INFECTION PREVENTION

ANNUAL REPORT 2023/2024

northern health
the northern way of caring

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Executive Summary

The Northern Health Infection Prevention (IP) program's annual report highlights achievements and challenges facing Infection Prevention and Medical Device Reprocessing practices throughout the region.

Facilities and the associated staff are more familiar with Infection Prevention Program/ Practitioners roles and responsibilities within the organization. There is an increased awareness that Infection Prevention support at the site level enables management to implement a preventative approach with communicable disease. With this support from Infection Prevention, leads and staff have become more confident in the implementation of infection prevention guidance.

This report summarizes the initiatives and accomplishments of the IP program during the 2023/24 fiscal year and outlines major goals and continued priorities for the upcoming fiscal year.

Infection Prevention Health Care Report Card and Indicators for 2023–2024

Infection Prevention Health Care Report Card and Indicators for 2023 2024					
Indicator	**Status**	**Target**	**2023–2024**	**Preferred Direction**	**Page #**
Clostridium difficile	◆	< 0.30	0.39	↓	11
Methicillin-Resistant *Staphylococcus aureus*	◆	< 0.70	0.86	↓	12
Hand Hygiene Compliance	●	≥ 85%	91%	↑	9
*Cases per 1,000 patient days					
**Please see the Hand Hygiene section for further discussion regarding the 2022/23 hand hygiene compliance rates					
● Meeting target ▲ Within 10% of target ◆ Outside of target range by more than 10%					

Infection Prevention Health Care Report Card and Indicators for 2023 2024				
Indicator	**Status**	**Target**	**2023–2024**	**Page #**
Clostridium difficile	●	Reduction in health care associated transmissions	0	14
Methicillin-Resistant *Staphylococcus aureus*	●	< 3 per 100 procedures	1 per 100 procedures	19
Hand Hygiene Compliance	◆	Reduction in # of outbreaks	31 COVID-19 Clusters	20
			8 Influenza A Outbreaks	
			2 GI Outbreaks	
□ Number of cases				
● Meeting target ▲ Within 10% of target ◆ Outside of target range by more than 10%				

INFECTION PREVENTION GOALS
2024–2025

EDUCATION
Implementation of education co-leads

MDRD
Dashboard

UTI
Education and surveillance for LTC

2023–2024 GOALS UPDATES:

Facility Quality Assessment

- Facility Quality Assessment completed for Acute and LTC

Quality Improvement

- Co-lead group created
- Projects completed under co-lead:
  - Update and review Infection Prevention Policies
  - Updated Outbreak Manuals
  - Updated Construction documents review
  - Updated UTI Surveillance program documents
  - Quality assessment Briefing Note

See page 20 for more information.

MDRD

- Staff training ongoing
- Product standardization started
- Reprocessing instrument tracking started

See page 23 for more information.

Introduction

Under the administrative direction of Fraser Bell, Vice President of Planning, Quality, and Information Management, the Northern Health Infection Prevention (IP) program is dedicated to the prevention and reduction of healthcare associated illness in Northern BC patients, residents, and employees through a variety of strategies summarized in this annual report.

The regional program provides on-site and consultative infection prevention and medical device reprocessing expertise to thirty-five acute care facilities, long term care facilities, home and community care, assisted living facilities, diagnostic and treatment (D&T) centers and health centers.

Infection Prevention liaises with other programs such as Communicable Disease (Public Health), and Workplace Health and Safety (WH&S) regarding communicable diseases and outbreak management.

The program functions in accordance with international, national, and provincial guidelines and best practices across the continuum of care, and influences practice through the following:

- Obtains, manages and disseminates critical data and information, including surveillance for infections; and disseminates information to appropriate stakeholders

- Develops and recommends best practices, policies, and procedures
- Involved in infection prevention issues relating to all construction and renovation projects within NH to ensure that infection prevention strategies are followed during construction and renovation projects according to the Canadian Standards Association (CSA) protocols
- Promotes and facilitates infection prevention education within the department, as well as healthcare personnel, patients and their families
- Provides consultation and outbreak management support to all acute care facilities, long term care facilities, assisted living facilities, diagnostic and treatment centres, health centres, and community programs within Northern Health
- Provides expertise, and outbreak management support to non-healthcare organizations located in the NH geographic region i.e. work camps

INFECTION PREVENTION

Team Members

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WORKING GROUPS AND INITIATIVES

- Guidelines and References Developed and Reviewed:
  - Construction documents reviewed and updated
  - Quick Guide to Outbreak Management (reviewed and updated)
  - Outbreak manuals for COVID-19 and Influenza-like Illness were combined to Viral Respiratory Illness (VRI)
  - Gastrointestinal Illness (GI) Outbreak manual updated
  - 17 Infection Prevention policies (reviewed)
  - Urinary tract Infection (UTI) documents reviewed and updated
- Participated in 25 Northern Health, provincial and national working groups
- Infection Prevention involvement on NH ongoing Construction Projects:

Dawson Creek and District Hospital Replacement

Dawson Creek, BC

Ksyen Regional Hospital

Terrace, BC

Stuart Lake Hospital Replacement

Fort St. James, BC

Education

An integral part of the Infection Prevention program is ongoing education and training in infection prevention practices, based on current evidence-based recommendations. Current information regarding Infection Prevention and Medical Device Reprocessing department (MDRD) services is available on the MyNH website.

Post pandemic, amongst significant organizational turnover, the Infection Prevention program continued to focus on “Back to Basics” education for NH staff. This involved education around hand hygiene, PPE training, outbreak management and protocols.

Staff workload was a significant challenge to delivery of education sessions. Elbow-to-elbow or “in the moment” education was the most successful learning delivery method as staff often expressed lack of time to attend classroom sessions.

With Accreditation now occurring on a yearly cycle, the Infection Prevention program assisted with preparation for the 2024 Acute Care site surveys by creating a series of one-page education sheets regarding infection prevention ROPs and standards. The one-page education sheets were distributed to acute care managers in all facilities.

INFECTION PREVENTION PROFESSIONALS EDUCATION

In keeping with the program’s mandate to provide current infection prevention expertise, the IP team participated in the following education in 2023/24:

- 4 IP team members completed the Canadian Standards Association (CSA) Infection Prevention During Construction, Renovation and Maintenance of Health Care Facilities Course
- 2 IP team members completed the Canadian Infection Prevention Courses
- 1 IP Team member completed Certification in Infection Control (CIC) Certification
- 16 team members completed the Respectful Relationships Culturally Safe Indigenous Health Care course

Surveillance

The IPAC program carries out surveillance on a number of quality and patient safety indicators. This section of the report presents information on a number of these indicators. Surveillance case definitions can be found in Appendix 1.

