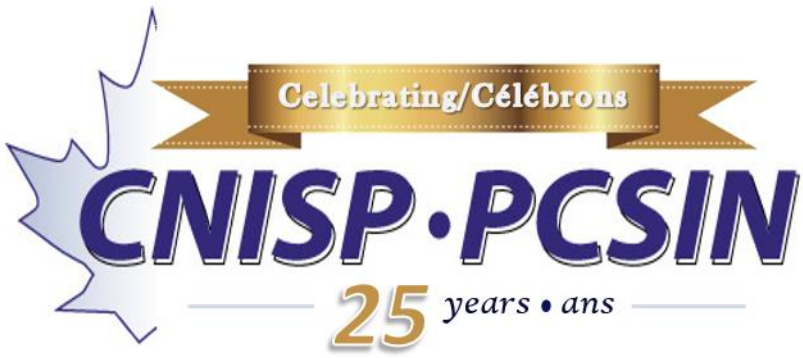

Canadian Nosocomial Infection Surveillance Program

Surveillance for COVID-19 and other viral respiratory infections among inpatients in CNISP hospitals

Version: April 28, 2020

Contact Information

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Background

Viral respiratory infections (VRI) cause increased morbidity and mortality in both adult and pediatric healthcare settings. Age is a key risk factor with regards to the severity, transmission and impact of VRI. The consequences of VRI are especially concerning for children and older adults with existing co-morbidities or underlying conditions such as cardiac and pulmonary disease, or immunosuppression. The emergence of SARS, avian influenza, novel H1N1 influenza, MERS-CoV and, recently, COVID-19 have underlined the need for data to inform infection prevention and control practices for respiratory pathogens in healthcare settings.

Rationale

A hospital's ability to appropriately manage COVID-19 and other VRI patients will be dependent on their understanding of the burden of both community and healthcare associated severe respiratory infections. This surveillance will assist in understanding the burden of COVID-19 and other VRI in adults and pediatric patients in Canadian hospitals.

A real-time hospital based surveillance system will assist in identifying high-risk groups, as well as describing risk factors and patient outcomes in order to inform public health decisions and evaluate interventions.

Short term objectives

1. Describe the inpatient population infected with COVID-19
2. Provide timely data (e.g. demographic, clinical and outcome data) to hospitals and PHAC regarding patients hospitalized with COVID-19

Long term objectives

1. Identify new and emerging respiratory viruses in Canadian acute care hospitals
2. Describe selected characteristics of the organisms involved and of the pediatric and adult populations who develop VRI in order to assist hospitals in the development of precautionary measures for patients at high risk
3. Facilitate intra- and inter-hospital comparison of adult and pediatric VRI rates over time
4. Compare the epidemiology of COVID-19 to other currently circulating respiratory viruses among pediatric and adult inpatients, and to compare the epidemiology of COVID-19 with pathogens that have emerged previously in Canada such as H1N1 and COVID-19

Methods

Study Design

Sentinel surveillance of adult and pediatric COVID-19 and other VRI at participating CNISP hospitals.

Site Eligibility

All CNISP hospitals are eligible to participate.

Surveillance period

Year round surveillance

Weekly reporting to begin the week of Sunday March 29 to Saturday April 4th. If possible, please submit two weeks of retrospective weekly data (i.e. March 15 – March 21 and March 22- March 28). Even if there are zero cases, these data will be included.

Detailed patient questionnaires for COVID-19 and other VRI retrospective to March 1, 2020.

Case Eligibility

i. Any patient admitted to a CNISP participating hospital. All hospital inpatient wards are eligible (e.g. including long-term care, psychiatric wards, maternity wards etc.)

ii. Patient meets the case definition below.

