

ANNUAL REPORT

2020 - 2021

INFECTION PREVENTION

Skeena River – Ashley Ellerbeck, Northern Health

“Fighting infections
by providing knowledge”



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Executive Summary

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




At the start of the 2020/21 year it became evident that the healthcare system, as well as the IP program was about to face unprecedented challenges due to the emergent COVID-19 pandemic. Infection Prevention staffing ratio was identified by the NH executive and an additional 6 full time and 2 casual positions were added to the program.




This report summarizes the initiatives and accomplishments of the IP program during the 2020/21 fiscal year, and outlines major goals and continued priorities for the upcoming fiscal year.

Infection Prevention Health Care Report Card and Indicators for 2020/21

Infection Prevention Health Care Report Card and Indicators for 2020/21					
Indicator	Status	Target	2020/21	Preferred Direction	Page #
<i>Clostridium Difficile</i>		< 0.30	0.43		12
Methicillin-Resistant <i>Staphylococcus aureus</i>		< 0.70	0.83		13
Hand Hygiene Compliance		≥85%	92%		10


*Cases per 1,000 patient days
 ^please see the Hand Hygiene section for a further discussion regarding the 2020/21 hand hygiene compliance rates

-  Meeting target
-  Within 10% of target
-  Outside of target range by more than 10%

Additional Infection Prevention Indicators				
Indicator	Status	Target	2020/21	Page #
Carbapenemase-Producing Organisms		Reduction in nosocomial transmissions	0	15
Surgical Site Infections		< 3 per 100 procedures	2 per 100 procedures	16
Outbreak Management		Reduction in # of outbreaks	11 (all COVID-19)	20

Based on this year's report, the key priorities remain the same for 2021 - 2022:

1 Education Framework for Primary Care



2 **QUALITY IMPROVEMENT**
Patient Hand Hygiene



3 **MDR**
Event related sterility/obsolete devices



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 prevention of healthcare associated infections is an organizational wide responsibility, reflected in our motto “Infection Prevention is Everyone’s Business”. During 2020/21, the IP program has continued to provide infection prevention expertise, and support departments and front line staff.

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

Northern Health is geographically divided into three health service delivery areas (HSDAs). Each of the areas is represented by a multidisciplinary infection prevention committee that reports to the NH Infection Prevention Council, the NH Medical Advisory Committee, and the Executive team.

Infection Prevention liaises with other programs such as Communicable Disease (Public Health), and Workplace Health & 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

Vice President, Planning, Quality, and Information Management – Fraser Bell

Medical Lead, IP – Dr. Abuobeida Hamour

Regional Manager, IP – Deanna Hembroff

Medical Device Reprocessing Regional Coordinator – Bonnie Mackenzie

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Working Groups and Initiatives

Guidelines and Reference Developed:

- [COVID-19 Outbreak Management Guidelines](#) developed
- [COVID-19 Outbreak Management Guidelines for non-healthcare type facilities](#) (i.e. work-camps) developed
- [Facility Outbreak Preparedness Checklist](#) developed
- [Outbreak Quick Reference Guide](#) updated
- [Outbreak Readiness Checklist](#) developed

Participated in the following Working Groups/Committees:

- Antimicrobial Stewardship working group
- COVID-19 IPAC, WH&S provincial working group
- COVID-19 Preparedness & Response for work camps located in NH
- Joint Occupational Health and Safety committee
- Long Term care (LTC) and Assisted Living (AL) COVID-19 task group
- LTC Accommodation capital working group
- Mortuary Management provincial committee
- NH Long Term Care community of practice
- NH Perinatal committee
- NH Skin and Wound committee
- NH PPE task group
- Pan Canadian Advisory Committee for the Measurement and Surveillance of Healthcare-Associated infections
- Personal Protective Equipment (PPE) clinical oversight committee
- Provincial Aerosol-Generating Medical Procedures (AGMP) expert committee
- Provincial PPE supply working group
- National Infection Prevention and Control Canada (IPAC) interest groups: Long Term Care (LTC), Medical Device Reprocessing (MDR), IPAC Environmental Hygiene Interest Group (EHIG), Surveillance and Applied Epidemiology (SAIEG), SSI Surveillance Canada, Health Care Facility Design and Home and Community Care

Participated in the following Working Groups/Committees:

- **New Builds**: Mills Memorial Hospital, Dawson Creek District Hospital, Stuart Lake Hospital, and UHNBC Surgical Tower
- **Large Renovation Projects**: Stuart Nechako Manor, Infectious Disease Units in NH Acute Care facilities

Education:

An integral part of the Infection Prevention program is the ongoing education and training in infection prevention practices, based on current evidence-based recommendations. Relevant and current information with regards to Infection Prevention and Medical Device Reprocessing department MDRD services is available on the [OurNH](#) website.