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Infection Prevention Health Care Report Card and Indicators for 2023 2024				
Indicator	**Status**	**Target**	**2023/24**	**Page #**
Carbapenemase-Producing Organisms	●	Reduction in nosocomial transmissions	0	14
Surgical Site Infections	●	< 3 per 100 procedures	1 per 100 procedures	15
Outbreak Management	◆	Reduction in # of outbreaks	31 COVID-19 Clusters	17
			8 Influenza A Outbreaks	
			2 GI Outbreaks	
□ Number of cases				
● Meeting target ▲ Within 10% of target ◆ Outside of target range by more than 10%				

HAND HYGIENE

Status	Target	Actual (2023/24)	Preferred Direction
●	≥ 85%	Acute Care Facilities (ACF): **91%**	↑
●	≥ 85%	Long Term Care Facilities (LTCF): **83%**	↑

Hand hygiene (HH) with either soap and water or alcohol based hand rub is recognized as a key component in the prevention of Healthcare-Associated Infections (HAIs). HH is required both before and after contact with patients/residents and their environment. The minimum provincial requirement is 200 observations per quarter for each facility with 25 or more beds.

For facilities with fewer than 25 beds, the audit data is aggregated into NH data.

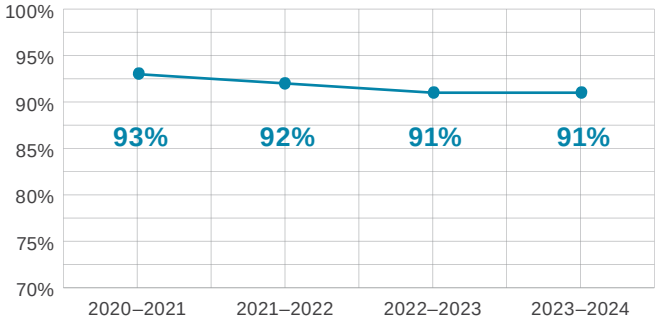
Ongoing challenges within NH are staff engagement and awareness. Posting of hand hygiene rates and other communication strategies were not a priority during the pandemic.

Provincial HH audit classification of staff/healthcare provider types is collated into four category codes:

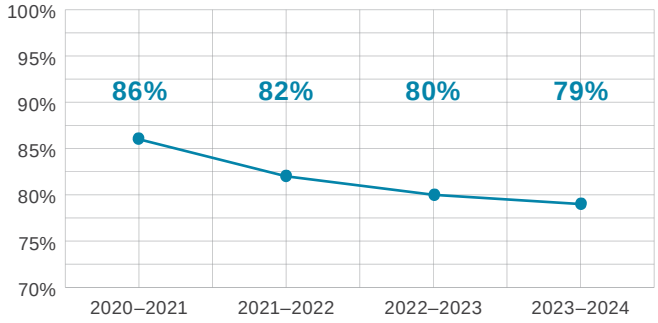
Nurse	NP/RN/RPN, LPN, Care Aide/Student Aide, Student (Nursing)
Physician	Physician, Medical Student/Resident
Clinical	Medical Technician, Respiratory Therapy, Lab personnel, Porter, Social Worker, Rehab Therapy, Dietitian, Pharmacist
Other	Housekeeper, Facilities Maintenance, Volunteer, Food Services, Other

Hand Hygiene Compliance in Acute Care Healthcare Provider Averages (% Compliance 2020–2024)

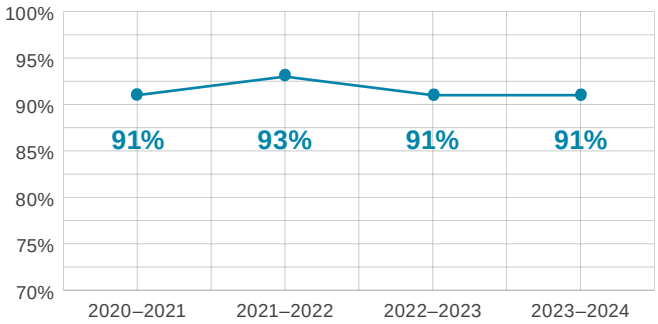
NURSING STAFF 2020–2024



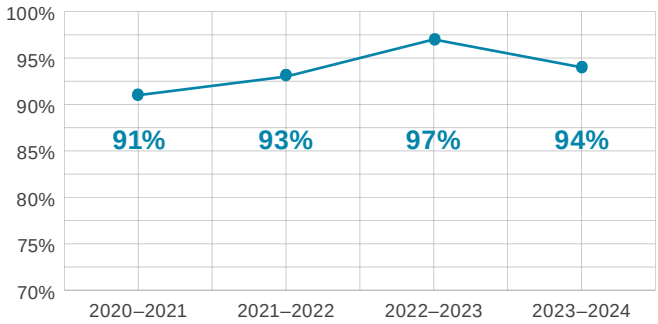
PHYSICIAN STAFF 2020–2024



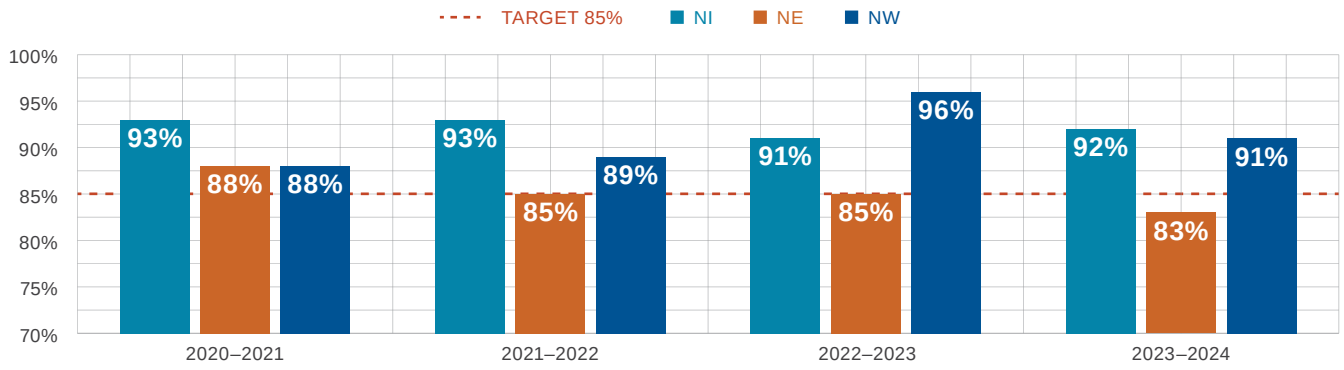
CLINICAL SUPPORT 2020–2024



OTHER 2020–2024



HAND HYGIENE COMPLIANCE IN NORTHERN HEALTH HSDA AVERAGES 2020–2024



Goals for 2023–2024:

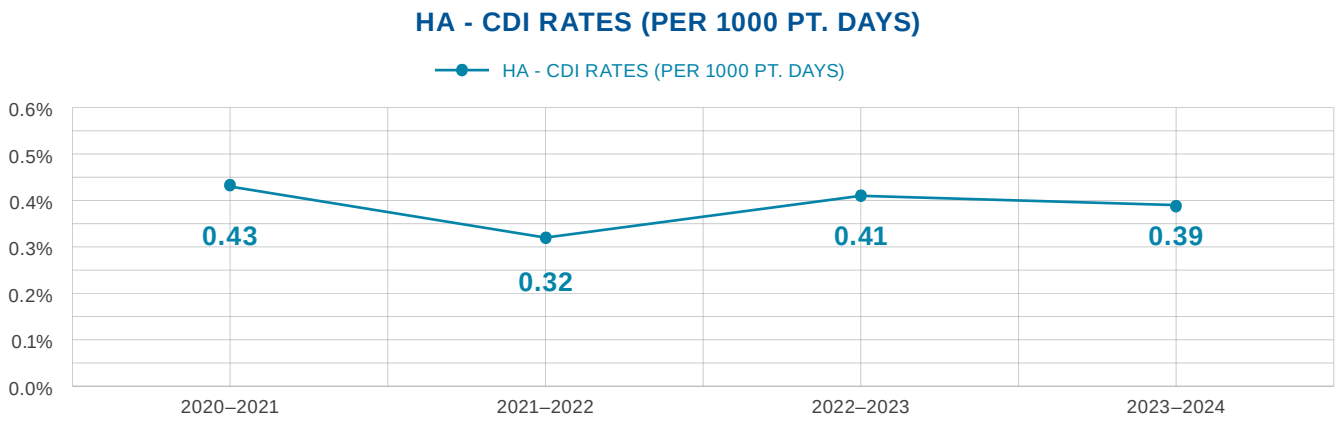
- All Northern Health Acute Care Facilities will complete and submit hand hygiene audits as per provincial requirements
- All Northern Health Long Term Care Facilities will complete and submit hand hygiene audits as per provincial requirements
- Westech Hand Hygiene web-based app for patients and visitors
- Community and Primary Care Hand Hygiene review product usage and complete self audits and observational audits

Healthcare-Associated Infection Indicators

CLOSTRIDIUM DIFFICILE INFECTION (CDI)

Status	Target	Actual (2023–2024)	Preferred Direction
◆	< 0.30 per 1,000 pt. days	0.39 per 1,000 pt. days	↓

Clostridium difficile is a spore forming bacterium that can cause infections of the gastrointestinal system. Clostridium difficile infection (CDI) is one of the most common infections acquired in health care settings as the physical environment plays a significant role in transmission of CDI, more so than any other Healthcare-associated Infection (HAI).



The annual rate of Healthcare-associated Clostridium difficile infection (HA-CDI) is the number of new cases of CDI in NH facilities, divided by the total number of in-patient days, multiplied by 1,000.

Actions taken in 2023–2024 include:

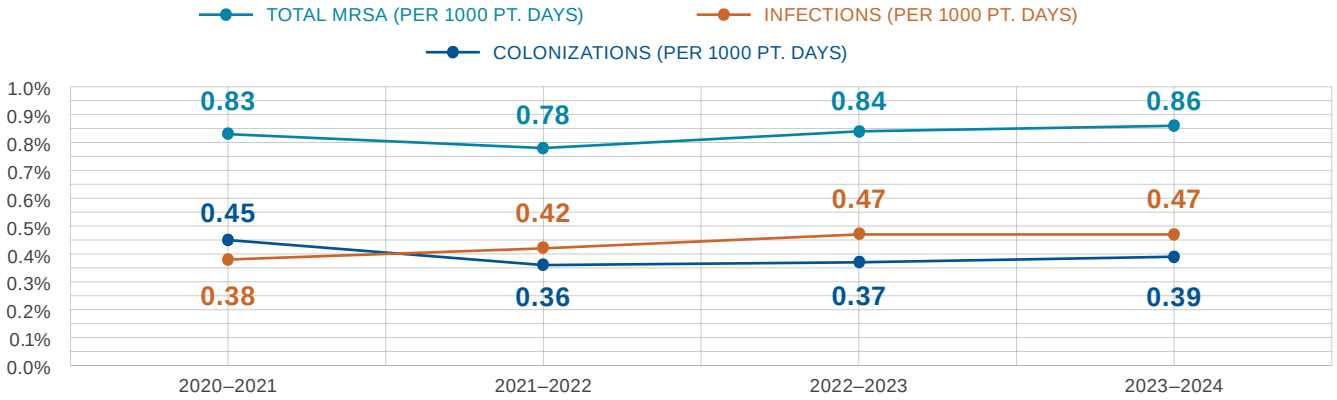
- Education provided on cleaning with sporicidal for all suspected and confirmed cases
- Facilitated increased communication between front line nursing staff and environmental services
- Increased education sessions for Health Care Workers (HCWs) regarding importance of proper protocol, signage and precautions
- Discussed with patients, families and visitors Clostridium difficile transmission

METHICILLIN-RESISTANT STAPHYLOCOCCUS AUREUS (MRSA)

Status	Target	Actual (2023–2024)	Preferred Direction
◆	< 0.70 per 1,000 pt. days	0.86 per 1,000 pt. days	↓

Methicillin-resistant Staphylococcus aureus (MRSA) is a strain of Staphylococcus aureus resistant to a number of antibiotics such as methicillin, penicillin, and amoxicillin. MRSA is primarily spread by skin to skin contact or contact with items and surfaces contaminated by the bacteria. The principle mode of transmission in healthcare facilities is considered to be from one (colonized or infected) patient to another via the contaminated hands of healthcare providers. Patients at greatest risk of acquiring MRSA are the elderly, those who have chronic diseases and/or undergoing invasive procedures.

MRSA INFECTION AND COLONIZATION RATES



The incidence rate of MRSA is the number of newly identified cases of MRSA (colonized and infected) acquired by patients as a result of their stay in a Northern Health acute care facility, divided by the total number of in-patient days, and multiplied by 1,000.