Case definitions

a) **COVID-19 case definition:**

- A person with laboratory confirmation of infection with the virus that causes COVID-19

Inclusion criteria:

- Any patient identified with a laboratory positive COVID-19 result while admitted to a CNISP participating hospital
- Any patient identified with a laboratory positive COVID-19 result in the 14 days prior to being admitted to a CNISP participating hospital *(please use your best clinical judgement when applying the 14 day time frame (i.e. date of admission could be greater than 14 days since positive COVID-19 result)*
- Any patient identified with a subsequent laboratory positive COVID-19 result following determination of being cleared of COVID-19 (reinfection)

Exclusion criteria:

- Patients with laboratory confirmed COVID-19 who are not admitted to a CNISP participating hospital

b) **VRI case definition (excluding COVID-19):**

- Positive viral culture or DFA (direct fluorescent antigen) or EIA (enzyme immunoassay) or PCR (polymerase chain reaction) for a viral respiratory tract pathogen

AND

- At least one of the following signs or symptoms:
  fever (> 38 °Celsius) or single temperature >1.1°Celsius over baseline from any site (oral, tympanic, auxiliary), rhinitis, nasal congestion, pharyngitis, sneezing, cough, wheeze, stridor, apnea, dyspnea, laboured breathing, increased respiratory secretions, change in characteristics of chronic secretions, decreased air entry on auscultation, rales, rhonchi, decreased oxygen saturation, need for increased Fi02, increased ventilator support, increased suctioning or new abnormality on chest radiograph.

AND

- No other evident cause for the abnormality

Exposure classification for COVID-19

Once the patient has been identified with a COVID-19, the case will be classified as healthcare-associated acquired in your acute-care facility, healthcare-associated any other healthcare exposure or community-associated based on the following criteria and in accordance with the best clinical judgement of the healthcare and/or infection prevention and control practitioner (ICP).

Healthcare-associated acquired in your acute care facility (HA-YAF)

- Symptom onset ≥ 7[1] calendar days after admission to the reporting hospital and using best clinical judgement (e.g. symptom onset < 7 days but known epi link to a positive case).

OR

- If patient is readmitted with a positive test < 7 days after discharge from hospital and using best clinical judgement.

Healthcare-associated any other healthcare exposure (HA-Other)

- Any patient who is identified with COVID-19 not acquired at your facility that is thought to be associated with any other healthcare exposure (e.g. another acute-care facility, long-term care or rehabilitation facility etc.).

Community-associated

- No exposure to healthcare that would have resulted in this infection (using best clinical judgement) and does not meet the criteria for a healthcare-associated infection.

Exposure classification for VRI (excluding COVID-19)

Once the patient has been identified with a VRI, they case will be classified as healthcare-associated acquired in your acute-care facility, healthcare-associated any other healthcare exposure or community-associated based on the following criteria and in accordance with the best clinical judgement of the healthcare and/or infection prevention and control practitioner (ICP).

Healthcare-associated acquired in your acute care facility (HA-YAF)

- Symptom onset ≥ 72 hours (≥3 calendar days) after admission to the reporting hospital and using best clinical judgement.

OR

- If patient is readmitted with a positive test < 72 hours (3 calendar days) after discharge from hospital and using best clinical judgement.

[1] 7 days was chosen as the cut-off to attribute acquisition to the hospital based on a current estimate of a median incubation of 4 days (IQR 2-7 days) for hospitalized patients with COVID-19. This is a conservative estimate and can be later re-coded based on date of admission, symptom onset and test date if required.
https://www.cdc.gov/coronavirus/2019-ncov/hcp/clinical-guidance-management-patients.html

Healthcare-associated any other healthcare exposure (HA-Other)

- Any patient who has a VRI not acquired at your facility that is thought to be associated with any other healthcare exposure (e.g. another acute-care facility, long-term care, rehabilitation facility or clinic etc.).

Community-associated

- No exposure to healthcare that would have resulted in this infection (using best clinical judgement) and does not meet the criteria for a healthcare-associated infection.

Data collection and submission

1. A weekly reporting form with aggregate numbers of hospitalizations, ICU admissions and deaths among patients with lab-confirmed COVID-19 as well as a brief line list of new COVID-19 cases will be submitted to CNISP electronically every Tuesday at the close of business day which will include all cases identified in the previous week, i.e. Sunday to Saturday (Appendix A).

   There are three ways that sites can choose to submit the weekly data:

   - Fill out the form on CNPHI Web Data (this is the preferred method)
   - Fill out the fillable Word document and email it to CNISP (phac.cnisp-pcsin.aspc@canada.ca)

2. For weekly COVID-19 surveillance, weekly admissions will be estimated using 2019 patient admissions.

3. For each case that meets the case definition for COVID-19 or other VRI, a detailed patient questionnaire (Appendix B) should be completed by reviewing the patients' chart and reported to PHAC. Please submit the detailed patient questionnaires for COVID-19 cases as time permits (we recognize that hospitals are extremely busy but these data are very useful). The patient questionnaires for other VRI cases may be submitted retrospectively. Please submit data electronically on CNPHI Web Data or via email to phac.cnisp-pcsin.aspc@canada.ca.