The majority of this year's employee educational needs were driven by the COVID-19 pandemic with the focus on "Back to Basics" including hand hygiene and PPE training. Outbreak management and protocols were also a priority teaching requirement.

As a result of size of gatherings restrictions, communication strategies were expanded to include Microsoft team videoconference and e-learning Hub.

All education opportunities located outside of NH facilities (i.e. university and college nursing programs) were cancelled or postponed.

Infection Prevention Professionals Education:







In keeping with the program's mandate to provide current infection prevention expertise, IPs participated in the following education in 2020/21:




- 8 Infection Prevention Practitioners completed the CSA Infection Control During Construction, Renovation and Maintenance of Health Care Facilities Course
- 8 Infection Prevention Practitioners are currently enrolled in Canadian Infection Prevention Courses




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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*Cases per 1,000 patient days
 ^please see the Hand Hygiene section for a further discussion regarding the 2020/21 hand hygiene compliance rates
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Hand Hygiene

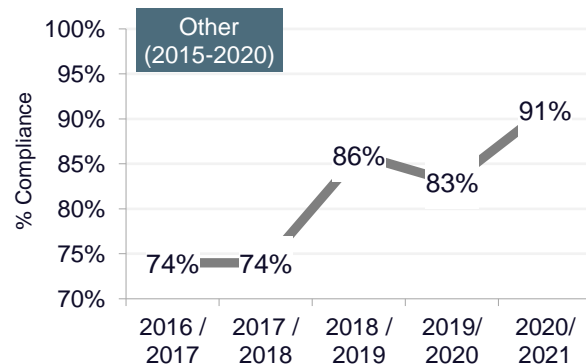
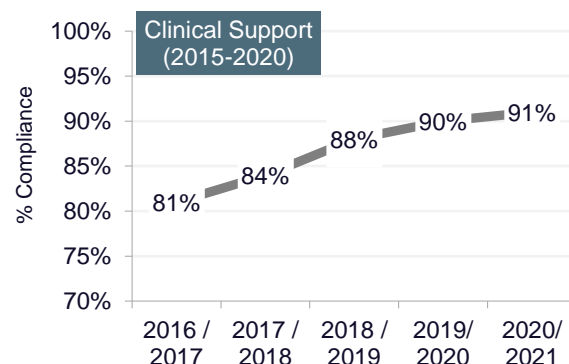
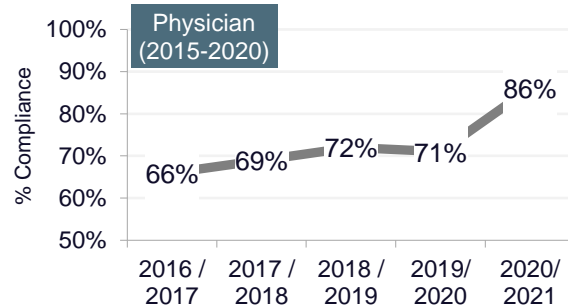
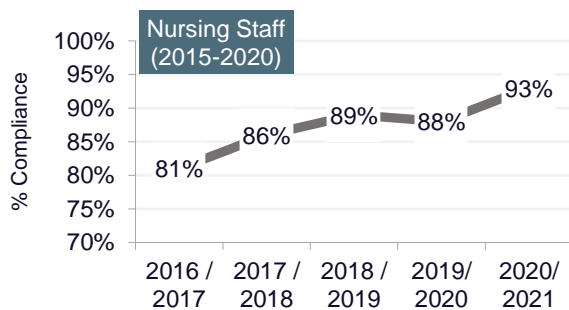
Status	Target	Actual (2020/21)	Preferred Direction
●	≤85%	Acute Care Facilities (ACF): 92%	↑
●	≤85%	Long Term Care Facilities (LTCF): 88%	↑

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.

