Northern Health Physicians
Partners in Wellness
Public Health Newsletter for Northern Health Physicians
Volume 14. Number 1. January 2018 • Page 1 of 3

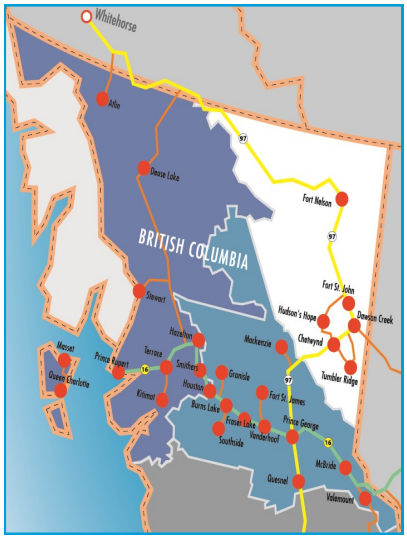
2017: Year in Review

Volume 13:		
Month/link	Issue	Topic
January	1	(No regular issue) New Year Greeting and 2017 Year in Review
February	2	Influenza activity has increased sharply in BC; Influenza update; Update on Opioid Overdoses; Call for Community Champions; Research Project: Physical Activity-Barriers and facilitators in Northern Primary Care Practice
March	3	Reminder-Research Project: Physical Activity-barriers and Facilitators in Northern Primary Care Practice; Influenza update; Naloxone update: Training resources and scope of practice for nurses and allied health professionals; Mumps refresher
April	4	Pediatric Nutrition Guidelines for Health Professionals; Influenza update; Medical Assistance in Dying (MAID) Conference June 2017
May	5	NH Antimicrobial Stewardship (AMS) program; Physicians can stock free STI meds; Opioid use disorder: New treatment guidelines
June	6	Rabies in BC; Medical Health Officers-Who are we and what do we do?
July	7	Cyclospora Outbreak in BC; Library Services; Truth and Reconciliation Commission: Calls to Action relating to Health
August	-	No issue
September	8	Ticks, Lyme Disease and Tick Paralysis; Expanded eligibility for HPV Vaccination; The Truth and Reconciliation Commission: Calls to Action specific to Child Welfare
October	9	Special Issue on Influenza: 2017-2018 season–what you need to know, including: Immunization campaign start date; Vaccine ordering, distribution and storage; Eligibility; Recommended Vaccine Dosage by Age; Vaccines and Recommended Usage; Egg allergies/Oculo-Respiratory Syndrome; **Pneumococcal Vaccine;** Reporting Requirements; Adverse reactions following Immunization; Vaccine Administered; Influenza testing and treatment; References; Additional Resources; Influenza Control Program Policy for Health Care Workers and, Community Vaccine Provider Influenza Vaccine Order Form
November	10	Introducing New Northeast Medical Health Officer, Dr. Jong Kim; Update on Syphilis Testing via PCR; World Antibiotic Awareness Week; Senior Falls are Preventable; The Truth and Reconciliation Commission: 5 Calls to Action relating to Language and Culture and 17 calls relating to Justice
December	11	Cannabis Legalization and Regulation; Counselling your patients about non-medical cannabis use; Cannabis use for medical purposes; Influenza update; The Truth and Reconciliation Commission: Calls to Action relating to Justice

Inside this Issue:

Notable Quotable

Back issues of *NH Physicians, Partners in Wellness* newsletters and bulletins are located on the NH Physicians website:
http://physicians.northernhealth.ca/physicianResources/PublicHealth.aspx



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Northeast
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Outbreak of invasive meningococcus W-135 in the Okanagan area

Invasive meningococcal disease serogroup W has been on the increase in BC, with 15 cases in 2017. The historical average was less than 2 cases per year. No cases have occurred in Northern Health.

Cases have been concentrated in the Okanagan Health Service Delivery Area, which has led to an outbreak being declared in that area. Most cases in the Okanagan have occurred in 15 to 19 year olds.

As a result, for the duration of this outbreak, **publicly funded quadrivalent meningococcal vaccine is being offered to all 15-19 year olds who:**

- **reside in the Okanagan HSDA (including for school), or**
- **are planning to visit the Okanagan HSDA for at least three weeks.**

The Okanagan HSDA includes Kelowna, Princeton, Keremeos, Osoyoos, Oliver, Penticton, Summerland, Peachland, Vernon, Coldstream, Lumby, Armstrong, Enderby, and other smaller communities.

Most eligible individuals will be vaccinated in the Okanagan, but a few may seek vaccine elsewhere, such as in Northern Health primary care settings. **Any individuals meeting the above eligibility criteria can be referred to your local Interprofessional Team for immunization.**

BC is only in its second year of a public quadrivalent meningococcal immunization program, offered in grade 9. Most grade 10 students (age 15-16) have therefore been immunized, but the rest of the 15-19 year old cohort generally has not.

Outside the universal grade 9 program, quadrivalent meningococcal vaccine is covered in BC only for individuals at high risk, including specific at-risk population segments determined in the context of an outbreak, as above. Other individuals who wish to reduce their risk of meningococcal disease may seek privately funded meningococcal vaccine, which is available through some community pharmacies.

For further information, please see:

Interior Health – Meningococcal Outbreak (Okanagan) https://www.interiorhealth.ca/YourEnvironment/CommunicableDiseaseControl/Pages/Meningococcal-Outbreak.aspx

HealthLinkBC – Meningococcal Quadrivalent Vaccines https://www.healthlinkbc.ca/healthlinkbc-files/meningococcal-quadrivalent-vaccines
BCCDC Communicable Disease Control Manual – Immunization, Part 4: Biological Products http://www.bccdc.ca/health-professionals/clinical-resources/communicable-disease-control-manual/immunization/biological-products

Submitted by: Dr. Andrew Gray, Northern Interior Medical Health Officer

NH Antimicrobial Stewardship Program Update

According to the Canadian Institute for Health Information- “In 2015, more than 25 million courses of anti biotics were prescribed in the country, the equivalent of almost 1 prescription for every Canadian age 20 to 69… antibiotics are prescribed more frequently in Canada than in other Organization for Economic Co-operation and Development (OECD) countries”

We all know that the use and misuse of antibiotics leads to increases in resistance and unnecessary use can be harmful to our patients. The answer? = Antimicrobial Stewardship!! Our NH prescribers now have easy access to information about the NH Antimicrobial Stewardship Program and how to access resources created and promoted by the program. How do you find this great new resource? By going to the NH physicians website and looking under Physician Resources; Antimicrobial Stewardship is at the top of the list! What will you find here? You will find a variety of items such as order sets, clinical practice standards, empiric prescribing tools, the NH Antibiogram as well as other recommended online resources such as the new FREE online Bugs and Drugs website.

For more information contact the program coordinator Alicia Rahier at 250-565-5956 or via email alicia.rahier@northernhealth.ca

Submitted by: Alicia Rahier, Antimicrobial Stewardship Program Coordinator

The Truth and Reconciliation Commission

The Truth and Reconciliation Commission's report was released in December 2015. The report details 94 Calls to Action (recommendations) for Canadians to redress the legacy of residential schools (Actions 1-42) and advance the process of reconciliation (Actions 43-94). This newsletter series will walk through the 94 Calls to Action to support Northern physicians and other providers to learn about the legacies and take actions towards reconciliation in their practices, relationships, and communities.

The categories to redress the legacy of residential schools include; child welfare, education, language and culture, health, and justice. This issue we highlight 10 Reconciliation Calls to Action. Others will be shared in upcoming newsletters.

To learn more about the Truth and Reconciliation Commission and the Calls to Action, visit http://nctr.ca/

Canadian governments, UN Declaration on the Rights of Indigenous People

43. We call upon federal, provincial, and territorial, and municipal governments to fully adopt and implement the United Nations Declaration on the Rights of Indigenous Peoples as the framework for reconciliation.
44. We call upon the Government of Canada to develop a national action plan, strategies, and other concrete measures to achieve the goals of the United Nations Declaration on the Rights of Indigenous Peoples.

Royal Proclamation and Covenant of Reconciliation

45. We call upon the government of Canada, on behalf of all Canadians, to jointly develop with Aboriginal peoples a Royal Proclamation of Reconciliation to be issued by the Crown.
46. We call upon the parties to the Indian Residential Schools Settlement Agreement to develop and sign a Covenant of Reconciliation that would identify principles for working collaboratively to advance reconciliation in Canadian society,, and that would include, but not be limited to...
47. We call upon federal, provincial, territorial, and municipal governments to repudiate concepts used to justify European sovereignty over Indigenous peoples and lands, such as the Doctrine of Discovery and terra nullius, and to reform those laws, government policies, and litigation strategies that continue to rely on such concepts.

Settlement Agreement Parties and the United Nations Declaration on the Rights of Indigenous Peoples

48. We call upon the church parties to the Settlement Agreement, and all other faith groups and interfaith social justice groups in Canada who have not already done so, to formally adopt and comply with the principles, norms, and standards of the United Nations Declaration on the Rights of Indigenous Peoples as a framework for reconciliation. This would include, but not be limited to, the following commitments...
49. We call upon religious denominations and faith groups who have not already done so to repudiate concepts used to justify European sovereignty over Indigenous lands and peoples, such as the Doctrine of Discovery and terra nullius.

Equity for Aboriginal People in the Legal System

50. In keeping with the United Nations Declaration on the Rights of Indigenous Peoples, we call upon the federal government in collaboration with Aboriginal organizations, to fund the establishment of Indigenous law institutes for the development, use, and understanding of Indigenous laws and access to justice in accordance with the unique cultures of Aboriginal peoples in Canada.
51. We call upon the Government of Canada, as an obligation of its fiduciary responsibility, to develop a policy of transparency by publishing legal opinions it develops and upon which it acts or intends to act, in regard to the scope and extent of Aboriginal and Treaty Rights
52. We call upon the Government of Canada, provincial and territorial governments, and the courts to adopt the following legal principles...

Submitted by:
Dr. Sandra Allison Chief Medical Health Officer

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Public Health Newsletter for Northern Health Physicians

Volume 14. Number 02. February 2018 • Page 1 of 4

HIV Pre-exposure prophylaxis (PrEP) now covered in BC for people at high risk

The newest tool for HIV prevention is pre-exposure prophylaxis (PrEP), using a single daily dose of antiretroviral medication (emtricitabine-tenofovir DF).

When PrEP is taken on an ongoing daily basis by someone who is HIV negative but at ongoing high risk, the risk of contracting HIV risk is dramatically reduced. When PrEP is taken consistently every day, the risk by sexual transmission is reduced by over 90%, and the risk by sharing injection equipment is reduced by over 70%.

As of January 1, 2018, the BC government now covers PrEP for individuals at high risk. Full guidelines for using PrEP are available from the BC Centre for Excellence in HIV/AIDS (BCCfE) at http://www.cfenet.ubc.ca/hiv-pre-exposure-prophylaxis-prep. This newsletter article aims to provide a basic introduction.

Who should receive PrEP?

PrEP is indicated in the following groups at high risk:

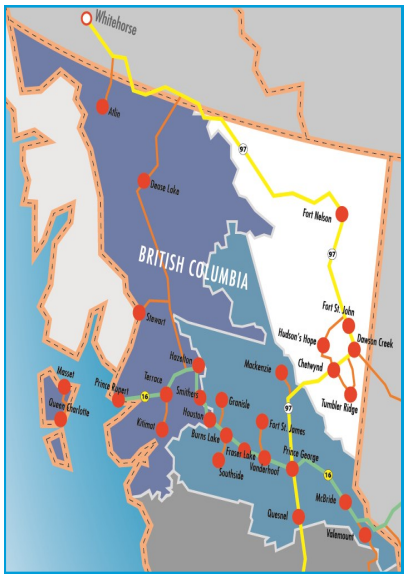
1. Men who have sex with men (MSM) and transgender women (TGW) who report condomless anal sex and any of the following:
   - Infectious syphilis or rectal bacterial sexually transmitted infection (STI), particularly if diagnosed in the preceding 12 months.
   - Use of non-occupational post-exposure prophylaxis (nPEP) on more than one occasion.
   - Ongoing sexual relationship with an HIV-positive partner who is not receiving stable ART and/or does not have an HIV viral load <200 copies/ mL.
   - HIV Incidence Risk Index for men who have sex with men (HIRI-MSM) score ≥10 (see the BCCfE PrEP guidelines for details on calculating the HIRI-MSM score)
2. Heterosexual men and women who report condomless vaginal or anal sex and an ongoing sexual relationship with an HIV-positive partner who is not receiving stable ART and/or does not have an HIV viral load <200 copies/mL.
3. People who inject drugs (PWID) using equipment shared with an HIV-positive injecting partner who is not receiving stable ART and/or does not have an HIV viral load <200 copies/mL.