Northern Health MRSA rates have increased to 0.86. Limitations include:

- Difficulty with accommodating patients with an ARO(s) or risk factors for an ARO(s) in appropriate single rooms due to overcapacity and COVID-19 surge as well as due to many shared wards with older hospitals design structure
- Staff disengagement with routine admission swabbing in part to expectations around pandemic

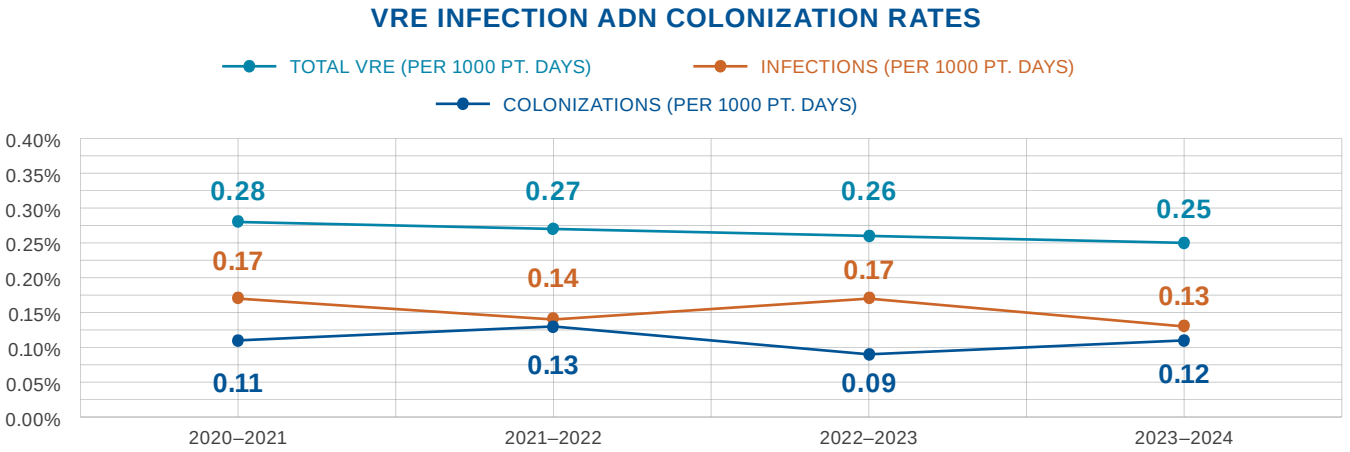
Ongoing Actions:

- All NH patients who test positive for an ARO have their health record flagged with that ARO alert
- Continued 30-day prevalence screening of all previously tested negative in-patients
- Infection prevention education for HCWs regarding importance of HH, environmental cleaning and appropriate cleaning of shared equipment
- Infection prevention education for patients, families and visitors
- Discussion with senior management around Healthcare-associated Infections (HAIs) of MRSA and VRE at operational team meetings

VANCOMYCIN RESISTANT ENTEROCOCCI (VRE)

Status	Target	Actual (2023–2024)	Preferred Direction
●	< 0.30 per 1,000 pt. days	0.25 per 1,000 pt. days	↓

The incidence rate of Vancomycin-Resistant Enterococci (VRE) is the number of newly identified cases of VRE (colonized and infected) acquired by patients as a result of their stay in a Northern Health acute care facility, divided by the total number of in-patient days, and multiplied by 1,000.



Ongoing Actions:

- All NH patients who test positive for VRE have their health record flagged with an ARO alert
- Continued 30-day prevalence screening of all previously tested negative patients admitted to Intensive Care Units
- Infection prevention education for HCWs regarding importance of Hand Hygiene (HH), environmental cleaning and appropriate cleaning of shared equipment
- Infection prevention education for patients, families and visitors

MANAGEMENT OF CARBAPENEMASE PRODUCING ORGANISMS (CPO)

Carbapenemase Producing Organisms are gram negative bacteria that harbor Carbapenemase producing genes. These genes allow the organism to be resistant to the carbapenem family of antibiotics. Similar to VRE and MRSA, the most common mechanism of transmission is contact, both direct and indirect.

In 2023–2024, no new cases of CPO identified in NH.

Actions taken in 2023–2024 include:

- Education for HCW about importance of admission screening and screening of transfer patients
- Communication of ongoing CPO investigations within the province to ward staff and management

SURGICAL SITE INFECTIONS (SSI)

Surgical Site Infections (SSIs) are the most common Healthcare-associated Infections (HAIs) as found in a prevalence study done by the CDC. SSI's remain a substantial cause of morbidity, prolonged hospitalization, and death.

SSI surveillance is conducted by IP through post discharge surveillance. Surgical procedures surveyed for infection include: Caesarean section, total abdominal hysterectomy, total primary hip replacement, total primary knee replacement, and bowel resection (not including the rectum). Surveillance of antibiotic prophylaxis given within one hour of surgical cut time is also monitored.

Prophylactic antibiotic rates vary. Challenges include incomplete or nonexistent documentation when antibiotics were given.

Actions taken in 2023–2024 include:

- Patients are monitored for up to 90 days for total hip replacement (THR) and total knee replacement (TKR)
- Facilitate communication with surgeons regarding infections
- Clusters are investigated and discussion for quality improvements occur
- Education provided for staff regarding the rationale behind appropriate antibiotic use pre-operatively and the importance of documentation
- Education for patients and families pre and post-surgery

Caesarean Section:

Status	Target	Actual (2023–2024)	Preferred Direction
●	≤ 3 per 100 procedures	2 per 100 procedures	↓

C-sections are performed at a total of **9** Northern Health facilities.

Outcome: 769 C-sections performed in 2023–2024.

- Antibiotics given within one hour of cut time — 87%. Rate of administration increased from the previous year at 82%. Challenges with finding documentation in the patient chart remains an ongoing issue, in particular emergency C-sections
- 15 SSIs were identified
- The SSI rate was 2 per 100 procedures

Total Abdominal Hysterectomy (TAH):

Status	Target	Actual (2023–2024)	Preferred Direction
●	≤ 4 per 100 procedures	0 per 100 procedures	↔

Total Abdominal Hysterectomies are performed at **6** Northern Health facilities.

Outcome: 47 TAH performed in 2023–2024.

- Antibiotics given within one hour of cut time — 96%. Rate of administration has significant increased from the previous year at 85%
- 0 SSI was identified
- The SSI rate was 0 per 100 procedures

Total Primary Hip Replacement (THR):

Status	Target	Actual (2023–2024)	Preferred Direction
●	≤ 2 per 100 procedures	1 per 100 procedures	↓

Total Hip Replacements are performed at **5** Northern Health facilities.

Outcome: 417 THR performed in 2023–2024.

- Antibiotics given within one hour of cut time — 97%. Rate of administration remains unchanged from the previous year at 97%
- 5 SSIs were identified
- The SSI rate was 1 per 100 procedures

Total Primary Knee Replacement (TKR):

Status	Target	Actual (2023–2024)	Preferred Direction
●	< 2 per 100 procedures	0.1 per 100 procedures	↓

Total Knee Replacements are performed at **4** Northern Health facilities.