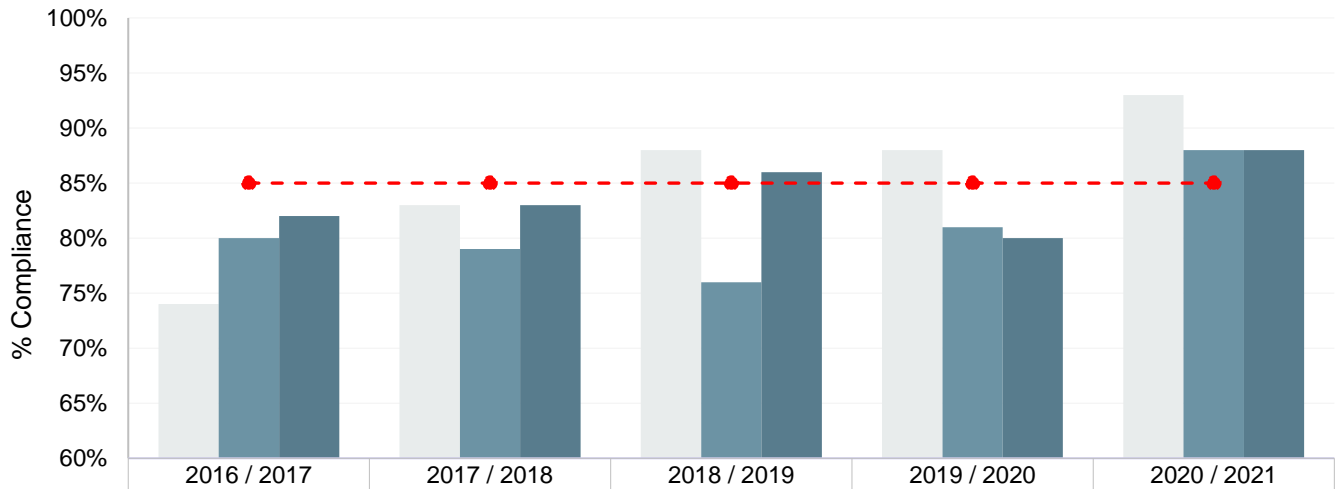
Ongoing challenges within NH are recruitment of HH auditors and maintaining sustainability with auditing at both acute and long term care facilities.

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, Dietician, Pharmacist
Other	Housekeeper, Plant Services, Volunteer, Food Services, Other



Hand Hygiene Compliance in Northern Health HSDA Averages (2016-2021)



	2016 / 2017	2017 / 2018	2018 / 2019	2019 / 2020	2020 / 2021
NI	74%	83%	88%	88%	93%
NE	80%	79%	76%	81%	88%
NW	82%	83%	86%	80%	88%
Target	85%	85%	85%	85%	85%

Goals for 2021/22:

- 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 will be trialed.
- Initiated Hand Hygiene monitoring through self assessment process in Community programs.

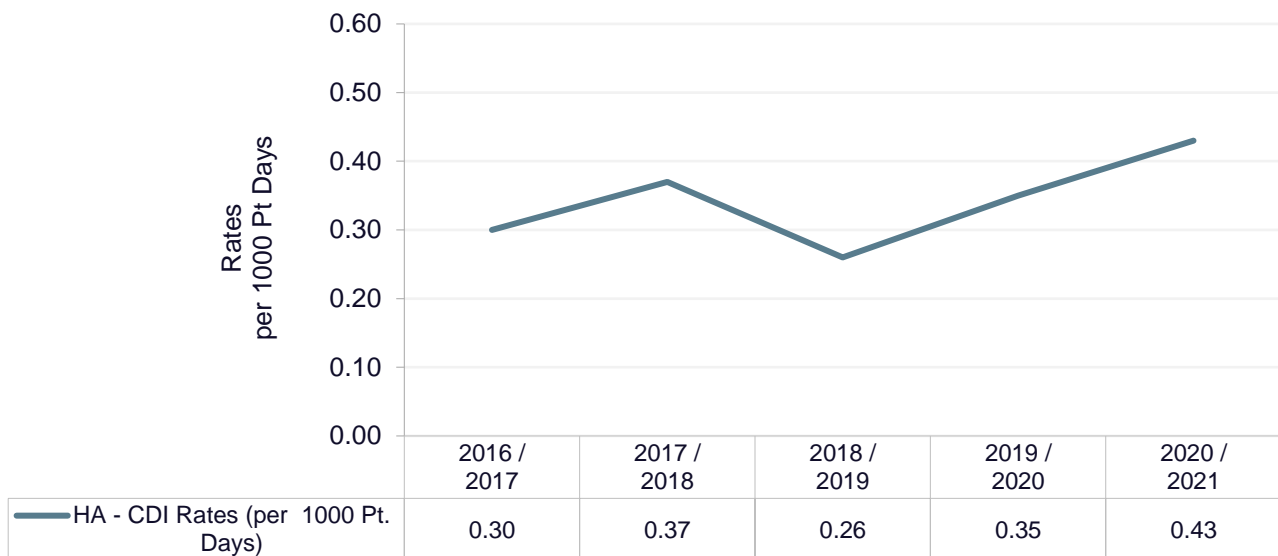
Healthcare-Associated Infection Indicators