PrEP is now available for free in BC for individuals meeting all of the following criteria:

1. Member of a high risk group, as defined above
2. Laboratory testing completed:
   a) Negative HIV test within the 15 days preceding the application for PrEP coverage. The window period for a standard HIV test is up to 3 weeks. If there has been high-risk exposure in the past month, or symptoms suggestive of acute HIV infection in the past 6 weeks, call BCCDC virologist at 604-707-5600 to arrange a pooled NAAT HIV RNA.

Inside this Issue:

Notable Quotable:



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(Continued from page 1)

b) **CrCl or eGFR >** 60mL/min
c) Hepatitis B surface antigen (**HBsAg**) status is documented, whether positive or negative
d) Other recommended tests (not required for PrEP coverage): urinalysis and/or urine ACR for absence of proteinuria; pregnancy test; STI and hepatitis B/C screening; hepatitis B vaccination if not immune

3. Current BC resident with MSP or Interim Federal Health coverage.

Precautions: Possible risks to the patient include nephrotoxicity, and decreased bone mineral density. Careful assessment of risks and benefits is warranted in patients who have additional risk factors for these outcomes. Regular monitoring of renal function is recommended in all patients on PrEP. See the BCCfE guidelines for further details.

Pregnancy: PrEP is category B. Regular monitoring of pregnancy status is recommended in all patients of childbearing potential who are using PrEP, so that if pregnancy occurs, HIV-related risks are considered early on during the pregnancy.

Counselling patients about PrEP

Other risk reduction strategies: In addition to offering PrEP, anyone reporting the above risk factors should also be counselled around risk reduction, including using condoms and not sharing injecting. However, it should also be recognized that some people will not be willing or able to consistently adhere with risk reduction recommendations, and PrEP is highly effective at preventing HIV in this group.

Adherence: Counselling should emphasize that efficacy is greatly reduced in those who do not adhere daily.

Time to maximum effectiveness: Preliminary data suggests that, following PrEP initiation, the medication only reaches steady state after 7 days in rectal mucosa and 20 days in the cervico-vaginal mucosa. Safer sex practices should be used during this period.

Logistics

Coverage is arranged through the BC Centre for Excellence in HIV/AIDS. For more information on the application process as well as clinical guidelines for using PrEP, please consult http://cfenet.ubc.ca/hiv-pre-exposure-prophylaxis-prep or call St Paul's Hospital Ambulatory Pharmacy support Monday-Friday 8am-5pm at 1-888-511-6222.

To learn more

- Northern Health's HIV and Hepatitis C Specialized Support Team can provide further information regarding treatment, community resources, and social support. Contact the team at 1-888-645-6495.
- BC Centre for Excellence in HIV/AIDS (BCCfE). HIV Pre-Exposure Prophylaxis (PrEP). **http://www.cfenet.ubc.ca/hiv-pre-exposure-prophylaxis-prep**
- Centres for Disease Control and Prevention (CDC). HIV/AIDS: PrEP. https://www.cdc.gov/hiv/basics/prep.html

Submitted by: Dr. Andrew Gray, Northern Interior Medical Health Officer, with input from Jennifer Hawkes, Pharmacist, HIV/HCV Specialized Support Team

New Subunit Shingles Vaccine

Shingles:
Shingles (herpes zoster) is caused by reactivation of latent varicella zoster virus (VZV), which also causes varicella (chicken pox). Its most common symptom is a painful skin rash with blisters. The main complication is post-herpetic neuralgia (PHN) with prolonged severe pain. About 1 in 3 people get shingles in their lifetime. Shingles is most common in people over 50 years of age or in those with compromised immune systems. People over the age of 70 are more likely to get PHN.

Shingles Vaccines:
Shingles vaccines can provide protection against VZV reactivation. Until recently, live attenuated varicella zoster vaccine (Zostavax) was the only type of shingles vaccine available in Canada. Recently, a new adjuvanted recombinant subunit vaccine (Shingrix) has been approved by Health Canada, and is expected to be available in early 2018.

Comparing Shingles Vaccines:
Vaccine Efficacy
The live attenuated vaccine's efficacy (VE) in people aged 70 to 79 years is 41% for shingles, and 55% for PHN. The subunit vaccine has higher VE in people aged 70 to 79 at 91% for shingles, and 89% for PHN. Unlike the live attenuated vaccine, the efficacy of the subunit vaccine does not appear to decrease significantly with age.

Safety & Adverse Events
Both vaccines are considered safe in terms of severe adverse events, with no significant difference in severe adverse event rates between the vaccine and placebo groups. The subunit vaccine is more reactogenic: with the live attenuated vaccine, 48% of recipients reported injection site pain, swelling or redness. With the subunit vaccine, 74% of recipients reported injection site reactions. Systematic reactions including fever are also more frequent with the subunit vaccine compared to the live attenuated vaccine. 10% of recipients of the subunit vaccine experience adverse effects that are significant enough to interfere with daily activities.

Cost
In BC, the live-attenuated shingles vaccine costs about $200 at some travel clinics. The subunit vaccine requires 2 doses for protection. Overall, the subunit vaccine costs about a third more per dose than the live-attenuated vaccine, not including administration cost.

Recommendations:
Canada's National Advisory Committee on Immunization (NACI) recommends the live-attenuated shingles vaccine for people aged 60 and older. This vaccine is also approved for anyone aged 50 and older. NACI has not yet issued any recommendations related to the subunit vaccine. Neither vaccine is publicly funded in BC.

In the U.S., the Advisory Committee on Immunization Practices (ACIP) recommends the subunit vaccine over the live attenuated vaccine for adults over 50. It also recommends, for those previously vaccinated with live-attenuated vaccine, re-vaccination with the subunit vaccine.

Comments for Northern BC physicians:
With no Canadian guideline available, we recommend northern BC physicians and patients make an informed decision, weighing the benefits of improved vaccine efficacy against the increased likelihood of local and systemic reactions and the higher cost of the subunit shingles vaccine.

Further updates will follow when Canadian or provincial recommendations are issued.

Resources:

1. HealthLink BC: https://www.healthlinkbc.ca/healthlinkbc-files/shingles-vaccine
2. BCCDC guideline for Zostavax: http://www.bccdc.ca/resource-gallery/Documents/Guidelines%20and%20Forms/Guidelines%20and%20Manuals/Epid/CD%20Manual/Chapter%202%20-%20Imms/Part4/Zoster.pdf
3. Canadian Immunization Guide: https://www.canada.ca/en/public-health/services/publications/healthy-living/canadian-immunization-guide-part-4-active-vaccines/page-8-herpes-zoster-(shingles)-vaccine.html
4. ACIP Recommendations: https://www.cdc.gov/mmwr/volumes/67/wr/mm6703a5.htm
5. ACIP Economic Evaluation: https://www.cdc.gov/vaccines/acip/meetings/downloads/slides-2017-06/zoster-04-leidner.pdf
6. Live-Attenuated Vaccine Efficacy Study: http://www.nejm.org/doi/full/10.1056/NEJMoa051016
7. Subunit Vaccine Efficacy study: http://www.nejm.org/doi/full/10.1056/NEJMoa1603800
8. AAFP article: https://www.aafp.org/news/health-of-the-public/20171031acipmeeting.html

Submitted by: Dr. Jong Kim, Northeast Medical Health Officer

Antimicrobial Stewardship in NH
This Month's Topic-Asymptomatic Bacteriuria1-6

As the name suggests, asymptomatic bacteriuria is the presence of a significant colony count of bacteria recovered from a urine sample in a person without any signs or symptoms associated with a urinary tract infection. It is most common in the elderly (over 65 years), 20% in women and 10% in men. As age advances so does the incidence – up to 50% in women and 30% in men over age 80. It is more commonly seen in hospitals and nursing homes and incidence rates increase with longer durations of stay.

Non-specific Signs and symptoms that may or may not indicate a urinary tract infection:
- Fever*
- Hematuria- blood in urine*
- Cognitive changes*

* These alone are insufficient to diagnose a urinary tract infection

NOT typically associated with a urinary tract infection:
- Dizziness
- New or increased falls
- Decreased appetite
- Altered behaviour:
  - New or increased verbal or physical aggression
  - Confusion/disorientation
  - New or increased wandering
  - Disorganized thinking

Exclude all other potential causes of non-specific symptoms:
- Dehydration
- New medications/drug interactions
- Sleep disturbances
- Sensory deprivation
- Trauma
- Hypoxia
- Hypoglycemia
- Infection other than urinary tract infection

Top Three **Myths**:

1. Urine is cloudy and smells bad - Patient has UTI
   a. Visual inspection not helpful
   b. Foul-smelling - unreliable indicator

2. Urine is positive for leucocyte esterase – need to perform urine culture
   a) Urine white blood cell counts vary depending on hydration. Present in up to 90% of patients with asymptomatic bacteriuria. Present in 30% of patients in LTC with no bacteriuria.

May also be elevated:
- Hematuria of non-infectious cause
- Acute renal failure
- Sexually transmitted diseases
- Non-infectious cystitis

3. Urine has nitrates present - Patient has UTI

a) Urine nitrate has high predictive value for bacteriuria but: Not all bacteria positive for nitrate test
   - *Pseudomonas spp*
   - *Enterococcus spp*

Many elderly have asymptomatic bacteriuria

b) Combination of negative leucocyte and negative nitrate: Good to rule out UTI; Negative predictive value = 88%

Some points for practice:
- Asymptomatic bacteriuria is a colonization state **NOT** an infection
- ** **Antibiotics are NOT indicated** **Exceptions: pregnancy and prior to genitourinary procedures
- Bacteriuria and pyuria are **expected** findings in the elderly
- Symptomatic UTI is much **less common** than asymptomatic bacteriuria
- Foul-smelling and cloudy urine typically indicate dehydration, **NOT** urinary tract infection
- Culturing urine specimens based on dipstick / positive urinalysis is **NOT** recommended due to its poor predictive value in the elderly
- Treatment of asymptomatic bacteriuria **DOES NOT** alter clinical outcome but results in adverse events and promotes antimicrobial resistance

Resources

1. Nicolle LE. Infect Dis Clin North Am 1997;11(3):647-62
2. Nicolle LE. Infect Control Hosp Epidemiol 2001;22(3):167-75
3. Deville WL, et al. BMC Urol 2004;4:4
4. Juthani-Mehta M, et al. Infect Control Hosp Epidemiol 2007;28(7):889-91
5. Lammers RL et al. Ann Emerg Med 2001;38:505–12
6. CDC 2014: CDC/NHSN surveillance definitions for specific types of infections

Do you have an idea for a newsletter?
Please send any suggestions or articles to:
NHPhysiciansNewsletter@northernhealth.ca

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The Truth and Reconciliation Commission

The Truth and Reconciliation Commission's report was released in December 2015. The report details 94 Calls to Action (recommendations) for Canadians to redress the legacy of residential schools (Actions 1-42) and advance the process of reconciliation (Actions 43-94). This newsletter series will walk through the 94 Calls to Action to support Northern physicians and other providers to learn about the legacies and take actions towards reconciliation in their practices, relationships, and communities.

The categories to redress the legacy of residential schools include; child welfare, education, language and culture, health, and justice. This issue we highlight 9 Reconciliation Calls to Action. Others will be shared in upcoming newsletters.

To learn more about the Truth and Reconciliation Commission and the Calls to Action, visit http://nctr.ca/

National Council for Reconciliation

53. We call upon the Parliament of Canada, in consultation and collaboration with Aboriginal peoples, to enact legislation to establish a National Council for Reconciliation. The legislation would establish the council as an independent, national, oversight body with membership jointly appointed by the Government of Canada and national Aboriginal organizations, and consisting of Aboriginal and non-Aboriginal members. Its mandate would include, but not be limited to, the following …

54. We call upon the Government of Canada to provide multi-year funding for the National Council for Reconciliation to ensure that it has the financial, human, and technical resources required to conduct its work, including the endowment of a National Reconciliation Trust to advance the cause of reconciliation.

55. We call upon all levels of government to provide annual reports or any current data requested by the National Council for Reconciliation so that it can report on the progress towards reconciliation. The reports or data would include, but not be limited to …

56. We call upon the prime minister of Canada to formally respond to the report of the National Council for Reconciliation by issuing an annual "State of Aboriginal Peoples" report, which would outline the government's plans for advancing the cause of reconciliation.