Outcome: 698 TKR performed in 2023–2024.

- Antibiotics given within one hour of cut time — 98%. Rate of administration remains unchanged from the previous year at 98%
- 1 SSIs were identified
- The SSI rate was 0.1 per 100 procedures

Bowel Resection (not including rectum):

Status	Target	Actual (2023–2024)	Preferred Direction
●	< 10 per 100 procedures	1 per 100 procedures	↓

Bowel Resections are performed at **6** Northern Health facilities.

Outcome: 70 Bowel Resections performed in 2023–2024.

- Antibiotics given within one hour of cut time — 90%. Rate of administration decreased from the previous year at 100%
- 1 SSIs were identified
- The SSI rate was 1 per 100 procedures

SURGICAL SITE INFECTIONS (SSI)

Rate Comparison With Previous Years:

Procedure	2019–2020	2020–2021	2021–2022	2022–2023	2023 2024
Abdominal Hysterectomy	7 per 100 procedures	4 per 100 procedures	4 per 100 procedures	3 per 100 procedures	0 per 100 procedures
Caesarean Section	3 per 100 procedures	3 per 100 procedures	2 per 100 procedures	3 per 100 procedures	2 per 100 procedures
Bowel Resection	10 per 100 procedures	2 per 100 procedures	10 per 100 procedures	7 per 100 procedures	1 per 100 procedures
Total Primary Hip Replacement	4 per 100 procedures	2 per 100 procedures	5 per 100 procedures	2 per 100 procedures	1 per 100 procedures
Total Primary Knee Replacement	2 per 100 procedures	2 per 100 procedures	2 per 100 procedures	1 per 100 procedures	0.1 per 100 procedures

Cluster/Outbreak Management

Outbreak manuals for COVID-19 and Influenza-like Illness were combined to Viral Respiratory Illness (VRI). Infection Prevention collected and provided data for the province regarding COVID-19 statistics (individual cases as well as NH facility outbreaks), influenza and GI illness.

Declaring a cluster has become a more collaborative process with ease of restrictions as there are more possible modes of transmission and COVID-19 is widespread in communities across NH.

Of note, there were a total 31 COVID-19 related clusters.

There were 8 Influenza A and 2 GI outbreaks in NH facilities this fiscal year.

LESSONS LEARNED

- **Timely Application of Precautions:** Lessons learned were well documented and IP team was able to apply them to other clusters/outbreaks in the NH region
- **Communication is Key:** Early establishment of daily meetings and huddles were vital due to the scope and level of coordination required. Meeting early on with the MHO to discuss the differences between clusters and outbreaks helped to address worries and staff were receptive to the new format. The communications office provided support for communicating with families
- **LTC and ALC Mandatory Education:** Mandatory staff education to now include guidelines for N95 Fit Testing, and outbreak protocols and preparedness
- **Multidisciplinary Approach:** Multidisciplinary collaboration facilitates effective teamwork in early detection and efficient management of outbreaks. IP moved back into a consultative role as facilities felt more confident with managing clusters
- **Vaccination Improved Resident/Patient Outcomes:** Severity of illness decreased with successive booster vaccinations, fewer admissions to hospital were seen with long-term care clusters and outbreaks
- **Nature of Unit Dictates Extent of Precautions:** Isolating whole units became the exception instead of the norm with widespread vaccination, decreased severity of illness and focus on patient/resident mental health and wellbeing. Entire units were treated as potentially infectious when individual case isolation was not possible (i.e. non-compliant or wandering residents/patients, 4 bed wards)
- **Recognizing limitations:** Outbreak management teams pivoted from strict cohorting to reinforcing appropriate donning/doffing of personal protective equipment

Quality Improvement

- Follow up of NH Facilities Quality Assessments were completed
- Laparoscopic Assisted Vaginal Hysterectomy (LAVH) surveillance was requested by Surgical Services leads. Anecdotally, an increase was noted. These procedures were monitored Quarter 2 to 4 (June 23, 2023 to March 31, 2024). Infection rate of 1.1% is within accepted mean

LAPAROSCOPIC ASSISTED VAGINAL HYSTERECTOMY:

Total # of LAVH Surgery	Total # of Infections	Infection Rate	Prophylactic Antibiotic Rate
188	2	1.1%	95%

QUALITY IMPROVEMENT CO-LEAD GROUPS

Accreditation

Infection Prevention has worked collaboratively with Regional Pharmacy, Quality and innovation Team and Medical Device Coordinator to review existing resources which support clinical teams to achieve accreditation standards. The outcome from this review was the development of three different tools for staff: (1) the iGraphix Accreditation support tool which is an interactive online tool accessible for all staff through my NH, (2) multiple “one pagers” focused on short elbow to elbow education for clinical teams and (3) a comprehensive checklist embedded with up to date resources and key points applicable to practice.

Education

An Education Co lead group was implemented in 2024. The goal of this group is to enhance infection prevention education for all Northern Health staff; increasing sustainability, accessibility and equity of educational opportunities. This goal will be accomplished through creation of an educational framework and standardization of education tools. Once developed, education tools will be reviewed yearly by the Infection Prevention team and stakeholders will be consulted when appropriate. This initiative complements the Northern Health Infection Prevention motto “fighting infections by providing knowledge.”

Construction

The group met initially to discuss what are the new updates in CSA guidance 2022 and what documents needed to be updated and reviewed. Action items were created and were then distributed to the members.

Documents we updated /created are as follows:

- Remedial measures –water issues, floods
- Performance leak testing of CAHU/HEPA vacuum
- Updated plumbing guidelines 2022
- Reviewed No-Go list document
- Ceiling access word document
- Updated the ICRA document
- Risk reduction measures reviewed and updated (I, II, III, IV)
- New build document – still working on this document
- Construction FAQ document created
- MDT checklist-pre/during and post construction
- New build document

What's Next 2024-25

1. Integrate existing and updated IP and FM CSA policies and procedures into one NH webpage for ready access by contractors, FM, Capital Planning, and IP. To facilitate this integrated webpage, a subgoal is to increase communication and cooperation between IP, FM, Capital Planning, and contractors.
2. One pager for asbestos in construction.