Clostridium difficile Infection (CDI)

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).

Status	Target	Actual (2020/21)	Preferred Direction
◆	< 0.30 per 1000 pt. days	0.43 per 1000 pt. days	↓

HA - CDI Rates (per 1000 Pt. Days)



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 1000.

Actions taken in 2020/21 include:

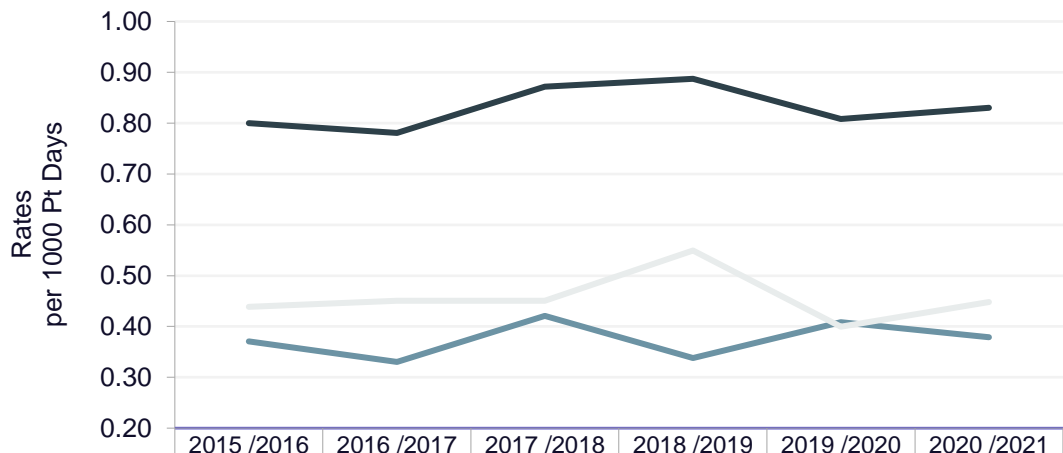
- Education provided on cleaning with sporicidal for all suspected and confirmed cases.
- Facilitated increased communication between front line nursing staff and environmental services.
- Increased education sessions for Health Care Workers (HCWs) regarding importance of proper protocol, signage and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

Methicillin-resistant *Staphylococcus aureus* (MRSA)

Status	Target	Actual (2020/21)	Preferred Direction
♦	< 0.70 per 1000 pt. days	0.83 per 1000 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 or shared equipment. 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



	2015 /2016	2016 /2017	2017 /2018	2018 /2019	2019 /2020	2020 /2021
Total MRSA (per 1000 Pt. Days)	0.80	0.78	0.87	0.89	0.81	0.83
Infections (per 1000 Pt. days)	0.37	0.33	0.42	0.34	0.41	0.38
Colonizations (per 1000 Pt. days)	0.44	0.45	0.45	0.55	0.40	0.45

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 1000.

Northern Health MRSA rates have remained steady at 0.83.