Professional Development and Training for Public Servants

57. We call upon the Parliament of Canada, in consultation and collaboration with Aboriginal peoples, to enact legislation to establish a National Council for Reconciliation. The legislation would establish the council as an independent, national, oversight body with membership jointly appointed by the Government of Canada and national Aboriginal organizations, and consisting of Aboriginal and non-Aboriginal members. Its mandate would include, but not be limited to, the following …

Church Apologies and Reconciliation

58. We call upon the Pope to issue an apology to survivors, their families, and communities for the Roman Catholic Church's role in the spiritual, cultural, emotional, physical, and sexual abuse of First Nations, Inuit, and Métis children in Catholic-run residential schools.

59. We call upon church parties to the settlement agreement to develop ongoing education strategies to ensure that their respective congregations learn about their church's role in colonization, the history and legacy of residential schools, and why apologies to former residential school students, their families, and communities were necessary.

60. We call upon leaders of the church parties to the settlement agreement and all other faiths, in collaboration with Indigenous spiritual leaders, survivors, schools of theology, seminaries, and other religious training centres, to develop and teach curriculum for all student clergy, and all clergy and staff who work in Aboriginal communities, on the need to respect Indigenous spirituality in its own right, the history and legacy of residential schools and the roles of the church parties in that system, the history and legacy of religious conflict in Aboriginal families and communities, and the responsibility that churches have to mitigate such conflicts and prevent spiritual violence.

61. We call upon church parties to the settlement agreement, in collaboration with survivors and representatives of Aboriginal organizations, to establish permanent funding to Aboriginal people for …

Submitted by:
Dr. Sandra Allison Chief Medical Health Officer

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Volume 14. Number 3. March 2018 • Page 1 of 3

Antimicrobial Stewardship Program- Managing uncomplicated skin and soft tissue infections – preventing hospital admissions

Skin and soft tissue infections are a common reason for physician office and emergency department visits. Depending on the severity at presentation initiation of oral therapy may not be desirable and a few days of intravenous therapy prior to conversion to oral therapy may be required. In attempts to reduce number of admissions, physician often turn to outpatient administration of IV antimicrobials.

Previous practices in NH for outpatient IV management of uncomplicated skin and soft tissue infections (uSSTI) relied on the use of cefazolin plus oral probenecid. In 2011, probenecid was removed from the Canadian Market. At that time, ceftriaxone replaced cefazolin plus probenecid in the outpatient setting for uSSTI. This is not an ideal practice because ceftriaxone has suboptimal activity against S. aureus, has a higher risk for developing C. difficile infection and provides unnecessary gram negative coverage promoting antimicrobial resistance.

Probenecid (a uricosuric agent that inhibits kidney tubular secretion of cefazolin) given orally prior to a once daily dose of cefazolin 2 g IV has been shown to increase serum concentrations and extend the half-life of cefazolin in a manner that achieves clinical resolution of cellulitis and related soft tissue infections compared to treatment with ceftriaxone 2 g IV daily. Prescribing cefazolin 2 g IV q24h plus probenecid 1 g PO daily 10 to 30 min prior to cefazolin in outpatient treatment settings for uSSTI will minimize use of ceftriaxone for uSSTI in outpatient treatment settings. However there will still be situations that warrant use of ceftriaxone in the outpatient setting (e.g. complicated infections such as: bone and joint infection, endocarditis, moderate/severe diabetic foot ulcers and animal bites).

NH is now able to obtain a compounded product through a Canadian manufacturer in Quebec. These capsules are not available

(Continued on page 2)

Inside this Issue:

Notable Quotable:

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(Continued from page 1)

via community pharmacies (manufacturer will only sell to hospital pharmacies), therefore NH facilities are required to provide patients with this oral medication daily (when patient returns for cefazolin dose).

Probenecid is contraindicated in patients with renal dysfunction and should not be used in patients with a creatinine clearance (CrCl) of less than 30 mL/min. Patients with CrCl of less than 30 mL/min could be treated with cefazolin at a reduced frequency (see below).

Creatinine Clearance (mL/min)	Cefazolin dosing
10 – 30	Cefazolin 2 g IV q 12h (no probenecid)
Less than 10	Cefazolin 2g IV 24h (no probenecid)
Hemodialysis	Cefazolin 2g IV after dialysis 3x/week (no probenecid)

Points for practice

- Use of cefazolin + probenecid for uSSTI allows sparing of ceftriaxone for more complicated infections and allows for convenient daily dosing for outpatients
- Assess response to initial antibiotic therapy at 3 days and consider conversion to oral therapy
- Keep in mind that an increased redness/extension of cellulitis may occur after initiation of antibiotic therapy (due to release of toxins from bacteria) therefore NOT a reliable marker of clinical status if otherwise improving

Submitted by:
Alicia Rahier, Antimicrobial Stewardship Program Coordinator

The Truth and Reconciliation Commission

The Truth and Reconciliation Commission's report was released in December 2015. The report details 94 Calls to Action (recommendations) for Canadians to redress the legacy of residential schools (Actions 1-42) and advance the process of reconciliation (Actions 43-94). This newsletter series will walk through the 94 Calls to Action to support Northern physicians and other providers to learn about the legacies and take actions towards reconciliation in their practices, relationships, and communities.

The categories to redress the legacy of residential schools include; child welfare, education, language and culture, health, and justice. This issue we highlight 9 Reconciliation Calls to Action. Others will be shared in upcoming newsletters.

To learn more about the Truth and Reconciliation Commission and the Calls to Action, visit http://nctr.ca/

Education for reconciliation

62. We call upon the federal, provincial, and territorial governments, in consultation and collaboration with survivors, . Aboriginal peoples, and educators, to...

(Continued on page 3)

The Truth and Reconciliation Commission

Education for reconciliation

63. We call upon the Council of Ministers of Education, Canada to maintain an annual commitment to Aboriginal education issues, including …

64. We call upon all levels of government that provide public funds to denominational schools to require such schools to provide an education on comparative religious studies, which must include a segment on Aboriginal spiritual beliefs and practices developed in collaboration with Aboriginal elders.

65. We call upon the federal government, through the Social Sciences and Humanities Research Council, and in collaboration with Aboriginal peoples, post-secondary institutions and educators, and the National Centre for Truth and Reconciliation and its partner institutions, to establish a national research program with multi-year funding to advance understanding of reconciliation.

Youth Programs

66. We call upon the federal government to establish multi-year funding for community-based youth organizations to deliver programs on reconciliation, and establish a national network to share information and best practices.

Museums and Archives

67. We call upon the federal government to provide funding to the Canadian Museums Association to undertake, in collaboration with Aboriginal peoples, a national review of museum policies and best practices to determine the level of compliance with the United Nations Declaration on the Rights of Indigenous Peoples and to make recommendations.

68. We call upon the federal government, in collaboration with Aboriginal peoples, and the Canadian Museums Association to mark the 150th anniversary of Canadian Confederation in 2017 by establishing a dedicated national funding program for commemoration projects on the theme of reconciliation.

69. We call upon Library and Archives Canada to fully adopt and implement the United Nations Declaration on the Rights of Indigenous Peoples and the United Nations Joinet-Orentlicher principles, as related to Aboriginal peoples' inalienable right to know the truth about what happened and why, with regard to human rights violations committed against them in the residential schools, and …

70. We call upon the federal government to provide funding to the Canadian Association of Archivists to undertake, in collaboration with Aboriginal peoples, a national review of archival policies and best practices to …

Submitted by: **Dr. Sandra Allison,** Chief Medical Health Officer

Do you have an idea for a newsletter?
Please send any suggestions or articles to:
NHPhysiciansNewsletter@northernhealth.ca
Back issues of *NH Physicians, Partners in Wellness* newsletters and bulletins are located on the NH Physicians website:
http://physicians.northernhealth.ca/physicianResources/PublicHealth.aspx

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Northern Health Physicians
Partners in Wellness

Public Health Newsletter for Northern Health Physicians

Volume 14. Number 4. April 2018 • Page 1 of 3

Understanding Our Youth's Health- McCreary's Adolescent Health Survey

It is important for health care providers to understand the health of the youth in the community they serve. Reports generated from the McCreary's British Columbia (BC) Adolescent Health Survey (AHS) can improve the way in which care is delivered and engagement is coordinated with community partners to support vulnerable youth.

What is the Adolescent Health Survey?

The BC AHS is an information gathering survey used to collect valuable information about young people's physical and emotional health, and about factors that can influence health during adolescence or in later life.[1] This survey has been in place in BC since 1992 and is conducted every five years by the McCreary Center Society in collaboration with provincial government, public health systems and school districts.

What is happening in Northern BC?

In Northern Health the AHS is currently being administered to the identified public schools in all health service delivery areas to youth grades 7-12 and aged 12-19. All school districts in BC, both public and private, were invited to participate in the survey. In 2018, ten school districts in the Northern Health region are participating:[1] school district #28 Quesnel; #50 Haida Gwaii; #52 Prince Rupert; #54 Bulkley Valley; #57 Prince George; #59 Peace River South; #60 Peace River North; #81 Fort Nelson; #82 Coast Mountains, and; #91 Nechako Lakes.

Why is the Adolescent Health Survey Important – For Your Community?

The survey has contributed to the longitudinal data repository on what youth *know, think* and *do* about their own health.[1] The survey helps all those working with school aged children to better understand physical, mental and social health of their community's youth cohort. The aim of this work is to inform policy and program changes by identifying what is working well as well as areas for improvement. It supports new program and project development by identifying targeted areas for health promotion and prevention initiatives.[1]

Why is Adolescent Health Survey Important – For Your Practice?

Health care providers across BC strive to understand the life of youth, such as sexual orientation, mental health, substance use, their social and family relationships, to provide holistic, person centered care. Thus, the survey and its findings can support health care providers to tailor practice with their youth clients.

For example, the 2013 McCreary provincial report identified that the number one reason youth did not access needed mental health services was because they did not want their parents to know (see below).[1] This information is valuable for healthcare providers when speaking with youth, building a trusting and confidential relationship, and explaining mature minor consent legalities in BC.[2]

(Continued on page 2)

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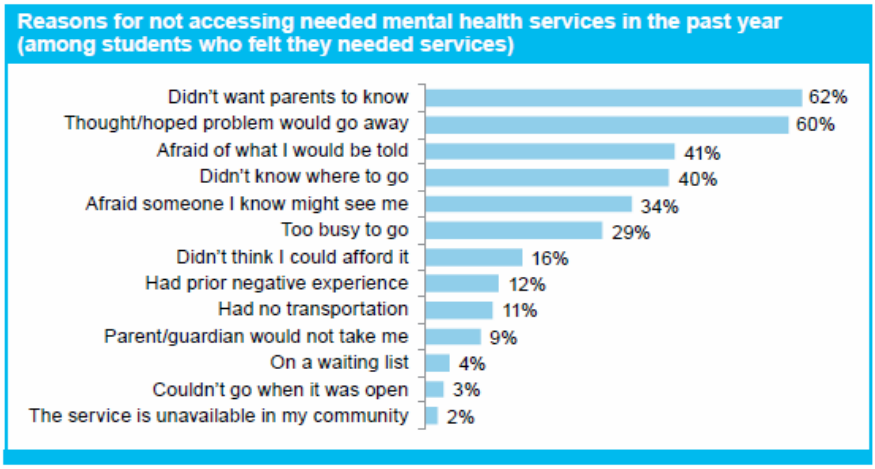

Note: Youth could choose more than one response.

For more information about the AHS and other youth surveys, please visit the McCreary Centre Society website: https://www.mcs.bc.ca/2013_AHS_Reports.

If you would like more information on the AHS happening in your community, please connect with your local school district or contact NH's Healthy Schools Lead, Taylar Endean (HealthySchools@northernhealth.ca)

References:
1. McCreary Centre Society (2012). Research and Action for Youth Health. https://www.mcs.bc.ca/about_the_bc_ahs
2. Zucker, Noah A. et al. (2017). Confidentiality in the Doctor-Patient Relationship: Perspectives of Youth Ages 14–24. Journal of Adolescent Health , Volume 62 , Issue 2 , S92. DOI: https://doi.org/10.1016j.jadohealth.2017.11.187

Submitted by:
Dr. Jong Kim, Northeast Medical Health Officer
Lara Frederick, Public Health Program Lead
Taylar Endean, Regional Nursing Lead Health Schools

Antimicrobial Stewardship Program Update

Bacterial resistance and adverse effects from antimicrobials are growing concerns in the general public and health care systems nation-wide. We are losing our antimicrobials to multi-drug resistant bugs and patients are experiencing adverse events such as *C. difficile* infection due to over use of antimicrobials.