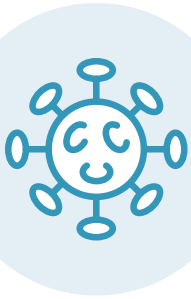
UTI

The Urinary Tract Infection (UTI) co-lead group has been working on the Long-Term Care (LTC) roll out of a UTI surveillance program. This program is designed to help implement recommended practices, such as thorough assessments to guide need for testing, strategies that can be used to rule out infection like treating dehydration or other possibilities that may cause similar symptoms, education on proper sample collection and storage, and decrease antibiotic prescribing when not medically necessary or definition of a UTI is not met. There have been updates to reporting tools and posters for the program. A new guide has been completed for LTC staff. The program has been rolled out in two test facilities (Jubilee and Bulkley Lodge) and information gathered to improve the program. The goal is to have the UTI program rolled out in all LTC facilities in Northern Health by 2025.

Hand Hygiene

Hand Hygiene is the number one preventive tool we can use in health care facilities and our infection prevention team are responsible for new hire orientations and annual recertification sessions for all staff. The Hand Hygiene co-lead group has been working on collecting all Infection Prevention resources and implementing a hand hygiene toolkit. This toolkit contains everything for the education and implementation of a good hand hygiene program in all NH facilities. Included are polices, pamphlets and posters document, educational power points and handouts, the hand hygiene compliance training tools, fun ideas for hand hygiene days and stations, and lastly hand hygiene games for sessions. The group is in the process of updating our posters and incorporating the hand hygiene app into practice. There is a future goal of changing the stigma of hand hygiene observations and finding more inclusive ways to complete hand hygiene compliance- using students, volunteers, and family/visitors.

Outbreak



This past year, we have updated our outbreak resources to match the language given by the Ministry of Health on Viral Respiratory Illness. This year, we will continue to review and update or resources as information is received from the Ministry. We are modifying our education to include one-page documents on outbreak preparedness to distribute to sites.

Policy

This past year, we updated our Infection Prevention Clinical Practice Standards CPS to include new information and updated language as per the BCCDC language guidelines. The co-leads completed the Intermediate Policy and Clinical Practice Standards Development course. This year, we will continue to update our CPS(s) to meet best practice and have the most current information by consulting stakeholders and reviewing information given by the Ministry of Health.

Medical Device Reprocessing Department

Updates on the initiatives for 2023.

MDR ONLINE EDUCATION

- Work is near completion on the MDR webpage linking over 100 continuing education courses for staff to maintain competencies. A table of contents, course description and a link are available for easy access. Staff can collect continuing education hours from each course
- NHA recognizes the Sterile Processing University online MDR theory course as acceptable for entry into MDRD. To date 7 individuals have received a certificate of education and 5 are working fulltime in the MDR

MDRD PRODUCT STANDARDIZATION

- MDR and PHSA warehouse continue to work together to ensure that cleaning products and consumables maintain a level of standardization within NHA
- Inventory is compared from one site to the next and an outlier site is encouraged to switch products to the standard. This is an ongoing process

MDRD INITIATIVE 2023 UPDATE: INSTRUMENT TRACKING

- Instrument tracking remains a top priority in 2024. New hosptials in Terrace and Dawson Creek will benefit from the technology provided by an instrument tracking system which will compliment the newly initiated surginet systems in the operating rooms
- Stakeholders include IT, captial planning, finance and medical device reprocessing

The Medical device reprocessing department has prioritized three key initiatives for 2024–2025 based on audit results, staff feedback, and MDR provincial working group participation.

EDUCATION

- Five minute educational memos developed and sent weekly starting January 2024. Focusing on CSA Z314-23 Standards and NHA policy and procedure updates. This is to encourage morning huddles with the team, and provide much needed education for remote sites

INVENTORY LIST

- MDR specific inventory list with description, picture, order and reference number, and MIFU's
- Part of standardizing inventory to maintain PHSA contract pricing in NHA

COMPETENCY FRAMEWORK REDESIGN

- Develop a shortened competency framework that can be part of a Learning Hub series for MDR, Endoscopy, Medical Imaging. Maximum time to complete 30 minutes each section
- Maintaining competencies by completing continuing education hours. MDR webpage revision to include vendor offered continuing education modules

Northern Health Facilities

ACUTE CARE

Bulkley Valley District Hospital – Smithers

Chetwynd Hospital and Health Centre

Dawson Creek and District Hospital

Fort Nelson Hospital

Fort St. John Hospital

GR Baker Memorial Hospital – Quesnel

Haida Gwaii Hospital and Health Center – Xaayda Gwaay Ngaayskll Naay – Daajing Giids

Kitimat General Hospital

Lakes District Hospital – Burns Lake

Mackenzie and District Hospital

McBride Hospital

Ksyen Regional Hospital – Terrace

Northern Haida Gwaii Hospital and Health Center - Masset

Prince Rupert Regional Hospital

St. John Hospital – Vanderhoof

Stuart Lake Hospital – Fort St. James

University Hospital of Northern BC – Prince George

Wrinch Memorial Hospital – Hazelton

ASSISTED LIVING FACILITIES

Alward Place Seniors Assisted Living – Prince George

Gateway Lodge Assisted Living Residence – Prince George

Heritage Manor II – Fort St. John

Laurier Manor – Prince George

McConnell Estates – Terrace

Nick Grosse Assisted Living Residences – Masset

Summit Assisted Living Residences – Prince Rupert

DIAGNOSTIC AND TREATMENT CENTRES, HEALTH CENTRES

Atlin Hospital
Fraser Lake D&T Centre
Granisle Community Health Centre
Houston Health Centre
Hudson Hope Health Centre
Stewart Health Centre
Stikine D&T Centre – Dease Lake
Tumbler Ridge D&T Centre
Valemount D&T Centre

HOME COMMUNITY/PRIMARY CARE LONG TERM CARE

Acropolis Manor – Prince Rupert
Bulkley Lodge – Smithers
Dunrovin Park Lodge – Quesnel
Gateway Lodge – Prince George
Jubilee Lodge – Prince George
Kitimat Mountain View Lodge
Parkside Care – Prince George
Peace Villa – Fort St. John
Rainbow Lodge – Prince George
Rotary Manor – Dawson Creek
Simon Fraser Lodge – Prince George
Stuart Nechako Manor – Vanderhoof
Terraceview Lodge – Terrace
The Pines – Burns Lake

Appendices

APPENDIX I: VRI CLUSTER/OUTBREAK – ACUTE CARE

Outbreaks (4)								
Facility/Ward	**Causative Organism**	**Total # of Clients in Facility/ Unit**	**Total Positive Clients**	**Total Positive Staff**	**Total Client Deaths**	**Start Date (mm-dd-yyyy)**	**End Date (mm-dd-yyyy)**	**Length of Outbreak (days)**
NEHSDA								
FSJ Hospital	Influenza-A	16	4	0	0	12/5/2023	12/15/2023	11
NIHSDA								
UHNBC - Rehab Unit	Influenza-A	30	4	2	1	03/04/2024	03/11/2024	8
UHNBC - FMU	Influenza-A	26	8	0	0	03/09/2024	03/22/2024	14
NWHSDA								
PRRH-PCU	Influenza-A	32	11	0	3	01/04/2024	01/15/2024	12