Limitations include:

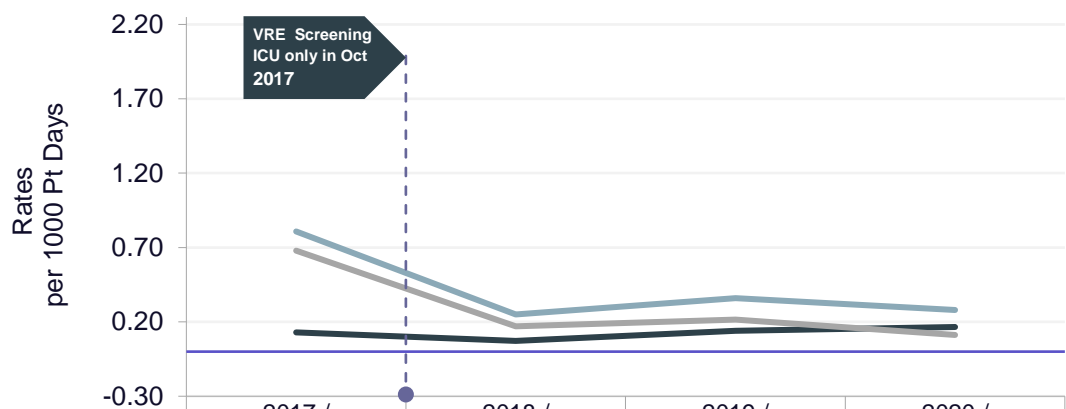
- Difficulty with accommodating patients with an ARO (s) or risk factors for AROs in appropriate single rooms due to overcapacity and COVID-19 surge as well as due to many shared wards with older hospitals design structure.
- Staff disengagement with routine admission swabbing in part to expectations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

Vancomycin Resistant *Enterococci* (VRE)

Status	Target	Actual (2020/21)	Preferred Direction
●	< 0.30 per 1000 pt. days	0.28 per 1000 pt. days	↓

The incidence rate of Vancomycin-Resistant *Enterococci* (VRE) is the number of newly identified ICU 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 1000.

VRE Infection and Colonization Rates



	2017 / 2018	2018 / 2019	2019 / 2020	2020 / 2021
— Total VRE (per 1000 Pt. Days)	0.81	0.25	0.36	0.28
— Infections (per 1000 Pt. days)	0.13	0.07	0.14	0.17
— Colonizations (per 1000 Pt. days)	0.68	0.17	0.22	0.11

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 in Adult ICU.
- 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.

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 2020/21, zero cases of CPO were identified in NH.

Surgical Site Infections (SSI)

Surgical Site Infections (SSI) 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 IPs 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 with documentation i.e. antibiotics may have been given but incomplete or nonexistant documentation.

Actions Taken in 2020 - 2021

- Patients are monitored for up to 3 months or 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 prior to and after surgery.

Caesarean section:

Status	Target	Actual (2020/21)	Preferred Direction
	≤ 3 per 100 procedures	3 per 100 procedures	



Total C-sections are performed at 9 Northern Health facilities.

Outcome:

789 C-sections performed in 2020/21.

- Antibiotics given within one hour of cut time - 83%. Rate of administration remains relatively unchanged from the previous year at 79%. (Challenges with finding documentation in the patient chart remains an ongoing issue, in particular emergency C/sections).
- 20 SSIs were identified
- The SSI rate was 3 per 100 procedures

Total Abdominal Hysterectomy (TAH):

Status	Target	Actual (2020/21)	Preferred Direction
	≤ 3 per 100 procedures	4 per 100 procedures	



Total Abdominal Hysterectomies are performed at 5 Northern Health facilities.

Outcome:

71 TAH performed in 2020/21.

- Antibiotics given within one hour of cut time - 82%. Rate of administration remained relatively the same from the previous year at 81%.
- 3 SSIs were identified
- The SSI rate was 4 per 100 procedures

Total Primary Hip Replacement (THR):

Status	Target	Actual (2020/21)	Preferred Direction
	≤ 2 per 100 procedures	2 per 100 procedures	



Total Hip Replacements are performed at 4 Northern Health facilities.

Outcome:

203 THR performed in 2020/21.

- Antibiotics given within one hour of cut time - 96%. Rate of administration remains unchanged from the previous year at 97%.
- 4 SSIs were identified
- The SSI rate was 2 per 100 procedures

Total Primary Knee Replacement (TKR):

Status	Target	Actual (2020/21)	Preferred Direction
	< 2 per 100 procedures	2 per 100 procedures	



Total Knee Replacements are performed at 4 Northern Health facilities.