Antimicrobial Stewardship (AMS) is a term used to describe a variety of clinical interventions where the sole purpose is to improve and measure the appropriate use of antimicrobial agents (i.e. antibiotics, antifungals, antivirals). The goal of an AMS program is to improve clinical outcomes related to antimicrobial use, including reducing costs of infections, minimizing toxicities and adverse events and limiting selection of antimicrobial resistant strains.

Q: Does Northern Health have an AMS program?

A: Northern Health's AMS program research and development began in 2014. Today it consists of a program lead and medical lead, interdisciplinary committee and has several collaborative relationships with other programs and departments in northern health (e.g. Infection Prevention and Control, Microbiology). The members of the program have been working on creating and providing clinical tools/supports and policies. Using clinical pharmacists across the region to review and evaluate patients receiving antimicrobials in NH facilties has led to over 2000 recommendations made to prescribers regarding antimicrobial therapies in the past 1.5 years.

Q: Who is involved in the AMS program and it's initiatives?

A: Any physician, pharmacist and nurse can work together to ensure that the right antimicrobial at the right dose and time is given for the right duration. In addition to the lead pharmacist/program coordinator Alicia Rahier, an interdisciplinary regional subcommittee has been established with Dr. Hamour as the Medical Lead.

Q: How can I get more information?

We need to start the change now! The longer we use antimicrobials inappropriately (drug/bug mismatch, using broad spectrum agents when better options available and giving antimicrobials for too long) we cause negative outcomes in our patients (e.g. *C. Diff* infections) and we run the risk of not having antimicrobials that will work in the future!

You can access resources created and or provided by the AMS program by visiting the NH physician's website or OurNH. Both websites contain a page dedicated to AMS and it's initiatives.

For more information on Northern Health's program, current and future initiatives please contact the AMS Program Coordinator at alicia.rahier@northernhealth.ca

Submitted by: Alicia Rahier, Antimicrobial Stewardship Program Coordinator

The Truth and Reconciliation Commission

The Truth and Reconciliation Commission's report was released in December 2015. The report details 94 Calls to Action (recommendations) for Canadians to redress the legacy of residential schools (Actions 1-42) and advance the process of reconciliation (Actions 43-94). This newsletter series will walk through the 94 Calls to Action to support Northern physicians and other providers to learn about the legacies and take actions towards reconciliation in their practices, relationships, and communities.

The categories to redress the legacy of residential schools include; child welfare, education, language and culture, health, and justice. This issue we highlight 8 Reconciliation Calls to Action. Others will be shared in upcoming newsletters.

To learn more about the Truth and Reconciliation Commission and the Calls to Action, visit http://nctr.ca/

Missing Children and Burial Information

71. We call upon all chief coroners and provincial vital statistics agencies that have not provided to the Truth and Reconciliation Commission of Canada their records on the deaths of Aboriginal children in the care of residential school authorities to make these documents available to the National Centre for Truth and Reconciliation.
72. We call upon the federal government to allocate sufficient resources to the National Centre for Truth and Reconciliation to allow it to develop and maintain the National Residential School Student Death Register established by the Truth and Reconciliation Commission of Canada.
73. We call upon the federal government to work with churches, Aboriginal communities, and former residential school students to establish and maintain an online registry of residential school cemeteries, including, where possible, plot maps showing the location of deceased residential school children.
74. We call upon the federal government to work with the churches and Aboriginal community leaders to inform the families of children who died at residential schools of the child's burial location, and to respond to families' wishes for appropriate commemoration ceremonies and markers, and reburial in home communities where requested.
75. We call upon the federal government to work with provincial, territorial, and municipal governments, churches, Aboriginal communities, former residential school students, and current landowners to develop and implement strategies and procedures for the ongoing identification, documentation, maintenance, commemoration, and protection of residential school cemeteries or other sites at which residential school children were buried.
76. We call upon the parties engaged in the work of documenting, maintaining, commemorating, and protecting residential school cemeteries to adopt strategies in accordance with the following principles …

National Centre for Truth and Reconciliation

77. We call upon provincial, territorial, municipal, and community archives to work collaboratively with the National Centre for Truth and Reconciliation to identify and collect copies of all records relevant to the history and legacy of the residential school system, and to provide these to the National Centre for Truth and Reconciliation.
78. We call upon the Government of Canada to commit to making a funding contribution of $10 million over seven years to the National Centre for Truth and Reconciliation, plus an additional amount to assist communities to research and produce histories of their own residential school experience and their involvement in truth, healing, and reconciliation.

Submitted by: Dr. Sandra Allison, Chief Medical Health Officer

Northern Health Physicians
Partners in Wellness

Public Health Newsletter for Northern Health Physicians

Volume 14. Number 5. May 2018 • Page 1 of 7

Rotavirus Immunization Program: Transitioning to pentavalent rotavirus vaccine (RV5, RotaTeq®)

Beginning May 2018 BC will begin transitioning from the monovalent rotavirus vaccine (RV1, Rotarix®) to the pentavalent rotavirus vaccine (RV5, RotaTeq®) in the infant rotavirus immunization program. The National Advisory Committee on Immunization recommends routine infant rotavirus vaccination with either rotavirus vaccine product, without preferential recommendation for one over the other. As both products are live attenuated vaccines that are given orally, the main difference with this product change is the immunization schedule, as the schedule for RotaTeq® is **3 doses**, as compared to 2 doses for Rotarix®.

RotaTeq® vaccine is given orally at **2, 4 and 6 months of age**. The maximum age for dose 1 of RotaTeq® is 20 weeks less 1 day and the maximum age for the last dose is 8 months. Ideally, infants who begin their series with Rotarix® will be able to complete their series with the same product. In order to achieve this it is important to balance the remaining Rotarix® stock on hand to ensure completion of vaccine series started on this product whenever possible, while also minimizing vaccine wastage. If any dose of the series was RotaTeq® (or the product is unknown), a total of 3 doses should be administered.

Contraindications for the two products are the same.

For questions about RotaTeq® vaccine, please contact your local primary care nurse or refer to the following resources:

Resources for health care professionals

BCCDC's Q&A regarding this product change: http://www.bccdc.ca/resource-gallery/Documents/Guidelines%20and%20Forms/Guidelines%20and%20Manuals/Immunization/Vaccine%20Info/Rotavirus_QandA_Apr_2018.pdf

BC Immunization Manual: http://www.bccdc.ca/health-professionals/clinical-resources/communicable-disease-control-manual/immunization

Resources for the general public
ImmunizeBC: www.immunizebc.ca

Submitted by: Dr. Andrew Gray, Medical Health Officer

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Antimicrobial Stewardship in Practice (Part 1)

By now most clinicians are familiar with the basic definition of Antimicrobial Stewardship (AMS). Which is defined as the collection of interventions used to promote the optimal use of antimicrobials (using the right drug at the right dose for the correct frequency and length of time). The goals of AMS are to limit unnecessary antimicrobial exposure and optimally treat infections while minimizing toxicities and adverse events. But for some clinicians the question still remains – How do I incorporate AMS principles into my daily patient care practices?

Here are some AMS principles that can be included in everyday patient care related activities:

1. Take thorough and complete antibiotic allergy histories
2. Monitor patients for adverse effects from antibiotics
3. Monitor and identify patients for oral antibiotic step down assessments
4. Limit urine analysis and culture collections
5. Proper wound culture collection

Antibiotic Allergy Histories

Patients report any reaction to medications as an allergy therefore it is important to educate our patients on the difference between a side effect and an allergy. Labeling patients with untrue antimicrobial allergies can lead to issues for prescribing and increases the risk of using broad-spectrum or expensive medications unnecessarily. A commonly reported antibiotic allergy that impacts future prescribing is penicillin which is reported by about 10% of patients when in fact less than 1% have a true allergy.[1] Of those patients that have a true allergy, 50% will lose their sensitivity after 5 years (80% after 10 years).[1] Often the concern with penicillin allergy is the potential for cross-reactivity with other antimicrobial agents. There is a common misconception that the risk of cross-reactivity is higher than in reality. Less than 3% of patients with confirmed penicillin allergy will have a cross reaction with cephalosporins with similar side chains. Cefazolin is NOT expected to cross-react with any penicillin or cephalosporin as it does not have a similar side chain to any other Beta-lactam antibiotic.[1] With regards to carbepenems (e.g. meropenem, imipenem) 4.3% of patients with a penicillin allergy will cross react.[1]

IV to PO Conversion

Conversion from IV to PO antimicrobials in select patients leads to positive clinical outcomes such as early discharge and reduced risk of IV line infections as well as cost savings for our healthcare system. Timely conversion from IV to PO antimicrobial therapy is an effective strategy for many infections and should should be considered as soon as a patient is placed on IV antimicrobials. Making the switch from IV to PO must be individualized based on the patient's clinical status and type of infection. Refer to the NH Clinical Practice Standard 1-20-6-1-010.

Watch for the Antimicrobial Stewardship article next month for more information on limiting urine analyses and culture collection as well as the principles of proper wound culture collection.

You can access resources created and or provided by the AMS program by visiting the NH physician's website or OurNH.

Reference: 1. Bugs and Drugs online reference. Beta-Lactam allergy. Updated: Jan 25, 2018. URL: http://www.bugsanddrugs.org/Home/Index/bdpageAC6F582CF1A24A71AB998B52DD7F60F9

Submitted by: Alicia Rahier, Antimicrobial Stewardship Program Coordinator

New e-learning course: BC Pediatric Nutrition Guidelines

In early 2017, the Provincial Health Services Authority (PHSA) released the BC *Pediatric Nutrition Guidelines (Six Months to Six Years) for Health Professionals*. The guidelines assist health professionals to identify nutrition issues and support consistency in nutrition messaging among health professionals throughout BC. You may have read about these guidelines in an article in the BC Medical Association Journal, as well as in a previous issue of this Physician's Newsletter.

This BC resource is organized by age (i.e. 6-9 months, 9-12 months, 12-24 months, and 2-6 years) and includes:
Relevant milestones related to feeding.

- Guidelines for food and fluids.
- Nutrition risk indicators that warrant additional investigation, intervention and/or referral.
- Additional information related to: parental influences on eating habits, growth monitoring, informed decision making about infant feeding, food allergy prevention, iron and food safety.

PHSA has developed an e-learning course to support orientation to these BC guidelines, and this course is now live on the LearningHub. The course consists of 5 modules and quizzes, which require about 2.5 hours to complete. The course is entitled "BC Pediatric Nutrition Guidelines for Health Professionals – using the Guidelines with your Clients" and can be accessed at:

(Continued on page 2)

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https://learninghub.phsa.ca/Courses/17179. There is no cost; you simply need to create an account and login to access Learning Hub courses.

Health professionals in northern BC will find the above guidelines and e-learning modules to be a useful complement to existing Northern Health (NH) resources. Specifically, the NH Infant Toddler Nutrition Guidelines for Health Professionals provide additional depth and tools related to many pediatric nutrition topics. NH staff and physicians can access these guidelines and an orientation to these guidelines via the OurNH Population Health Nutrition all-staff page.

For more information about any of the above resources, please contact Lise Luppens, MA RD, Population Health Dietitian at Lise.Luppens@northernhealth.ca.

Submitted by: Lise Luppens, Population Health Dietitian

New Population and Public Health Resource Hub

We've developed a Resource Hub on OurNH to improve access to high quality, evidence-based prevention and health promotion information and resources.

The content is relevant for:

- Primary and community care interprofessional teams and those who support them (Team Leads, Community Service Managers, etc.)
- Health care practice across settings and disciplines.

You can easily access information, guidance, expertise and best practices on:

- Preventing chronic diseases, communicable disease and injuries; and
- Improving health and wellness where people live, work, learn and play.

Topics include:

- Communicable Disease
- Dental Health
- Harm Reduction
- Healthy Communities
- Healthy Schools
- Healthy Start
- Immunizations
- Injury Prevention
- Mental Wellness and Prevention of Substance Harms
- Physical Activity
- Population Health Nutrition
- Sexual and Reproductive Health
- Tobacco Reduction
- Vaccine Stewardship
- Vision Screening

Also find:

- Memos send to IPTs from Population and Preventative Public Health
- Contact information for Public Health Professionals who can support your practice
- General contact information if you are unsure where to start

The Resource Hub will continue to develop, so check back for new content. An evaluation is planned that will gather end-user input and inform improvements.