Clusters (9)								
Facility/Ward	**Causative Organism**	**Total # of Clients in Facility/ Unit**	**Total Positive Clients**	**Total Positive Staff**	**Total Client Deaths**	**Start Date (mm-dd-yyyy)**	**End Date (mm-dd-yyyy)**	**Length of Outbreak (days)**
NEHSDA								
NONE								
NIHSDA								
UHNBC - Rehab Unit 1.0	COVID-19	25	18	10	1	04/03/2023	04/17/2023	15
UHNBC – SSMU	COVID-19	25	13	0	1	09/25/2023	10/08/2023	14
UHNBC – PCMU 1.0	COVID-19	35	23	1	0	09/25/2023	10/08/2023	14
UHNBC - FMU	COVID-19	27	13	1	1	09/25/2023	10/23/2023	29
UHNBC - IMU	COVID-19	30	7	0	1	12/29/2023	01/10/2024	13
UHNBC - PCMU 2.0	COVID-19	35	6	0	0	01/11/2024	01/27/2024	17
UHNBC - Rehab Unit 2.0	COVID-19	26	11	2	1	01/27/2024	02/09/2024	14
NWHSDA								
Wrinch Memorial Hospital	COVID-19	15	3	1	0	2/28/24024	3/21/2024	23
Ksyen Regional Hospital	COVID-19	32	11	1	0	03/14/2024	03/30/2024	17

Exposure Event (5)								
Facility/Ward	**Causative Organism**	**Total # of Clients in Facility/ Unit**	**Total Positive Clients**	**Total Positive Staff**	**Total Client Deaths**	**Start Date (mm-dd-yyyy)**	**End Date (mm-dd-yyyy)**	**Length of Outbreak (days)**
UHNBC-Psychiatry	Influenza-A	23	2	9	0	12/19/2023	12/28/2023	10
Ksyen Regional Hospital	Influenza-A	32	4	0	0	01/04/2024	01/15/2024	12
Kitimat General Hospital	Influenza-A	32	4	0	0	03/26/2024	04/07/2024	13
GR Baker Hospital	COVID-19	30	4	0	0	11/22/2023	11/10/2023	20
Dawson Creek District Hospital	COVID-19	44	4	0	0	01/11/2024	01/24/2024	14

APPENDIX II: VRI OUTBREAKS AND CLUSTERS – LONG TERM CARE /COMPLEX CARE/ASSISTED LIVING

Ourbreaks (4)								
Facility/Ward	**Causative Organism**	**Total # of Clients in Facility/ Unit**	**Total Positive Clients**	**Total Positive Staff**	**Total Client Deaths**	**Start Date (mm-dd-yyyy)**	**End Date (mm-dd-yyyy)**	**Length of Outbreak (days)**
NEHSDA								
Peace Villa, LTC	Influenza-A	64	9	0	0	12/4/2023	12/14/2023	11
Rotary Manor, LTC	Influenza-A	24	13	0	0	01/09/2024	01/23/2024	15
NIHSDA								
Simon Fraser Lodge, LTC	Influenza-A	33	9	0	0	01/30/2024	02/08/2024	10
NWHSDA								
Mountainview Lodge, LTC	Influenza-A	34	5	0	0	02/27/2024	03/06/2024	9

Clusters (23)								
Facility/Ward	**Causative Organism**	**Total # of Clients in Facility/ Unit**	**Total Positive Clients**	**Total Positive Staff**	**Total Client Deaths**	**Start Date (mm-dd-yyyy)**	**End Date (mm-dd-yyyy)**	**Length of Outbreak (days)**
NEHSDA								
Peace Villa, LTC 1.0	COVID-19	40	13	1	0	04/17/2023	05/01/2023	15
Peace Villa, LTC 2.0	COVID-19	24	12	3	1	04/24/2023	05/06/2023	13
Rotary Manor, LTC 2.0	COVID-19	117	32	2	0	04/24/2023	05/15/2023	22
Peace Villa, LTC 3.0	COVID-19	28	18	0	0	05/02/2023	05/19/2023	18
Peace Villa, LTC 4.0	COVID-19	28	12	0	0	07/11/2023	07/21/2023	11
Rotary Manor, LTC 1.0	COVID-19	113	23	0	0	09/16/2023	09/29/2023	14
NIHSDA								
Laurier Manor, AL	COVID-19	32	11	0	0	04/03/2023	04/15/2023	13
Gateway Lodge, AL	COVID-19	55	9	3	0	04/06/2023	04/13/2023	8
Gateway Lodge, LTC 1.0	COVID-19	26	4	1	1	04/11/2023	04/24/2023	14
Jubilee Lodge, LTC	COVID-19	62	12	0	0	04/19/2023	04/28/2023	10
Simon Fraser Lodge, LTC	COVID-19	130	61	29	1	05/09/2023	06/1/2023	24
Gateway Lodge, LTC 2.0	COVID-19	40	16	6	1	10/26/2023	11/3/2023	9
Maeford Place, AL	COVID-19	36	14	5	0	11/14/2023	12/29/2023	16

Clusters (23) *continued*								
Facility/Ward	**Causative Organism**	**Total # of Clients in Facility/ Unit**	**Total Positive Clients**	**Total Positive Staff**	**Total Client Deaths**	**Start Date (mm-dd-yyyy)**	**End Date (mm-dd-yyyy)**	**Length of Outbreak (days)**
Rainbow Lodge, LTC 1.0	COVID-19	18	11	5	0	12/01/2023	12/27/2023	27
Parkside Lodge, LTC 1.0	COVID-19	58	7	5	0	12/12/2023	12/27/2023	16
Dunrovin Park Lodge, LTC	Human Meta / Rhino	24	10	0	0	03/11/2024	03/29/2024	19
Rainbow Lodge, LTC 2.0	COVID-19	19	14	6	0	03/11/2024	03/23/2024	13
Parkside Lodge, LTC 2.0	COVID-19	59	24	8	0	03/27/2024	04/22/2024	27
NWHSDA								
Bulkley Lodge, LTC	COVID-19	70	9	3	1	04/16/2023	05/09/2023	24
McConnell Estate, AL	COVID-19	22	15	0	0	05/04/2023	05/14/2023	11
Acropolis Manor, LTC	COVID-19	53	26	0	0	09/24/2023	10/21/2023	28
Terraceview Lodge, LTC	COVID-19	99	11	0	0	03/04/2023	03/28/2024	25
Wrinch Memorial Hospital, LTC	COVID-19	11	8	0	0	03/13/2024	03/21/2024	9