Outcome:

301 TKR performed in 2020/21.

- Antibiotics given within one hour of cut time - 97%. Rate of administration remains relatively unchanged from the previous year at 96%.
- 7 SSIs were identified
- The SSI rate was 2 per 100 procedures

Bowel Resection (not including rectum):

Status	Target	Actual (2020/21)	Preferred Direction
	< 10 per 100 procedures	2 per 100 procedures	

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

Outcome:

48 Bowel Resections performed in 2020/21.

- Antibiotics given within one hour of cut time - 83%. Rate of administration slightly decreased from the previous year at 86%.
- 1 SSIs were identified
- The SSI rate was 2 per 100 procedures

Surgical Site Infections (SSI)

Benchmark and Rate Comparison with previous years:

Procedure	Benchmark*	2016/2017	2017/2018	2018/2019	2019/2020	2020/2021
Abdominal Hysterectomy	1.10-4.05 per 100 procedures	1 per 100 procedures	6 per 100 procedures	3 per 100 procedures	7 per 100 procedures	4 per 100 procedures
Caesarean Section	1.46-3.82 per 100 procedures	4 per 100 procedures	4 per 100 procedures	3 per 100 procedures	3 per 100 procedures	3 per 100 procedures
Bowel Resection	**3.99-9.47 per 100 procedures	9 per 100 procedures	11 per 100 procedures	12 per 100 procedures	10 per 100 procedures	2 per 100 procedures
Total Primary Hip Replacement	0.67-2.40 per 100 procedures	2 per 100 procedures	3 per 100 procedures	4 per 100 procedures	4 per 100 procedures	2 per 100 procedures
Total Primary Knee Replacement	0.58-1.60 per 100 procedures	3 per 100 procedures	3 per 100 procedures	3 per 100 procedures	2 per 100 procedures	2 per 100 procedures

*Benchmark data from National Healthcare Safety Network (NHSN) report: Data Summary for 2006 through 2008, issued December 2009. Doi: 10.1016/j.ajic.2009.10.001

Outbreak Management

With the arrival of COVID-19, this has been a year unlike any other. In commitment to our motto - Infection Prevention is Everyone's Business, the IP team worked tirelessly to provide leadership, develop outbreak policies and procedures, and provide training and support, as well as assisting in front line care activities. (Involvement included: obtaining nasopharyngeal swabs in outbreak areas, setting up PPE stations, "At the elbow" teaching moments, and moving patient/residents beds).

In addition to outbreak meetings (occur with each outbreak), IP collected and provided data for the Ministry of Health regarding COVID-19 statistics (individual cases as well as NH facility outbreaks).

Protocols put in place by the Provincial Health Officer (PHO) and Northern Health to help prevent COVID-19 outbreaks included:

- Visitor restriction (essential only)
- Enhanced symptom screening on arrival to facility of all visitors, and service providers
- Enhanced symptom screening of all new or returning patients as well as daily screening of inpatients
- Restriction of COVID-19 symptomatic visitors and service providers (symptoms such as fever, cough, difficulty breathing, chills, sore throat, runny nose, vomiting or diarrhea)

Of note, there were **no** Gastrointestinal or Influenza-like illness outbreaks in any NH facilities this fiscal year.

There were a total of 10 COVID-19 outbreaks in NH facilities in 2020/21 listed in the below tables.



NH Acute Care COVID-19 Outbreaks

Facility/Ward	# of Beds	Total Positive Clients	Total Positive Staff	Total Client Deaths*	Start/End Dates	Length of Outbreak
UHNBC/ FMU	25	19	2	0	Dec 3/20 – Dec 15/20	12 days
UHNBC/ IMU	39	21	12	0	Dec 29/20 – Feb 9/21	42 days
UHNBC/ Rehab Unit	23	3	0	0	Jan 4/21 – Jan 25/21	21 days
Dawson Creek/ in-patient unit	14	9	5	1	Feb 7/21 – Mar 12/21	33 days
Prince Rupert in-patient unit	24	3	1	0	Mar 28/21 – April 28/21	31 days