Explore the Resource Hub on OurNH: https://ournh.northernhealth.ca/ClinProgServ/phealth

Submitted by: Hilary McGregor, Knowledge Implementation and Evaluation Coordinator

The Truth and Reconciliation Commission

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To learn more about the Truth and Reconciliation Commission and the Calls to Action, visit http://nctr.ca/

Commemoration

79. We call upon the federal government, in collaboration with survivors, Aboriginal organizations, and the arts community, to develop a reconciliation framework for Canadian heritage and commemoration.
80. We call upon the federal government, in collaboration with Aboriginal peoples, to establish, as a statutory holiday, a National Day for Truth and Reconciliation to honour Survivors, their families, and communities, and ensure that public commemoration of the history and legacy of residential schools remains a vital component of the reconciliation process.
81. We call upon the federal government, in collaboration with survivors and their organizations, and other parties to the Settlement Agreement, to commission and install a publicly accessible, highly visible, Residential Schools National Monument in the city of Ottawa to honour Survivors and all the children who were lost to their families and communities.
82. We call upon provincial and territorial governments, in collaboration with Survivors and their organizations, and other parties to the Settlement Agreement, to commission and install a publicly accessible, highly visible, Residential Schools Monument in each capital city to honour Survivors and all the children who were lost to their families and communities.
83. We call upon the Canada Council for the Arts to establish, as a funding priority, a strategy for Indigenous and non-Indigenous artists to undertake collaborative projects and produce works that contribute to the reconciliation process.

Media and Reconciliation

84. We call upon the federal government to restore and increase funding to the CBC/ Radio-Canada, to enable Canada's national public broadcaster to support reconciliation, and be properly reflective of the diverse cultures, languages, and perspectives of Aboriginal peoples, including, but not limited to …
85. We call upon the Aboriginal Peoples Television Network, as an independent non-profit broadcaster with programming by, for, and about Aboriginal peoples, to support reconciliation, including but not limited to …
86. We call upon Canadian journalism programs and media schools to require education for all students on the history of Aboriginal peoples, including the history and legacy of residential schools, the United Nations Declaration on the Rights of Indigenous Peoples, Treaties and Aboriginal rights, Indigenous law, and Aboriginal–Crown relations.

Submitted by: Dr. Sandra Allison, Chief Medical Health Officer

Summer Exposures-Animal Bites

Warmer weather is upon us and with that a tendency for northerners to spend time in the beautiful wilderness options northern BC has to offer. We felt it might be useful to provide local physicians with some up to date information relevant to common exposures/presentations you may see in your office over the coming months.

Animal Bites in BC

My patient was bitten or scratch by an animal - now what?

1. Irrigate and treat the wound
2. Provide tetanus booster if needed
3. Assess the risk of rabies, If you believe the rabies risk is significant, or are uncertain, contact the MHO on-call to discuss the need for rabies post -exposure prophylaxis (RPEP). Note that MHO approval is needed to release RPEP in BC.

Rabies is essentially 100% fatal and 100% preventable. RPEP should always be given promptly when a significant risk of rabies exposure is identified.

However, RPEP as with any medical treatment does have some associated risks and thus the appropriate provision of RPEP must align with a risk-benefit assessment. RPEP should not be provided in situation where risk is negligible. RPEP should generally be provided when both the following conditions are met:

- The exposure was significant: a bite, a scratch, or a mucous membrane or broken skin exposed to the animal's saliva: **and,**
- There is a non-negligible risk that the animal had rabies.

Could the animal have rabies? Generally, rabies is a virus of bats and terrestrial mammals (dogs, cats, raccoons, foxes, etc.).

- There are many different strains of rabies virus, and each strain generally only infects specific species of mammals . Different strains are present in different parts of the world.
- **In BC, rabies is only known to circulate among bats**, (estimated prevalence <0.5%). It is very rate for bat-variant rabies to "spill over" into other animals (approximately 10 documented instances in BC history).
- Other Canadian provinces have different rabies epidemiologic profiles, with mammalian variants also being potential hosts for rabies virus (e.g. raccoon, skunk, fox, etc.).

Elsewhere in the world, other mammal species are at risk of rabies, especially in Asia and Africa where dog variant rabies causes the most human cases.

Given this epizoology, animals that are considered potentially at risk of rabies in BC are limited to bats, and terrestrial mammals that meet one of the following conditions:

- Have displayed abnormal neurological behaviour and/or other signs of rabies, such as abnormal gait, paralysis, erratic movement, hyper salvation, excessive docility, or clearly unprovoked aggressiveness;
- Have tested positive for rabies;
- Are known to have interacted with a bat in BC in the preceding 6 months; or
- Are known to have been recently imported in the preceding 6 months from, or travelled to, a region endemic for rabies virus strains that may infect that type of mammal.

An apparently unprovoked attack by an otherwise physically well, terrestrial animal, that does not meet the above criteria, is generally **not** considered indicative of rabies.

If a domestic animal meets one or more of these criteria, the risk to human health can be evaluated further through either a 10-day observation period, or through laboratory testing for rabies virus. (Testing requires euthanasia of the suspect animal.)

Given our local epizoology, most animal (non-bat) exposures that occur in BC do not require RPEP. There has only been one document case of rabies in a human in recent BC history; this case was due to exposure to a bat. **The risk of rabies should be assessed differently for animal exposures that occur outside of BC.**

Animal bites are not reportable in BC. However, physicians and veterinarians that become aware of an animal bite or other animal exposure scenario that meets any of the above-listed criteria, should inform Northern Health Authority.

For further details on how rabies risk is assessed by public health professionals, RPEP schedules and dosing, and other background information, please see the BCCDC's rabies guidelines in Chapter 1 of the Communicable Disease Control Manual at http://www.bccdc.ca/health-professionals/clinical-resources/communicable-disease-control-manual.

The guidance provided to BC veterinarians can be found here: http://www.bccdc.ca/Documents/BC%20Rabies%20Guidance%20for%20Veterinarians_Nov%202017.pdf

Article Credit: Interior Health Authority: Medical Health Officers Update for Physicians (May 24, 2017) https://www.interiorhealth.ca/AboutUs/Leadership/MHO/MHO%20Updates/MHO%20Update%20-%20May%2024,%202017.pdf

Summer Exposures - Tick Bites

Background on Ticks in northern BC: Ticks with Lyme disease carrying **potential** (*Ixodes pacificus* and *Ixodes angustus*) are known to be present in low levels in the north. **The most common ticks found in the Northern Health region are Rocky Mountain Wood Ticks** (*Dermacentor andersoni*). Rocky Mountain Wood Ticks have not been implicated with Lyme disease, however, they also could cause tick paralysis and have the potential to carry rickettsial pathogens. In Canada, the only rickettsial disease observed to occur via tick transmission is Rocky Mountain Spotted Fever.

Tick Paralysis: This rare disease does occur in B.C., though it is not reportable.

- Characterized by an acute, ascending, flaccid paralysis resulting from exposure to a neurotoxin released by tick salivary glands during feeding.
- Mostly occurs in younger children and elderly early in the spring.
- Ticks can be attached to the scalp or neck and concealed by hair.
- In patients presenting with tick paralysis, examination often reveals an attached tick.
- Once the tick is removed, paralysis usually resolves within 24 hours.
- There is no test to confirm tick paralysis as the neurotoxin produced by the tick and its mechanism of action are not fully understood.
- Patients presenting with initial signs and symptoms of acute paralysis should have a physical exam searching for a tick.

BCCDC information on Tick paralysis: http://www.bccdc.ca/health-info/diseases-conditions/tick-paralysis

Rocky Mountain Spotted Fever:

- The causative agent of RMSF is Rickettsia rickettsia. In northwestern US and western Canada, it is spread by the Rocky Mountain wood tick-Dermacentor andersoni.
- The incubation period ranges from two to 15 days.
- Symptoms may include: fever, rash, a scab at the bite wound, inflammation of the blood vessels and/or lymph system.
- More serious forms of illness can include: hepatosplenomegaly, bleeding, renal failure, heart failure, neurological problems.
- Overall, the fatality rate varies and is generally low, especially with treatment. It increases with age, and can reach 30 per cent or more if left untreated.
- **Laboratory Diagnosis**
  - BCCDC Public Health Laboratory Offers testing for RMSP. Serologic assays are the most frequently used methods for confirming cases of RMSF. A 5-7 ml mlood sample in a serum separator tube should be collected after 7-10 days after the onset of illness. Eighty-five percent of patients will not have detectable antibody titers during the first week of illness, and a negative testing during this time does not rule out RMSF. For that reason a convalescent-phase samples should be collected 2-4 weeks after first sample or after the resolution of illness.
  - PCR detection of R. rickettsii in whole blood in EDTA tube is possible but less sensitive because low numbers of rickettsiae circulate in the blood. Furthermore early antibiotic intervention may decrease the sensitivity further.
- **Treatment**
  - For details around appropriate antibiotic treatment please see Do Bugs need Drugs http://www.bugsanddrugs.org/

Acute Lyme disease: None of the Lyme disease cases that have been diagnosed in Northern Health were exposed locally (i.e. they were either exposed elsewhere in BC, Canada or internationally).

- Most people do not notice the tick bite or attachment when it occurs.
- About 60-70% of all newly infected patients with Lyme disease will develop an expanding circular red (erythema migrans) rash from 3-10 days after the bite.
- Laboratory tests support clinical care when used correctly and are performed using validated methods in an accredited laboratory.
- In B.C., laboratory testing to diagnose Lyme disease is done by the BCCDC Public Health Laboratory (PHL).
- Routine antibiotic prophylaxis is not indicated for tick bites in BC, as harm is more likely than benefit**.** Reassure patients who present with tick bite that Lyme disease is currently extremely uncommon in northern BC, but counsel patients to return for assessment if symptoms consistent with Lyme disease occur. Outcomes are generally very good when Lyme disease is treated early.

BCCDC information on Lyme disease: http://www.bccdc.ca/health-info/diseases-conditions/lyme-disease-borreliaburgdorferi-infection

Health Canada/Public Health Agency of Canada: https://www.canada.ca/en/public-health/services/diseases/lymedisease.html

How to remove a tick

Grasp the tick by its mouth as close to the skin as possible with tweezers or other device and pull outwards, avoiding injecting the tick's stomach contents into the

(Continued on page 7)

Summer Exposures - Tick Bites cont..

skin. Smothering methods for tick removal are ineffective and increase risk of injection of infected material into the client.

Testing
NOTE: Physicians wishing to test ticks are to contact BCCDC PHL's Parasitology Laboratory at (604) 707-2629.

For questions regarding testing of humans, call BCCDC PHL's Zoonotic Diseases and Emerging Pathogens Laboratory at (604) 707-2628. Ticks are not forwarded from Public Health (PH) Offices and patients should not be directed to PH offices with ticks.

Drinking Water in the Wilderness

Parasites and certain bacteria are common in any surface water source, such as: lakes, streams and rivers, and can contaminate water that humans use for both drinking, eating, and recreation. Patients should be advised not to drink untreated water in the wilderness. Adequate treatment requires either boiling (for at least 1 minute) or filtering (1 micron or smaller). Bleach alone does not work well in killing Giardia ("beaver fever") or Cryptosporidium parasites.

Clinical illness for Giardia is characterized by diarrhea, abdominal cramps, bloating, weight loss, or malabsorption. Although generally not a serious illness, it can have some long lasting side effects if left untreated - an issue primarily for people whose immune systems are weakened.

Clinical illness for Cryptosporidium is characterized by frequent watery diarrhea, abdominal cramps, loss of appetite, low-grade fever, nausea, and vomiting. The illness may be prolonged and life-threatening in severely immunocompromised persons due to severe dehydration.

Treatment:
People with healthy immune systems normally clear Giardia and Cryptosporidium infections over the course of a few weeks without treatment. Giardiasis does also respond fairly well to anti-parasitic medication. Cryptosporidium is usually self-limiting in immunocompetent patients. If diarrhea is severe or prolonged, treatment with Nitazoxanide can be considered (see http://www.bugsanddrugs.org/), however, it has to be requested through Health Canada's Special Access Program. For immunocompromised patients, consult an Infectious Disease specialist.

Testing:
Requisitions for submitting clinical specimens (Microscopic examination of stool sample) can be found under the "parasitology" section
http://www.bccdc.ca/health-professionals/professional-resources/laboratory-services

Useful links:
information, see HealthLinkBC File #49b Disinfecting Drinking Water, HealthLinkBC File #10 Giardia Infection, and HealthLinkBC File #48 Cryptosporidium Infection.