4. Denominator data (Appendix C) will be collected on the quarterly denominator form and submitted in CNPHI. If possible, please stratify your denominator data by age (adult $\geq$ 18 years and pediatric < 18 years).

   The data collected will include:

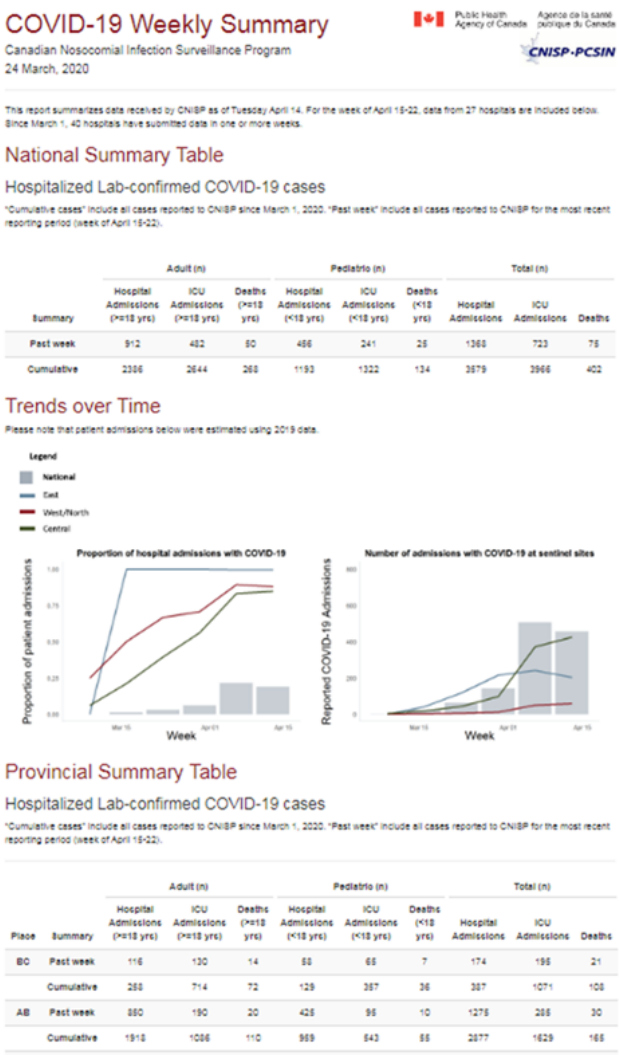
   1. Total number of patient admissions
   2. Total number of inpatient-days

In CNPHI, denominator data are entered via the "Profiles and Denominators" page. VRI rates will be calculated using the same denominator data as VRE, MRSA/MSSA, CPO and *C. auris* so please enter your denominator data under VRE or MRSA/MSSA.

In addition, the number of ICU admissions and ICU patient-days will be collected when available on Web Data in CNPHI via the VRI denominator and zero report form. If possible, please stratify your denominator data by age (adult ≥ 18 years and pediatric < 18 years).

Data reporting

All CNISP hospitals will receive a weekly aggregate report with age group and provincial level data (weekly and cumulative totals) by Thursday of the reporting week. Please see sample report below using fake data.



COVID-19 Weekly Summary

Canadian Nosocomial Infection Surveillance Program

24 March, 2020

Public Health Agency of Canada / Agence de la santé publique du Canada

CNISP-PCSIN

This report summarizes data received by CNISP as of Tuesday April 14. For the week of April 15-22, data from 27 hospitals are included below. Since March 1, 40 hospitals have submitted data in one or more weeks.

National Summary Table

Hospitalized Lab-confirmed COVID-19 cases

"Cumulative cases" include all cases reported to CNISP since March 1, 2020. "Past week" include all cases reported to CNISP for the most recent reporting period (week of April 15-22).