Long Term Care/Complex Care/Assisted Living COVID-19 Outbreaks

Site and Type of Institution	City or Town	# of Beds	Total Positive Clients	Total Positive Staff	Total Client Deaths	Start/End Dates	Length of Outbreak
Rotary Manor (LTC)	Dawson Creek	116	9	4	2	Nov 2/20 – Dec 10/20	39 days
North Peace Seniors Housing Society (AL)	Fort St John	160	15	8	1	Nov 22/20 – Dec 25/20	34 days
Jubilee Lodge (LTC)	Prince George	62	48	14	17	Dec 12/20 - Feb 10/21	60 days
Acropolis Manor (LTC)	Prince Rupert	61	33	25	19	Jan 19/21 – Mar 16/21	56 days
Heritage Manor	Fort St. John	22	1	0	0	Mar 26/21 – April 9/21	14 days

Lessons Learned

- **Timely Application of Precautions:** UHNBC Jubilee Lodge outbreak lessons were well documented and able to apply to other 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.
- **Face to Face Training Sessions:** Real time “*At the Elbow*” PPE training sessions with Educators were provided to staff members.
- **Treating All Patients on the Unit as Close Contacts:** Precautions were used on all patients on the unit; patients kept in their rooms as much as possible; unit closed to new admissions; Cohort staff.
 - Enhanced symptom monitoring of patients twice daily (COVID-19 screening with temperature checks).
 - Prevalence screening under direction of MHO.
- **LTC and ALC Mandatory Education:** Mandatory staff education to now include guidelines for N95 Fit Testing, and outbreak protocols & preparedness.
- **Multidisciplinary Approach:** Multidisciplinary collaboration facilitates effective teamwork in early detection and efficient management of outbreaks. Considered the addition of health emergency board committee (HEMBC).
- **Adequate Supplies and Stocks of Equipment:** Ensuring an adequate pool of PPE supplies as well as required equipment such as O2 concentrators (necessary in a majority of LTC facilities which do not have medical gases).

Medical Device Reprocessing Department

In compliance with the BC Provincial Policy for Reprocessing of Critical and Semi-critical devices, yearly assessments/audits are required. As a result of COVID-19 travel restrictions not all audits were completed. NH has maintained greater than 95% over all the categories for the past 5 years, with the exception of Dawson Creek. With renovations completed in the fall of 2019, Dawson Creeks score in Environmental Requirements rose from 33.3% to 100%, bringing their over-all score to greater than 95%.

2020/21 priorities for Medical Device Reprocessing (MDR) included setting up collection and reprocessing of N95 masks and half mask respirators, as well as assisting in the procurement of reusable isolation gowns that meet the CSA standards barrier protection.

The current MDR report focused on site by site discussions rather than a percentage scoring. Regular audits will continue in 2021 pending travel restrictions.

Acute Care

BULKLEY VALLEY DISTRICT HOSPITAL – ongoing quality improvement initiatives to meet CSA standards regarding removal of porous shelving. A height adjustable sink purchased and installed in decontamination area. Endoscopy fleet replacement plan in place.

DAWSON CREEK DISTRICT HOSPITAL - A larger capacity sterilizer installed in early 2020 has resulted in improved efficiency in relation to orthopedic equipment trays.
Area of concern: Endoscopy fleet replacement plan not in place.

FORT NELSON GENERAL HOSPITAL – currently runs one sterilizer load per week. Recommendation is to remove preventative maintenance and allow the equipment to phase out. Sterilization plans (minimal instrumentation) - transport to Fort St. John. Single use instruments and sets will be encouraged.

FORT ST. JOHN HOSPITAL – Area of concern: Endoscopy fleet replacement plan not in place.

GR BAKER HOSPITAL – Areas of concern include an aging Medivator (obsolete for parts repair), an outdated sink and only one washer disinfectant (no redundancy plan). Endoscopy replacement plan not in place.

HAIDA GWAII – Audit required in 2021.

KITIMAT GENERAL HOSPITAL – Addressed sterilizer issues/repairs and replaced one sterilizer.

Areas of concern: Equipment at End-of-Life (EOL) includes a washer disinfector, 2nd sterilizer and automatic endoscopy re-processor. Capital equipment purchases required in 2021. Endoscopy fleet plan not in place.

LAKES DISTRICT HOSPITAL AND HEALTH CENTRE – Audit required in 2021.

MILLS MEMORIAL HOSPITAL. Quality improvement initiatives in the OR and MDR resulted in removal of clutter and redundant storage. Stainless steel units replaced wooden shelving and work benches. Endoscopy fleet replacement plan in place.