Source:
Dr. Raina Fumerton, Medical Health Officer
Dr. Eleni Galanis, Public Health Physician
Dr. Erin Fraser, Public Health Veterinarian
Dr. Muhammed Morshed, Clinical Microbiologist

Northern Health Physicians
Partners in Wellness

Public Health Newsletter for Northern Health Physicians

Volume 14. Number 6. June 2018 • Page 1 of 3

Health Alert: Ebola Disease outbreak in the Democratic Republic of Congo

There is a recent outbreak of Ebola Virus Disease (EVD) in the Democratic Republic of Congo (DRC). As of May 20, 2018, a total of 61 cases of haemorrhagic fever have been reported in the region, including 38 confirmed, 14 probable and 9 suspect cases. **There have been no cases of EVD in Canada and the risk to most travelers is considered very low.**

Action and Advice

Should an individual with a recent history of travel to the Democratic Republic of Congo present to a health care provider and Ebola is considered to be in the differential diagnosis, we recommend the following course of action:

- **Place the patient in isolation with enhanced droplet contact precautions https://ournh.northernhealth.ca/PoliciesProcedures/DST%20Published%20Policies/1-11-1-1-110.pdf**
- **Contact the on-call Medical Health Officer and the regional Infectious Diseases consultant (Dr. Abuobeida Hamour) if available, through the UNHBC switchboard (250-565-2000).**
- **The Medical Health Officer will convene an immediate teleconference between the health care provider(s), the Provincial Health Officer, the Infectious Diseases Consultant and the BCCDC Medical Microbiologist, and provide an immediate risk assessment as well as guidance about how the patient should be managed**

Background on EVD

Ebola virus disease is a severe disease that causes haemorrhagic fever in humans and animals. Diseases that cause haemorrhagic fevers, such as Ebola, are often fatal as they affect the vascular system which can lead to significant internal bleeding and organ failure.

The Ebola virus can spread through:

- Contact with infected animals
- Contact with blood, body fluids or tissues of infected persons
- Contact with medical equipment, such as needles, contaminated with infected body fluids

NOTE: Airborne Transmission has not been documented as a mechanism of person-to-person spread

The incubation period of EVD varies from 2 to 21 days - there is no risk of transmission during the incubation period. Cases are not considered to be infectious before the onset of symptoms, however, communicability increases with each stage of illness. The case remains communicable as long as blood and body fluids contain the virus. This includes the post-mortem period.

(Continued on page 2)

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After hours calls to UHNBC Switchboard 250-565-2000 and ask for the on-call MHO

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Clinical symptoms of Ebola present as a severe acute viral illness consisting of sudden onset of fever, malaise, myalgia, severe headache, conjunctival infection, pharyngitis, vomiting, diarrhea that can be bloody, and impaired kidney and liver function. Diagnosis can be difficult, especially if only a single case is involved.

Often a maculopapular or petechial rash may be present that may progress to purpura. Bleeding from gums, nose, injection sites and gastrointestinal tract occurs in about 50% of patients. Dehydration and significant wasting occur as the disease progresses.
In severe cases, the haemorrhagic diathesis may be accompanied by leucopenia; thrombocytopenia; hepatic, renal and central nervous system involvement; or shock with multi-organ dysfunction.

Suggested Resources:
Information on the global situation:
http://www.who.int/csr/don/archive/disease/ebola/en/
https://www.promedmail.org/post/5812835

National and provincial guidance documents:
https://www2.gov.bc.ca/gov/content/health/about-bc-s-health-care-system/office-of-the-provincial-health-officer/current-health-topics/ebola

Background on Ebola:
http://www.bccdc.ca/health-info/diseases-conditions/ebola
https://www.canada.ca/en/public-health/services/diseases/ebola.html

Source:
Interior Health Authority

Kids Boost Immunity: Inspiring Canadian Students to "Educate Local to Vaccinate Global"

Kids Boost Immunity (KBI) is a free online learning resource for students that pairs local learning with a global reward: vaccines for children in need through UNICEF.

KBI is designed for students in grades 5-8 and is brimming with carefully curated lessons on a wide range of topics such as:

- *Germs and infections*
- *The immune system*
- *Vaccines*
- The spread of infectious disease & outbreaks
- *Global inequality in health and the role of NGOs*
- *Evaluating online information sources*
- *Antibiotics*

After completing a lesson, students are directed to take a quiz. Students earn vaccines for quiz questions they answer correctly - connecting local classroom learning directly to global giving. The more quizzes a student does, the more vaccines they earn for kids in another part of the world through UNICEF. It's that simple! All of the lessons are linked with either the science, health or socials curriculums.

How it Works

Teachers can sign-up their class by visiting www.kidsboostimmunity.com. Once registered, they will be given full access to all of the lessons and quizzes. Students will need to use a school computer or their own device (e.g. smart phone) to earn vaccines for UNICEF. Once all of the lessons within a topic are completed, students unlock a final quiz to reinforce learning. Teachers can assess learning outcomes through team and individual leaderboards that track student achievement. This includes displaying how many vaccines students have earned in real-time along with the number of questions answered correctly.

"As soon as my Grade 7-9 classes realized they could actually help other children around the world by learning about the concepts we would be studying anyway, they became very invested. A telling sign of student buy-in is when they continue to use the program and explore the site even after the activity is finished. Walking down the hall and hearing discussions about herd immunity or T versus B cells, I could tell that the learning would continue for my students because they had been given the opportunity to have a positive global impact with their efforts." Heidi Crowley – Teacher, Gray Academy, Winnipeg, Manitoba

Kids Boost Immunity represents a new approach to vaccination advocacy & education by connecting local grassroots education directly to global disease prevention.

Do you know any teachers or students who might be interested in Kids Boost Immunity? Refer them to: http://www.kidsboostimmunity.com

More About Kids Boost Immunity
Kids Boost Immunity is a national education and advocacy initiative administered through the Public Health Association of British Columbia, with financial contribution from the BC Ministry of Health and the Public Health Agency of Canada. The program is coordinated through the British Columbia Centre for Disease Control.

Source:
BC Centre for Disease Control

The Truth and Reconciliation Commission

The Truth and Reconciliation Commission's report was released in December 2015. The report details 94 Calls to Action (recommendations) for Canadians to redress the legacy of residential schools (Actions 1-42) and advance the process of reconciliation (Actions 43-94). This newsletter series will walk through the 94 Calls to Action to support Northern physicians and other providers to learn about the legacies and take actions towards reconciliation in their practices, relationships, and communities.

The categories to redress the legacy of residential schools include; child welfare, education, language and culture, health, and justice. This issue we highlight 8 Reconciliation Calls to Action. Others will be shared in upcoming newsletters.

To learn more about the Truth and Reconciliation Commission and the Calls to Action, visit http://nctr.ca/

Sports and Reconciliation

87. We call upon all levels of government, in collaboration with Aboriginal peoples, sports halls of fame, and other relevant organizations, to provide public education that tells the national story of Aboriginal athletes in history.
88. We call upon all levels of government to take action to ensure long-term Aboriginal athlete development and growth, and continued support for the North American Indigenous Games, including funding to host the games and for provincial and territorial team preparation and travel.
89. We call upon the federal government to amend the Physical Activity and Sport Act to support reconciliation by ensuring that policies to promote physical activity as a fundamental element of health and well-being, reduce barriers to sports participation, increase the pursuit of excellence in sport, and build capacity in the Canadian sport system, are inclusive of Aboriginal peoples.
90. We call upon the federal government to ensure that national sports policies, programs, and initiatives are inclusive of Aboriginal peoples, including, but not limited to …
91. We call upon the officials and host countries of international sporting events such as the Olympics, Pan Am, and Commonwealth games to ensure that Indigenous peoples' territorial protocols are respected, and local Indigenous communities are engaged in all aspects of planning and participating in such events.

Submitted by: Dr. Sandra Allison, Chief Medical Health Officer

Distribution Update

It has come to our attention that some physicians are not receiving this newsletter. If you would like to receive this newsletter by email please send an email to NHPhysiciansNewsletter@northernhealth.ca

As of January 1st, 2019 we will no longer be distributing physical copies of newsletters to UHNBC.

All back issues of *NH Physicians, Partners in Wellness* newsletters and bulletins are located on the NH Physicians website: http://physicians.northernhealth.ca/physicianResources/PublicHealth.aspx

Northern Health Physicians
Partners in Wellness
Public Health Newsletter for Northern Health Physicians
Volume 14. Number 7. July 2018 • Page 1 of 3

Introducing:
New Interim Northwest Medical Health Officer, Dr. Rakel Kling

We are very pleased to welcome Dr. Rakel Kling to the role of Interim Medical Health Officer, Northwest HSDA. Dr. Kling will be covering for Dr. Raina Fumerton while Dr. Fumerton is away on maternity leave beginning July 13, 2018 until July 19, 2019.

Dr. Kling grew up in Vancouver where she completed a BA in Psychology, and an MSc in Occupational and Environmental Hygiene. She completed medical school at the University of Ottawa and then returned to Vancouver to complete speciality training in Public Health and Preventative Medicine.

Her interests include environmental health, suicide prevention and mental health promotion. She is looking forward to working with communities in the North.

Dr. Kling will be located in Prince George, where she will be working out of the HSBC Corporate Office (8th Floor, Suite 810). She can be reached at rakel.kling@northernhealth.ca or 250-565-5618.

We are very happy to welcome Dr. Kling to Northern Health!

Submitted by: **Dr. Sandra Allison,**
Chief Medical Health Officer

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HIV Confidentiality and Disclosure

We have come a long way since the discovery of HIV in 1983 and current medical therapy allows HIV to be managed as a chronic illness. Despite this, people living with HIV across the world and in our own communities continue to experience discrimination and stigma on the basis of their health condition. People living with HIV are refused care, denied jobs, chased out of their communities and subjected to violence all because they have told others that they are HIV-positive. As healthcare providers, we are bound by duties of confidentiality, but there are times when our actions may lead to inadvertent HIV disclosure, particularly in small communities.

'Rebecca' is a woman living with HIV in this region and she shares her perspective on disclosure.

"Disclosure is complicated issue for me in healthcare settings. I don't have faith in the people whom are entrusted with patient confidentiality. I have had bad experiences with pharmacies asking me questions about my HIV medications in a voice so loud that others in the pharmacy could hear. This experience has made me fearful every time I go to a new pharmacy. When I started receiving my medication in this region I was scared about being asked questions about my pills with people in the line behind me being able to hear. However, I was relieved when I was asked to wait in a private room to meet with a pharmacist where no one could hear us talking. I have also worked as a Peer Support Worker and I know that many other people living with HIV have similar experiences and fears. I know a man who had to leave his small community and move to Vancouver's downtown eastside because he did not feel safe after a pharmacy breached his confidentiality.

I have also had bad experiences in the emergency room. I recently had an experience where a doctor was asking me questions about HIV that made me feel uncomfortable. He asked me how I got HIV, even though that had nothing to do with why I was in the emergency room. I felt so vulnerable as I lay there sick with just a curtain separating me from other patients. I thought to myself, 'what if someone I know was also there in emergency?' I have only disclosed to my immediate family and do not want others to know that I am living with HIV. I have known many Indigenous women who have experienced violence after disclosing their HIV status to partners or potential partners and I know others who have committed suicide from living in isolation with HIV. I am always careful about who needs to know, why they need to know, when they need to know, and where I let them know."

Dr. Abu Hamour, Northern Health HIV and Hepatitis C Care Medical Lead shares one of his many experiences of how HIV disclosure has negatively impacted his patients: *"I cared for one man who had to move away from Prince George after his neighbors found out about his HIV status. They vandalized his home – smashed his windows and TV and he was forced to move to Vancouver."*

Given the significant consequences of HIV disclosure (both planned and inadvertent due to breaches of confidentiality), here are a few tips to think about:

- Be mindful that hospital settings, such as the emergency department and ward rooms often do not provide enough privacy to ensure confidentiality when discussing a patient's HIV status
- Ensure that your office assistants are careful about how they communicate with patients in areas where other patients can hear (e.g. reception by the waiting room)
- Share information about a patient's medical history only when it is relevant to clinical care. For example, consider these two scenarios and think about where including HIV status is needed:
    - "HIV-positive man, recent fall, rule out ankle fracture"
    - "HIV-positive man with CD4=80, new focal neurologic deficits, rule out intracranial space occupying lesion"
- Always ask patients if they are comfortable with you sharing their medical information with various care providers. Some people will only feel comfortable with certain pharmacies, clinics, dentist, etc. and the preferred provider is not always the one closest to their home.
- Be familiar with resources you can use to help support patients when they choose to disclose their HIV status to others.
- Be prepared to discuss the current legal milieu around HIV disclosure and how non-disclosure of HIV status in sexual encounters (unless a condom is used AND the viral load is <1,500 copies/mL) may lead to criminal charges.

