRSA** 4. Added new response option for the high-risk MRSA screening question - "Patients who have high risk factors for community MRSA (IV drug use, homelessness, reside in communities with high prevalence of MRSA) " 5. Removed the following questions - For the specified surveillance year, in this hospital were additional precautions (i.e. gown, gloves) put in place for patients colonized with MRSA? - Are patients with MRSA routinely prescribed decolonization treatment? **CPOs** 6. Removed response option from CPO screening question: - patients who are being screened for other AROs (e.g. MRSA, VRE) **VRIs** 7. Added checklist for what respiratory viruses' hospitals test for. - Please specify the respiratory viruses your hospital tests for. 8. Added checklist of which platforms are used to test for viral infections. - Please specify the platform(s) your site uses to test for viral respiratory infections. 9. Added and removed response options for CDI testing method question 10. Added the following question - Who do you test? **ASP** 11. Removed questions related to antimicrobial stewardship programs (ASPs) **Antibiogram** 12. Removed questions related to antibiogram **CDI** 13. Removed the following questions from protocol - For the specified surveillance year, did this hospital conduct screening of inpatients for CDI upon admission? **Other** 14. Removed option to specify timeframe since previous hospitalization and changed wording to: - patients with a previous hospital admission in the last 12 months

	15. Moved number of isolates/screens questions from IPC section to Lab practices section
November 2023	1. Removed questions related to *C. auris* that will be included in a Task Authorization 2. Updated *C. difficile* testing question