	Adult (n)			Pediatric (n)			Total (n)		
Summary	Hospital Admissions (>=18 yrs)	ICU Admissions (>=18 yrs)	Deaths (>=18 yrs)	Hospital Admissions (<18 yrs)	ICU Admissions (<18 yrs)	Deaths (<18 yrs)	Hospital Admissions	ICU Admissions	Deaths
Past week	912	482	60	486	241	25	1368	723	75
Cumulative	2386	2644	268	1193	1322	134	3579	3966	402

Trends over Time

Please note that patient admissions below were estimated using 2019 data.

Legend: National, East, West/North, Central

Proportion of hospital admissions with COVID-19

Proportion of patient admissions

Week

Number of admissions with COVID-19 at sentinel sites

Reported COVID-19 Admissions

Week

Provincial Summary Table

Hospitalized Lab-confirmed COVID-19 cases

"Cumulative cases" include all cases reported to CNISP since March 1, 2020. "Past week" include all cases reported to CNISP for the most recent reporting period (week of April 15-22).

		Adult (n)			Pediatric (n)			Total (n)		
Place	Summary	Hospital Admissions (>=18 yrs)	ICU Admissions (>=18 yrs)	Deaths (>=18 yrs)	Hospital Admissions (<18 yrs)	ICU Admissions (<18 yrs)	Deaths (<18 yrs)	Hospital Admissions	ICU Admissions	Deaths
BC	Past week	116	130	14	88	66	7	174	196	21
	Cumulative	288	714	72	129	367	36	387	1071	108
AB	Past week	880	190	20	426	96	10	1276	286	30
	Cumulative	1918	1086	110	969	543	55	2877	1629	165

Zero report

For any quarter with no cases at your site, a zero report must be submitted under Web Data in CNPHI via the VRI denominator and zero report form so that quarters with zero counts can be differentiated from missing data. If no cases are submitted and you are missing zero reports for a surveillance year, your hospital data will not be included in rates.

APPENDIX A. WEEKLY COVID-19 REPORT FORM

CHEC Site # : Select CHEC Site. **Submission date:** yyyy-mm-dd

Surveillance week (i.e. Sunday to Saturday)

Sunday: yyyy-mm-dd to Saturday: yyyy-mm-dd

Please provide data for **newly**[a] identified lab confirmed COVID-19 patients for the surveillance period specified above.

	Pediatric (< 18 yrs)	Adult (18-59 yrs)	Older Adult (60+ yrs)	Weekly total
Number of new COVID-19 hospitalizations				

For the surveillance period specified above, please indicate the number of lab confirmed COVID-19 patients with the following outcomes:

	Pediatric (< 18 yrs)	Adult (18-59 yrs)	Older Adult (60+ yrs)	Weekly total
Number of new COVID-19 ICU admissions				
Number of new ventilated patients				
Number of patients where ECMO support was initiated				
Number of new COVID-19 deaths				

Note: a patient may be counted in multiple categories (for instance, if patient was both admitted to the ICU and ventilated within the specified 7 days they would be included in both categories). If there is a delay in obtaining any of this information for a week please include in a subsequent report (for instance, if a patient was admitted to the ICU on a Friday and your system does not capture in time for that weekly report, please include in the following report.) Cumulative totals will be calculated by CNISP PHAC.

If possible, for the COVID-19 hospitalizations above, please indicate the number of COVID-19 hospitalizations by acquisition

	Number HA-YAF[b]	Number HA-Other[c]	Number CA[d]	Unknown
Number of new COVID-19 hospitalizations				

[a]Data to reflect <u>new</u> cases every week.

[b]Healthcare-associated acquired in your acute care facility (HA-YAF)

Symptom onset ≥ 7 days after admission to the reporting hospital and using best clinical judgement (e.g. symptom onset < 7 days but known epi link to a positive case) OR if patient is readmitted with a positive test < 7 days after discharge from hospital and using best clinical judgement.

[c]Healthcare-associated any other healthcare exposure (HA-Other)

Any patient who is identified with COVID-19 not acquired at your facility that is thought to be associated with any other healthcare exposure (e.g. another acute-care facility, long-term care or rehabilitation facility etc.).

[d]Community-associated

No exposure to healthcare that would have resulted in this infection (using best clinical judgement) and does not meet the criteria for a healthcare-associated infection.