Here are some resources to get you started:

HIV Disclosure brochure for women, developed by BC's Positive Women's Network in 2016, sponsored by BC Women's Hospital: http://librarypdf.catie.ca/PDF/ATI-20000s/26526.pdf

HIV Disclosure for youth: http://librarypdf.catie.ca/PDF/ATI-20000s/26528.pdf

(Continued on page 3)

(Continued from page 2)

HIV Disclosure and the Law Brochure: http://librarypdf.catie.ca/PDF/ATI-20000s/26524.pdf

Positive Living Society: Disclosure, Telling someone you are living with HIV: https://positivelivingbc.org/wp-content/uploads/2015/03/Disclosure_OnlineBooklet.pdf

Indigenous Communities and HIV Disclosure to Sexual Partners: Questions and Answers: http://caan.ca/wp-content/uploads/2017/06/non_disclosure_indCommunities-EN_aug6_web.pdf

In addition, **Northern Health's HIV and Hepatitis C Specialized Support Team** can provide further information regarding treatment, community resources, and social support. Contact the team at **1-888-645-6495.**

Submitted by: Denise Jaworsky, MD, FRCPC and Anonymous Patient Partner

The Truth and Reconciliation Commission

The Truth and Reconciliation Commission's report was released in December 2015. The report details 94 Calls to Action (recommendations) for Canadians to redress the legacy of residential schools (Actions 1-42) and advance the process of reconciliation (Actions 43-94). This newsletter series will walk through the 94 Calls to Action to support Northern physicians and other providers to learn about the legacies and take actions towards reconciliation in their practices, relationships, and communities.

The categories to redress the legacy of residential schools include; child welfare, education, language and culture, health, and justice. This issue we highlight the last 3 Reconciliation Calls to Action. Others will be shared in upcoming newsletters.

To learn more about the Truth and Reconciliation Commission and the Calls to Action, visit http://nctr.ca/

Business and Reconciliation

92. We call upon the corporate sector in Canada to adopt the United Nations Declaration on the Rights of Indigenous Peoples as a reconciliation framework and to apply its principles, norms, and standards to corporate policy and core operational activities involving Indigenous peoples and their lands and resources.

Newcomers to Canada

93. We call upon the federal government, in collaboration with the national Aboriginal organizations, to revise the information kit for newcomers to Canada and its citizenship test to reflect a more inclusive history of the diverse Aboriginal peoples of Canada, including information about the Treaties and the history of residential schools.
94. We call upon the government of Canada to replace the oath of citizenship with the following: "I swear (or affirm) that I will be faithful and bear true allegiance to Her Majesty Queen Elizabeth II, Queen of Canada, her heirs and successors, and that I will faithfully observe the laws of Canada including Treaties with Indigenous Peoples, and fulfil my duties as a Canadian citizen."

Submitted by: Dr. Sandra Allison, Chief Medical Health Officer

Northern Health Physicians
Partners in Wellness

Public Health Newsletter for Northern Health Physicians

Volume 14. Number 8. September 2018 • Page 1 of 3

Be Active Every Day Campaign 2018
October 1-26, 2018

Do you want to make a positive impact in your community? Be Active Every Day is an annual Doctors of BC initiative to inspire kids ages 5-11 to move more and make healthy choices. Participating doctors are paired up with a local elementary school, initiating a month-long challenge to the students that incorporates the Live 5-2-1-0 principles:

5: Eating five fruits & vegetables daily
2: No more than two hours of screen time per day
1: Play actively for at least one hour per day
0: Choose healthy, zero sugar drinks

Be Active Every Day runs from October 1-26, 2018. Doctors visit the school at the beginning the campaign to introduce the challenge, as well as at the end to congratulate participants on making healthy choices every day, encouraging them to keep up the great work.

The theme for this year's challenge is "Choose Your Own Activity," which encourages the kids to try different activities and find something that they are passionate about and will want to continue with over the long term. Kids receive activity booklets and promotional items to help them set goals and track their progress and activities throughout the month. They are also encouraged to submit photos of them taking part in their chosen activity for a chance to be featured on the Doctors of BC website, as well as to be entered to win a grand prize.

Healthy habits started at a young age are more likely to continue into a healthy adult lifestyle. You have the opportunity to inspire the next generation to find their niche and improve their health! This year, Doctors of BC has made it even easier for schools and physicians to **sign up directly through the website** (being launched mid-August): www.be-active.ca.

For more information, please contact:
Patrick Higgins, Communications Coordinator, Doctors of BC
phiggins@doctorsofbc.ca
Phone: 604-638-8744 Fax: 604-638-2915

Written by: Gloria Fox, Regional Program Lead, NHR Food and Health

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Antimicrobial Stewardship Program: Urinary Tract Infections

Are you looking for some on-line learning about urinary tract infections? Northern Health's AMS program has created a course on the learning hub, consisting of 3 separate modules (a. uncomplicated cystitis and asymptomatic bacteriuria, b. complicated cystitis and pyelonephritis, c. catheter associated UTI). Once logged into the learning hub search for course title: NHA-AMS Urinary Tract Infections. Each module will take approx. 20 – 30 min and includes a quiz and simple evaluation. Your feedback will be reviewed!

Asymptomatic bacteriuria versus UTI (STOP Urine Dips in LTC!)

One of the most common areas of antimicrobial misuse is in the treatment of asymptomatic bacteriuria; 80% of this patient population receive antimicrobials inappropriately and in LTC facilities it has been found that 1/3 of all prescriptions for antimicrobials are given for asymptomatic bacteriuria.[1-2] Patients that produce a urine sample which shows growth of a significant colony count of bacteria but display **NO** symptoms or signs of a urinary tract infection (UTI) have asymptomatic bacteriuria. This condition is most common in catheterized patients and seniors over age 65 (20% non-catheterized females) and the incidence increases with age (up to 50% in non-catheterized females and 30% in males over 80). [3-4] Asymptomatic bacteriuria is a colonization state **NOT** an infection and therefore antibiotics are **NOT** indicated.[3-4] Bacteriuria and pyuria are **expected** findings in the elderly and symptomatic UTIs are much **less common** in this population than asymptomatic bacteriuria.[3-4] There are common misconceptions around what are considered true signs and symptoms of UTI. Signs that are **NOT** suggestive of UTI include: change in urine colour, change in urine odour (foul-smelling) and change in urine turbidity (cloudy urine); these signs do not warrant a urine dip or culture. Symptoms that are **NOT** typically associated with UTI include: dizziness, new or increased falls, decreased appetite, altered behaviour (including delirium). [3-4] If your patient has any of these signs or symptoms it is crucial that you exclude other causes **BEFORE** taking a urine sample, such other causes include: dehydration, new medications/drug interactions, sleep disturbances, sensory deprivation, trauma, hypoxia, hypoglycemia, infection other than urinary tract infection. Take home point: Urine Culture results **DO NOT** provide a diagnosis, they provide extra info (i.e. offending pathogen) once a **CLINICAL** diagnosis has already been made.

You can access resources created and or provided by the AMS program by visiting the NH physician's website or OurNH.

References:

1. Trautner BW. Asymptomatic bacteriuria: When the treatment is worse than the disease. Nat Rev Urol.2012;9:85-93
2. Fridkin S, Baggs J, Fagan R, et al. Vital signs: improving antibiotic use among hospitalized patients. MMWR Morb Mortal Wkly Rep 2014;63:194–200
3. Nicolle LE. Infect Dis Clin North Am 1997;11(3):647-62
4. Nicolle LE. Infect Control Hosp Epidemiol 2001;22(3):167-75

Submitted by: **Alicia Rahier,** Antimicrobial Stewardship Program Coordinator

Vitamin D Recommendations for Perinatal Women and Healthy Term Infants

The Provincial Health Services Authority (PHSA) has recently released two resources on the topic of vitamin D for perinatal women and healthy term infants. These include a Practice Support Tool (4 pages) and Background Paper (34 pages) for health professionals in British Columbia.

Key practice points include:

- Most perinatal women require a daily vitamin D supplement of 400 IU (10 µg) – 600 IU (15 µg)
- For healthy, term infants who are exclusively or partially breastfed, recommend a daily liquid vitamin D supplement of 400 IU (10 µg).
- Healthy, term infants fed commercial infant formula only, and who were born to mothers with adequate vitamin D status during pregnancy, do not need a liquid vitamin D supplement.
- Health professionals may recommend higher doses of vitamin D as a clinical decision for individual women or infants to address known or suspected insufficiency/deficiency. The background paper provides information on risk factors for vitamin D deficiency.

The guidance in these documents expands on the recommendations in the PHSA Pediatric Nutrition Guidelines (Six Months to Six Years) for Health Professionals. There is also alignment between these recommendations and those found in the NH Infant Toddler Nutrition Guidelines for Health Professionals (see Chapter 6: Nutrients of Concern).

The following client resource is also in alignment with current guidance: Vitamin D for Breastfed Infants and Toddlers in Northern BC (available at Document Source with re-order number 10-421-6020).

Physicians and NH staff can access the above resources via the OurNH Population Health Nutrition all-staff page. For more information, please contact Lise Luppens, MA, RD, Population Health Dietitian, at Lise.Luppens@northernhealth.ca or at 250-631-4278.

Submitted by: Lise Luppens, Population Health Dietitian

Distribution Update

It has come to our attention that some physicians are not receiving this newsletter. If you would like to receive this newsletter by email please send an email to NHPhysiciansNewsletter@northernhealth.ca

As of January 1st, 2019 we will no longer be distributing physical copies of newsletters to UHNBC.

All back issues of *NH Physicians, Partners in Wellness* newsletters and bulletins are located on the NH Physicians website: http://physicians.northernhealth.ca/physicianResources/PublicHealth.aspx

Northern Health Physicians

Partners in Wellness

Public Health Newsletter for Northern Health Physicians

Volume 14 . Number 9 . October 2018● Page 1 of 9

Special Issue on Influenza 2018-19 Season

HIGHLIGHTS

Vaccine roll-out:

- Starting October 9,2018:vaccine will be provided to Long Term Care (LTC) facilities for residents, and to NH Workplace Health & Safety (WH&S) for staff and physicians.
- Starting the week of October 22, 2018: distribution to physicians and other Community Vaccine Providers (CVPs) will commence. Vaccine will also be available to infants and toddlers through NH's Child Health Clinics (CHCs).
  - Order your vaccines now!

Indications: While specific products have changed, the general categories with respect to who receives TIIV, QIIV or LAIV-Q have not changed since 2017/18.Remember that the intranasal vaccine (FLUMIST®) which is indicated for children aged 2-17 years of age is **no longer considered superior** to the injectable quadrivalent vaccine. Fluzone Quadrivalent (depending on availability) should be used for children 6-23 months of age and may be used for individuals 2-17 years of age. Fluviral and Influvac are the publicly-funded options that should be offered to individuals 18 years of age and older.

Eligibility for free/publicly covered vaccination:

- Seasonal influenza vaccination is covered for people at high risk, their close contacts, and people who live or work in high-risk settings (see p.3).
- One-time polysaccharide pneumococcal vaccine for people 65 or older or otherwise at high risk, plus one booster for certain very high-risk groups (see p.5).

Remember to report to your local health unit:

- Influenza vaccine administration to children up to 8 years old,
- All pneumococcal vaccine administration, and
- Any adverse events following immunization.

Order forms, reporting forms, and many more resources are available at:https://www.northernhealth.ca/for health-professionals/immunization resources-tools.

Read on for more details!

Don't forget to **report your own immunization status at https:// medicalstaffhealth.phsa.ca/**.

Starting December 1, all physicians and staff are required to either be vaccinated or to wear a mask while in patient care areas in NH facilities.

Inside this Issue:

Also included:

Notable Quotable:

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2018-19 Seasonal Influenza: What You Need to Know

Introduction

The following pages contain information on influenza and pneumococcal vaccines to guide physicians, health care workers, and community vaccine providers on their use during the upcoming influenza season. For more information please see the references and resources at the end of this newsletter.

Immunization Campaign Start Date:

The official provincial campaign launch date for this season's influenza community campaign is **the week of October 29, 2018. Northern Health clinics will commence after this date.**

Vaccine Ordering, Distribution, Storage:
Vaccine Ordering:

Physicians and all other CVPs (pharmacists, nurses in First Nation communities, acute and residential care facilities and others) are required to fill out the Influenza Vaccine Order form when ordering Influenza and Pneumococcal vaccine this flu season. Your order for pneumococcal vaccine can be placed at the same time.