Exposure (4)								
Facility/Ward	**Causative Organism**	**Total # of Clients in Facility/ Unit**	**Total Positive Clients**	**Total Positive Staff**	**Total Client Deaths**	**Start Date (mm-dd-yyyy)**	**End Date (mm-dd-yyyy)**	**Length of Outbreak (days)**
NEHSDA								
Rotary Manor, LTC	COVID-19	117	2	0	0	10/25/2023	11/04/2023	11
Peace Villa, LTC 1.0	COVID-19	24	2	0	0	01/29/2024	01/30/2024	2
NIHSDA								
Dunrovin Park Lodge, LTC	COVID-19	6	3	0	0	11/12/2023	11/21/24	10
NWHSDA								
Cottonwood Manor, AL	COVID-19		3	0	0	05/18/2023	05/23/23	6

APPENDIX III: GI OUTBREAKS – ACUTE CARE AND LTC

Outbreaks (2)								
Facility/Ward	Causative Organism	Total # of Clients in Facility/ Unit	Total Positive Clients	Total Positive Staff	Total Client Deaths	Start Date (mm-dd-yyyy)	End Date (mm-dd-yyyy)	Length of Outbreak (days)
NEHSDA								
NONE								
NIHSDA								
Dunrovin Park Lodge, LTC	Noro - Type 2	120	16	10	0	07/24/2023	08/11/2023	19
Maeford Place, AL	Unknown	36	12	12	0	01/05/2024	01/17/2024	13
NWHSDA								
NONE								

APPENDIX V: SURVEILLANCE CASES DEFINITIONS

Clostridium difficile infection (CDI):

A diagnosis of CDI applies to a person with:

- Presence of diarrhea (e.g. three liquid or loose stools within a 24 hour period) or toxic megacolon without other known etiology, and laboratory confirmation of the presence of C. difficile toxin A and or B (positive toxin or culture with evidence of toxin production or detection of toxin genes)
- Diagnosis of typical pseudo-membranes or sigmoidoscopy or colonoscopy or
- Histological/pathological diagnosis of CDI with or without diarrhea

A CDI case is considered healthcare-associated when:

- Patient develops symptoms in hospital equal to or greater than 72 hours after admission; or
- Symptoms occur in a patient that has been hospitalized or discharged within the previous 4 weeks, and the patient is not in a long term care facility

Antibiotic Resistant Organism (ARO) Case Definition:

An ARO case is defined as meeting ALL of the following criteria:

- Laboratory identification of an ARO;
- Patient must be admitted to an acute care facility
- ARO must be newly identified from the specimen collected at the time of hospital admission or during hospitalization
- Patient must have no known history of either infection or colonization with an ARO in any BC acute care facilities

Surgical Site Infection (SSI):

Surgical procedures surveyed for infection include: caesarean sections, total abdominal hysterectomies, total primary hip and knee replacements, and bowel resections that do not involve the rectum.

CDC SSI Definitions:

- **Superficial Incision SSI** – Occurs within 30 days and involves only skin and subcutaneous tissue and the superficial incision is opened by the surgeon unless the incision is culture negative. Does not include stitch abscess or infection at a localized stab wound/drain site. Diagnosis by surgeon or attending physician
- **Deep Incisional SSI** – infection appears to be related to the operative procedure and involves deep soft tissues (fascial and muscle layers) of the incision. Evidence of abscess or infection is found on exam, during re-operation or by histopathologic/radiologic exam
- **Organ/space SSI** – infection appears to be related to the operative procedure and involves any part of the body, excluding the skin incision fascia or muscle layers that is opened or manipulated during the operative procedure. Evidence of abscess or infection is found on exam during re-operation or by histopathologic/radiologic exam

Viral Respiratory Illness (VRI) Case Definition

Acute onset of signs and symptoms of VRI based on clinical judgement AND testing has not yet occurred or results are pending. Signs and symptoms include two or more of the following:

- New or worsening cough
- Fever* or chills
- Shortness of breath
- Runny or stuffy nose (i.e., congestion) or sneezing
- Sore throat or hoarseness or difficulty swallowing
- Loss of sense of smell or taste
- Tiredness, malaise
- Muscle aches (i.e., myalgia)
- Headache

*Note that this does NOT include symptoms with a known cause, such as fever due to urinary tract infection, or diarrhea due to a new medication. Clinical judgement is required.

Viral Respiratory Illness Case/Cluster Definition

Whenever a cluster of VRI cases occurs, it warrants an investigation to determine possibility of epidemiological links, risk for further transmission, and consideration for additional measures. A cluster may involve a high prevalence of community-associated cases in a unit or localized area or possible health-care associated cases where epidemiological links cannot be conclusively determined. In community/LTC settings, VRI often reflect community levels of VRI and can be managed with clinical care and IPAC measures.

Note: Once initial testing has identified the causative agent within a select group of symptomatic patients, further esting of symptomatic patients may be suspended at the discretion of the MHO/official designate.

Gastrointestinal (GI) illness case definition

A case of probable GI infection is defined as any one of the following conditions that cannot be attributed to another cause (e.g., laxative use, medication side effect, diet, prior medical condition):

- Two or more episodes of diarrhea in a 24-hour period above what is considered normal for that individual
- Two or more episodes of vomiting in a 24-hour period
- One episode each of vomiting and diarrhea in a 24-hour period
- One episode of bloody diarrhea
- Positive culture for a known enteric pathogen with a symptom of GI infection (e.g., vomiting, abdominal pain, diarrhea)

GI Outbreak Definition

Three or more cases of probable viral GI infection, potentially related within a four-day period, within a specific geographic area (e.g. unit, ward).

APPENDIX VI – ABBREVIATIONS AND TERMINOLOGIES

NH

Northern Health

Acute Care (AC)

Sites where a patient receives active but short-term treatment for a severe injury or episode of illness, an urgent medical condition or during recovery from surgery.

AC/LTC

Combined Acute Care and Long Term Care in a single facility

Alert

An alert is called when there is a high number or proportion of cases on a unit, but the number does not meet the predetermined level for an outbreak to be declared.

Colonization

the presence and multiplication of microorganism without tissue invasion or damage.

GI

Gastrointestinal Illness

HEMBC

Health Emergency Management BC

IP

Infection Prevention

Healthcare-Associated Infections (HAI)

Infections patients get while staying in any healthcare facility, which include micro-organism from other patients, the environment or staff – not to be confused with facility-associated infections, which are acquired and identified at the same facility

SSI

Surgical Site Infection

UHNBC

University Hospital of Northern BC (Prince George)

VRI

Viral Respiratory Illness

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