APPENDIX B. COVID-19 VRI PATIENT QUESTIONNAIRE

1.	**CHEC Site # :** Select CHEC Site.
2.	**Unique Patient ID :** Enter unique patient ID. (CHEC Site #) (Year) (Case Number)
3.	**Date of Birth :** yyyy-mm-dd **OR** **Age :** Enter age. **Specify :** Years, months or days
4.	**Sex :** ☐ Male ☐ Female ☐ Unknown
5.	**Date of Admission** yyyy-mm-dd
6.	**Date of re-admission**[2] yyyy-mm-dd
7.	**Where was this VRI acquired?** ☐ Healthcare-associated (acquired at your acute care facility) [3] ☐ Healthcare-associated (other healthcare exposure)[4] ☐ Community-associated [5] ☐ Unknown
8a.	**Is this patient a healthcare worker**[6]**?** ☐ Yes ☐ No ☐ Unknown ☐ N/A – Pediatric patient
8b.	**If this patient is a HCW, did they provide direct care to a COVID-19 positive patient(s) in hospital?** ☐ Yes

[2] *If the patient had more than one hospitalization for their VRI, please include all data for both hospitalizations on one form and indicate the admission and discharge dates for all hospitalizations.*

[3] *COVID-19: Symptom onset ≥ 7 days after admission to the reporting hospital and using best clinical judgement (e.g. symptom onset < 7 days but known epi link to a positive case) OR if patient is readmitted with a positive test < 7 days after discharge from hospital and using best clinical judgement.*

Other VRI: Symptom onset ≥ 72 hours (≥ 3 calendar days) after admission to the reporting hospital and using best clinical judgement OR if patient is readmitted with a positive test < 72 hours after discharge from hospital and using best clinical judgement.

[4] *Any patient who has a VRI not acquired at your facility that is thought to be associated with any other healthcare exposure (e.g. another acute-care facility, long-term care or rehabilitation facility etc.).*

[5] *No exposure to healthcare that would have resulted in this infection (using best clinical judgement) and does not meet the criteria for a healthcare-associated infection.*

[6] *A healthcare worker is defined as any individual who provides direct patient care.*

	☐ No ☐ Unknown ☐ N/A
9.	**Was this patient admitted from a long-term care facility?** ☐ Yes ☐ No ☐ Unknown ☐ N/A – Pediatric patient
10.	**Is there any evidence of travel outside of Canada in the 14 days prior to the patient's symptom onset?** ☐ Yes, if known please specify country : Enter country travelled to. ☐ No ☐ Unknown
11.	**Primary admitting diagnosis:** Please specify the reason the patient was admitted to hospital (e.g. respiratory distress, knee replacement, motor vehicle accident, chest pain etc.): Click here to specify.
12.	**Is there evidence the patient has underlying medical condition(s)? Please check all that apply.** ☐ No ☐ Yes *(please check all that apply)* ☐ Liver disease ☐ Cancer (active) ☐ Lung disease (e.g. asthma, COPD) ☐ Kidney disease (include all patients on dialysis) ☐ Pregnancy, if yes weeks of gestation Enter weeks of gestation. ☐ Organ transplant recipient ☐ Other immunosuppression[7], please specify Click here to specify. ☐ Chronic heart disease ☐ Severe neurological disease[8] ☐ Diabetes ☐ Other, please specify Click here to specify. ☐ Unknown

[7] Includes congenital or acquired immunodeficiency, chemotherapy, immunosuppressive drugs, chronic high-dose systemic steroids (≥ 2 mg/kg or ≥ 20 mg/day prednisone or equivalent for > 2 weeks).