PRINCE RUPERT REGIONAL HOSPITAL - Capital approval received for Endoscopy cleaning room and decontamination area renovations. Construction planned for May 2021. Area of concern: Endoscopy fleet replacement plan not in place.

ST. JOHN'S HOSPITAL – department quality improvement initiatives ongoing. A newly installed pass-through washer disinfector allows the flow of dirty-clean to meet CSA standards. The site provides reprocessing for Fraser Lake Community Health Centre, Stuart Lake General Hospital, and Fort St. James Health Centre.

UHNBC – Sterrad 100S were replaced with a Steris VPro Max and a Stryker Sterizone low temperature sterilizers.

Areas of concern include staffing and unfilled shift issues. Endoscopy replacement plan not in place (Endoscopes are between 10-20 years old).

Long Term Care Home Sites:

Audits required in 2021.

Summary:

Capital equipment – Many sites are dealing with end of life equipment. Focus for 2021 includes replacement of problematic equipment, and capital requests for new equipment purchases over the next 2 years.

N-95 mask reprocessing – NH began N95 mask reprocessing in April 2020. Sites without low-temperature sterilization ability collected and transported to sites that did. Collection was very minimal at some sites, due to staff non-engagement. In December 2020, sites without reprocessing ability stopped collecting. Four sites in NH continue to collect, reprocess and store N95 masks.

Northern Health Facilities

Acute Care

Bulkley Valley District Hospital – Smithers
Chetwynd Hospital & 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
Kitimat General Hospital
Lakes District Hospital – Burns Lake
Mackenzie and District Hospital
McBride Hospital
Mills Memorial Hospital – Terrace
Prince Rupert Regional Hospital
Queen Charlotte Islands 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 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

APPENDIX 1 – 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

This includes:

- ARO identified for the first time during hospital admission
- ARO newly identified in the emergency dept. and then admitted to your acute care facility;

This does not include:

- ARO cases previously identified by NH or other BC acute care facilities
- ARO cases identified in the ER or outpatient clinics but are not subsequently admitted
- ARO cases re-admitted

An ARO case is considered Healthcare-associated Infection (HAI) based on the following criteria:

- Length of time in acute care facility is >48 hours prior to ARO identification
- Prior healthcare facility admission >24 hours within the previous 12 months

-
- Prior history of chemotherapy, dialysis, or surgery in healthcare facility within the previous 12 months
 - Indwelling catheter or other medical device (excluding Foley catheters and peripheral IV's) at time of admission which was installed at your facility

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.

COVID-19-Like Illness Case Definition:

An acute onset of respiratory, systemic, or gastrointestinal illness, with ANY of the following symptoms (new or worsened), and no other definitive diagnosis*:

- Respiratory symptoms: cough, shortness of breath, rhinorrhea (runny nose), nasal congestion, sore throat, odynophagia (painful swallowing), loss of smell and/or taste
- Systemic symptoms: fever, chills, headaches, fatigue, or muscle aches
- Gastrointestinal symptoms: nausea, vomiting, diarrhea

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

COVID-19 Outbreak Definition

Long-term care: Any ONE resident or Health Care Worker has a laboratory-confirmed diagnosis of COVID-19. (If the case is a Health Care Worker, they must have worked at the facility during their infectious phase AND had a PPE breach during this time.

Acute care: Any ONE admitted patient has a laboratory-confirmed diagnosis of COVID-19, AND the case investigation must conclude that the infection was most likely acquired at the facility, rather than prior to admission.

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)

Influenza-like illness (ILI) case definition:

An acute onset of respiratory illness with cough and fever and with one or more of the following: headache, sore muscles/joints/, extreme fatigue/weakness or sore throat.

ILI Outbreak Definition

Two or more cases of Influenza like Illness in clients and/or staff within a seven-day period, with at least one case identified as a resident.

APPENDIX 2 – Abbreviations and Terminologies

NH – Northern Health
Acute Care – 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.
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.
Benchmark – a point of reference for judging value, quality, change, or the like; standard to which others can be compared
Colonization – the presence and multiplication of microorganism without tissue invasion or damage.
GI – Gastrointestinal Illness
HEMBC – Health Emergency Management BC
ILI – Influenza-like illness
IP – Infection Prevention
IPP – Infection Prevention Professional
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)