[8] Includes:

a. moderate to profound intellectual disability or developmental delay
b. epilepsy or cerebral palsy if accompanied by (a)
c. neuromuscular disorders (e.g, muscular dystrophy), when associated with impaired respiratory function
d. other neurological disorders associated with impaired pulmonary function and/or difficulty handling lung secretions

13.	**Symptoms** (*please check all that apply and if possible, indicate each symptom's start date*): ☐ Asymptomatic ☐ Cough yyyy-mm-dd ☐ Fever yyyy-mm-dd ☐ Sore throat yyyy-mm-dd ☐ Runny nose yyyy-mm-dd ☐ Shortness of breath/difficulty breathing yyyy-mm-dd ☐ Nausea/vomiting yyyy-mm-dd ☐ Headache yyyy-mm-dd ☐ General weakness yyyy-mm-dd ☐ Pain (muscular, joint, chest, abdominal) yyyy-mm-dd ☐ Irritability/confusion yyyy-mm-dd ☐ Diarrhea yyyy-mm-dd ☐ Anosmia and ageusia yyyy-mm-dd ☐ Other, please specify Click here to specify. yyyy-mm-dd ☐ Data not available
14.	**Type of VRI, please check all that apply:** ☐ Upper respiratory tract infection only[9] ☐ Pneumonia with or without URTI[10] ☐ Other lower respiratory tract infection with or without URTI[11] ☐ Respiratory tract infection, unspecified site[12] ☐ Other, please specify : Click here to specify.
15.	**Specimen collection date :** yyyy-mm-dd ☐ Date not available
16.	**Specimen type:** ☐ Bronchial specimen (BAL) ☐ Endotracheal aspirate (ET) ☐ Nasopharyngeal swab/aspirate (NP) ☐ Sputum (SP) ☐ Throat swab or wash (TS) ☐ Data not available
17.	**Test:** ☐ DFA: direct fluorescent antibody ☐ EIA: enzyme immunoassay ☐ M-PCR: Multiplex PCR ☐ PCR: polymerase chain reaction ☐ Other, please specify: Click here to specify. ☐ Data not available

[9] *e.g. rhinitis, pharyngitis, laryngitis, cold, epiglottitis*

[10] *Must be supported by radiographic evidence*

[11] *e.g. bronchiolitis, tracheitis*

[12] *unable to rule out pneumonia clinically and chest radiographic not done or not interpretable*

18.	**Viruses isolated *(please check all that apply)*:** ☐ Adenovirus ☐ Influenza A ☐ Parainfluenza ☐ Influenza B ☐ Enterovirus ☐ Metapneumovirus ☐ Enterovirus/Rhinovirus ☐ Bocavirus ☐ Rhinovirus ☐ COVID-19 ☐ RSV ☐ Other coronavirus Click here to specify.
19.	**Was the patient treated with an antiviral for the VRI for which they tested positive?** ☐ No ☐ Yes *(please check all that apply and indicate each treatment's start date)* ☐ Oseltamivir (Tamiflu) yyyy-mm-dd ☐ Zanamivir (Relenza) yyyy-mm-dd ☐ Amantadine (Symmetrel) yyyy-mm-dd ☐ Peramavir yyyy-mm-dd ☐ Remedesivir yyyy-mm-dd ☐ Kaletra yyyy-mm-dd ☐ Ribavirin yyyy-mm-dd ☐ Chloroquine yyyy-mm-dd ☐ Other, please specify : Click here to specify. yyyy-mm-dd ☐ Unknown ☐ Antiviral treatment not available
20.	**Was the patient receiving any of the following specific treatments for the VRI for which they tested positive?** ☐ No ☐ Yes *(please check all that apply and indicate each treatment's start date)* ☐ Ibuprophen yyyy-mm-dd ☐ Angiotensin receptor blockers (e.g. losartan, valsartan, etc.) yyyy-mm-dd ☐ ACE inhibitors (e.g. captopril, enalapril, etc.) yyyy-mm-dd ☐ Hydroxychloroquine yyyy-mm-dd ☐ Azithromycin yyyy-mm-dd ☐ Hydroxychloroquine + Azithromycin yyyy-mm-dd ☐ Other, please specify : Click here to specify. yyyy-mm-dd ☐ Unknown
21.	**Did this patient have a secondary bacterial infection[13]?** ☐ Yes, please specify the pathogen : Click here to specify. (e.g. *Streptococcus pneumonia, S. aureus*, MRSA pneumonia or bacteremia, *Haemophilus influenza* etc.) ☐ No

[13] *Secondary bacterial infection is defined as a positive culture with a new pathogen*

	☐ Unknown
	30 DAY OUTCOME
22.	**Mechanical ventilation:** ☐ Yes ☐ No ☐ Already ventilated at time of test ☐ Unable to determine
23.	**ECMO:** ☐ Yes ☐ No ☐ Already on ECMO at time of test ☐ Unable to determine
24a.	**ICU admission:** ☐ Yes, related to VRI ☐ Yes, unrelated to VRI ☐ No ☐ Unable to determine
24b.	**Date of ICU admission** yyyy-mm-dd ☐ Not applicable
24c.	**Date of discharge from ICU** yyyy-mm-dd ☐ Not applicable ☐ Patient still admitted
25.	**Impact within 30 days of positive test *(please check all that apply):*** ☐ Patient isolated ☐ Contact/droplet only ☐ Contact/droplet + Airborne ☐ Patient isolated in negative pressure room ☐ Increase in ventilator setting ☐ New oxygen requirements ☐ Non-invasive ventilation ☐ Dialysis required (hemo or peritoneal dialysis) ☐ Other, please specify: Click here to specify. ☐ Unknown
26.	**What was the patient outcome 30 days after positive test?** ☐ Patient alive, still in hospital ☐ Patient survived and discharged Date of discharge yyyy-mm-dd Date of discharge from re-admission yyyy-mm-dd ☐ Patient survived and transferred Date of transfer: yyyy-mm-dd ☐ Patient died Date of death: yyyy-mm-dd ☐ Unknown
27.	**If the patient died within 30 days after positive test, please indicate the relationship of VRI to the death** ☐ VRI was the cause of death[14] ☐ VRI contributed to death[15] ☐ Death is unrelated to VRI[16] ☐ Causality between VRI and death cannot be determined[17]

[14] *VRI was the cause of death (i.e. the patient had no other condition that would have cause death during this hospitalization)*
[15] *VRI contributed to death (i.e. VRI exacerbated an existing condition that led to the patient's death)*
[16] *VRI was unrelated to death*
[17] *Unable to determine the causality between VRI and death.*

28.	**Additional comments** Click here

APPENDIX C. VRI DENOMINATOR DATA

Adult and pediatric patient days and admissions are currently collected on a quarterly basis in the CNPHI denominator module (for MRSA, VRE, CPO and *C. auris*). Pediatric and adult ICU denominator data will be collected on Web Data in CNPHI when available.

For weekly COVID-19 reporting, weekly admissions will be estimated using 2019 patient admissions.

CHEC Site # : Choose an item. **Surveillance period :** e.g. January 1 – March 31

Pediatric (< 18 yrs) denominator data

Total pediatric (< 18 yrs) patient days	Total pediatric (< 18 yrs) admissions
Total pediatric (< 18 yrs) ICU patient days	Total pediatric (< 18 yrs) ICU admissions

Adult (18+ yrs) denominator data

Total adult (18+ yrs) patient days	Total adult (18+ yrs) admissions
Total adult ICU (18+ yrs) patient days	Total adult ICU (18+ yrs) admissions

For the surveillance year specified above, were there zero (0) VRI cases reported for your site?

☐ Yes ☐ No

Please find below all forms in word fillable format. Please email to CNISP at phac.cnisp-pcsin.aspc@canada.ca

Appendix A: Weekly COVID-19 Report Form

COVID-19 Weekly form_27March.docx

Appendix B: Patient questionnaire

COVID-19_VRI Patient Questionnaire_20April

Appendix C: Denominator form

VRI Denominator data_24March2020.dc

Revision History

Date	Revisions Made
March 27, 2020	• Updated weekly aggregate report form (removed line list and added older age group) • Added symptoms to patient questionnaire (Q13)
April 9, 2020	• Added question regarding if HCW provided direct patient care to COVID-19 positive patient(s) (Q7b)

April 20, 2020	• Updated patient questionnaire
	  ○ Added date of readmission
	  ○ Primary admitting diagnosis changed to a text field
	  ○ Added date of onset for each symptom
	  ○ Added secondary bacterial infection
	  ○ Added dialysis required under impact within 30 days
	  ○ Added date of ICU admission and discharge from ICU
	  ○ Added date of discharge from readmission
	  ○ Added comments section

April 28, 2020	• Added asymptomatic as a response option under symptoms • Modified the COVID-19 case definition to reflect that best clinical judgement should be used for patients who are COVID-19 positive greater than 14 days prior to being admitted