Please use the Influenza Vaccine Order Form which can also be found at the following link: https://northernhealth.ca/Professionals/ImmunizationResourcesandTools.aspx.

Please fax your order to the local Health Unit at the number identified on the form. After receipt of your vaccine order, influenza vaccines will be available for pick up starting the week October 23rd (date dependent on vaccine delivery to local health units).

Please note that due to the incremental arrival of vaccines, Northern Health may not be able to fill all orders completely at the onset. Northern Health will endeavor to ensure fair and equitable distribution to all community partners and fill your complete order in as few installments as possible.

Reporting

All Community Vaccine Providers must complete the Influenza Vaccine Utilization Report. This form is used to track the number of doses given of each vaccine, and in each age group. This form is to be completed and returned/ faxed by CVPs to the appropriate community specific health unit by January 31, 2019.

Click here to access Influenza Order forms.

Reminders about Vaccine Distribution and Storage:

- Call the Biological Product Monitor (BPM) at your local health unit to arrange your vaccine order pick up date.
- Please bring an appropriate sized cooler with cooled gel blankets and ice for vaccine pick up.
- Keep your biological fridge between 2-8 degrees.
- Notify the local BPM of any cold chain break incidents and report accordingly.
- Return all unused and partially used vials of publically funded vaccines to your BPM. Do not dispose.
- Influenza vaccine can continue to be offered until the BPMs send out a request for annual influenza vaccine return. This typically occurs in May.

2018-19 Seasonal Influenza: What You Need to Know

Eligibility:

Influenza vaccine is recommended for everybody >6 months of age and provided free to:

1. **People at high risk:**
   - People aged 65 years and older
   - People of any age who are residents of long-term care facilities
   - Adults (including pregnant women) and children with the following chronic health conditions:
     - Cardiac or pulmonary disorders (e.g. bronchopulmonary dysplasia, cystic fibrosis, asthma)
     - Diabetes and other metabolic diseases
     - Cancer; immunodeficiency (including human immunodeficiency virus [HIV] infection); immunosuppression due to underlying disease or therapy (e.g., severe rheumatoid arthritis requiring immunosuppressive therapies)
     - Chronic kidney disease
     - Chronic liver disease, including hepatitis C
     - Anemia and hemoglobinopathy
     - Conditions that compromise the management of respiratory secretions and are associated with an increased risk of aspiration (e.g., cognitive dysfunction, spinal cord injury, seizure disorder, and neuromuscular disorders)
   - Children and adolescents (6 months to 18 years of age) with conditions treated for long periods with acetylsalicylic acid
   - Children and adults who are morbidly obese (adult BMI ≥ 40; child BMI assessed as ≥ 95th percentile adjusted for age and sex)
   - Aboriginal peoples (on and off reserve)
   - Healthy children 6 to 59 months of age
   - Pregnant women at any stage of pregnancy during the influenza season (typically spanning November to April)
   - Inmates of provincial correctional institutions
   - People working with live poultry (Immunization may reduce the potential for human-avian re-assortment of genes should such workers become co-infected with human and avian influenza.)

2. **People capable of transmitting influenza to those at high risk:**
   - All health care workers (including all health authority staff, accredited physicians and residents, volunteers, students, contractors, and vendors) who come into contact with patients at health care facilities including long-term care facilities. This includes independent health care practitioners and their staff in community settings.
   - Visitors to health care facilities and other patient care locations
   - Household contacts (including children) of people at high risk whether or not those high risk people have been immunized
   - Those who provide care and/or service in potential outbreak settings housing high risk persons (e.g., crew on ships)
   - Household contacts of healthy children 0 to 59 months of age
   - Those providing regular child care to children 0 to 59 months of age, whether in or out of the home

3. **People who provide essential community services:**
   - First responders: police, fire fighters, ambulance
   - Corrections workers

2018-19 Seasonal Influenza: What You Need to Know

Intended Use of Influenza Vaccines:

The following table outlines BCCDC guidelines for intended use of influenza vaccine as of August 27, 2018 as reference for the 2018/19 Influenza immunization program. For the most current version of this table, please refer to the following link: Intended Use of Influenza Vaccines

BC Centre for Disease Control
An agency of the Provincial Health Services Authority

Intended Use of Influenza Vaccines

The influenza biological product pages provide guidance on the use of influenza vaccines that are publicly-funded in BC for the 2018/19 season: FLUMIST® QUADRIVALENT, FLUZONE® QUADRIVALENT, FLUVIRAL® and INFLUVAC®.

The intended use of these vaccines by age group of recipient for the 2018/19 season is as follows:

Age Group	Vaccine	Comments
6-23 months of age	• FLUZONE® QUADRIVALENT	• For children 6-23 months of age, FLUZONE® QUADRIVALENT is the recommended product. If FLUZONE® QUADRIVALENT is unavailable, FLUVIRAL® should be used.
2-17 years of age	• FLUZONE® QUADRIVALENT • FLUMIST® QUADRIVALENT	• If a quadrivalent product is unavailable, FLUVIRAL® or INFLUVAC® should be used. INFLUVAC® is approved for those 3 years of age and older.
18 years of age and older	• FLUVIRAL® • INFLUVAC®	• INFLUVAC® is a single dose thimerosal-free product and should be used for individuals with a known hypersensitivity to thimerosal. • In the event of a surplus of FLUZONE® QUADRIVALENT in the provider's inventory beyond that required for those under 18 years old, this vaccine may be provided to those 18 years of age and older.

For more information on other influenza vaccines available in Canada, please refer to the product monograph and the NACI Statement on Seasonal Influenza Vaccine for 2018-2019. Non-publicly funded influenza vaccines can be purchased at local pharmacies and travel clinics.

As it is expected that FLUZONE® High-Dose will be marketed to seniors in BC, BCCDC has produced a FLUZONE® High-Dose Influenza Vaccine Question & Answer document for health care providers

2018-19 Seasonal Influenza: What You Need to Know

Vaccines and Recommended Usage

Influenza vaccine is safe and well-tolerated and may be given to persons starting from six months of age (noting-specific age indications and contraindications).

Four publicly-funded vaccine products will be distributed in Northern Health this influenza season. These products reflect the following World Health Organization recommended composition of influenza virus vaccines for use in the northern hemisphere during the 2018-2019 influenza season:

- **A/Michigan/45/2015 (H1N1)pdm09-like virus**
- **A/Singapore/INFIMH-16-0019/2016 (H3N2)-like virus**
- **B/Phuket/3073/2013-like virus (in quadrivalent vaccines only)**
- **B/Colorado/06/2017-like virus**

The A/Singapore and B/Colorado strains were not contained in the 2017/18 season vaccine.

Note: **Fluzone High-Dose** is a private pay option for seniors, recommended by NACI, and can be purchased without prescription at select pharmacies. It is not publicly covered in BC as the incremental benefit is very small.

Vaccine	FLUVIRAL®	INFLUVAC®	FLUZONE®	FLUMIST®
Description	**Inactivated Split Virion (TIIV) (IM) from GlaxoSmithKline Inc.**	**Inactivated Subunit (TIIV) (IM) From Mylan Pharmaceuticals ULC**	**Inactivated Split Virion (QIIV) (IM) from Sanofi Pasteur Limited**	**Live, attenuated (LAIV-Q) (Intranasal) from AstraZenaca Canada**
Presentation	10 doses per vial without syringes	Single dose syringe	10 doses per vial without syringes	Box with 10 applicators
Client Age Group	Intended for use in eligible individuals 18 years of age or older.	Intended for use in eligible individuals 3 years of age or older. NOTE: The vaccine is not approved for use in those less than 3 years of age.	Intended for use in eligible children 6 months to 17 years of age (inclusive) including those with contra-indications to LAIV-Q.	Intended for use in eligible individuals 2-17 years or age (inclusive)
Shelf-life, once opened	Multi-dose vial Discard multi-dose vials 28 days after first entry	n/a single dose	A multi-dose vial that has been stored at 2-8 degrees C may be used up to the expiry date indicated on the vial label.	n/a single dose
Other considerations**	May be used in children 6 months to 17 years of age if a quadrivalent vaccine is unavailable	Use for individuals with a known hypersensitivity to thimerosol May be used in children 3-17 years of age if a quadrivalent influenza vaccine is unavailable	In the event of vaccine surplus in the provider's inventory beyond that required for those under 18 years old, this vaccine may be provided to those 18 years of age and older as part of the publicly funded program in BC.	
	*contains thimerosal	*contains gentamicin	*contains thimerosal	*contains gentamicin

*****See product monographs for additional details on contraindications and precautions.***

Complete details on 2018/19 Seasonal Influenza Vaccines is available at BC Centre for Disease Control, Communicable Disease Control Manual, Chapter 2, Immunization Program, Part 4-Biological Products at: http://www.bccdc.ca/health-professionals/clinical-resources/communicable-disease-control-manual/immunization

2018-19 Seasonal Influenza: What You Need to Know

Pneumococcal Vaccine

Polysaccharide Pneumococcal Vaccine
Secondary pneumococcal infections add to the morbidity from seasonal influenza viruses. Polysaccharide pneumococcal vaccine is recommended and provided free for:

- Adults 65 years of age and older
- Residents of extended or intermediate care facilities
- Individuals 2 years of age and older with:
  - ***Anatomic or functional asplenia***
  - ***Sickle cell disease***
  - ***Immunosuppression related to disease (e.g., malignant neoplasm (including leukemia and lymphoma), HIV, multiple myeloma) or therapy (e.g., high dose, systemic steroids, or severe rheumatoid arthritis requiring immunosuppressive therapy)***
  - ***Congenital immunodeficiency states (e.g. complement, properdin, or factor D deficiency)***
  - ***Chronic heart or lung disease (except asthma, unless management involves ongoing high dose oral corticosteroid treatment.***
  - ***Chronic kidney disease***
  - ***Chronic liver disease including cirrhosis, chronic hepatitis B, hepatitis C.***
  - ***Receipt of hematopoietic stem cell transplant (HSCT)***
  - *Solid organ or islet cell* transplant (candidate or recipient)
  - Diabetes
  - Alcoholism
  - Cystic fibrosis
  - Chronic CSF leak
  - Cochlear implant (candidate or recipient)
  - Homelessness and/or illicit drug use
  - Chronic neurological conditions that may impair clearance of oral secretions\

Booster Doses
A once-only revaccination should be offered at least 5 years after the initial immunization to those who have:

- Anatomic or functional asplenia
- Sickle cell disease
- Immunosuppression related to disease (e.g., HIV, lymphoma, Hodgkin's, multiple myeloma) or therapy (e.g., high dose, systemic steroids)
- Congenital immunodeficiency states (as above)
- Chronic kidney disease
- Chronic liver disease including cirrhosis, chronic hepatitis B, and hepatitis C
- HSCT recipients: see Part 2 – Immunization of Special Populations, Hematopoietic Stem Cell Transplantation (HSCT).

Revaccination with pneumococcal vaccine (a booster dose) is not routinely recommended for clients who do not meet one of the above criteria.

We encourage physicians and other CVPs to identify patients who are eligible for pneumococcal vaccine, and administer pneumococcal vaccine if not already done.

Pneumococcal vaccine can be given at the same time as the seasonal influenza vaccine, using separate syringes/needles at separate sites.

Complete details on the Pneumococcal Polysaccharide vaccine is available in the BC Centre for Disease Control, Communicable Disease Control Manual, Chapter 2, Immunization Program, Part 4-Biological Products at: http://www.bccdc.ca/health-professionals/clinical-resources/communicable-disease-control-manual/immunization/

Reporting Requirements:

Adverse Reactions following Immunization (AEFI):
All significant and unexpected adverse events following immunization with any vaccine product are to be reported to the local health unit. Medical Health Officer recommendations for future immunizations will be sent to the immunizer.

The reporting form for AEFIs is available at: http://www.bccdc.ca/health-professionals/professional-resources/surveillance-forms.

For more information on Adverse Events following immunization please visit: http://www.bccdc.ca/resource-gallery/Documents/Guidelines%20and%20Forms/Guidelines%20and%20Manuals/Epid/CD%20Manual/Chapter%202%20-%20Imms/Part_5_AEFI.pdf

Reporting of Vaccine Administered:

Community vaccine providers are required to report the following vaccines administered:

- All clients receiving the Pneumococcal Vaccine
- Children 8 years and younger who receive the influenza vaccine

This ensures Public Health records are up to date and avoids unnecessary doses of vaccine.

The Immunization Influenza Vaccine and Pneumococcal reporting form can be found at: https://northernhealth.ca/Professionals/ImmunizationResourcesandTools.aspx

Influenza testing and treatment:
Influenza-like illness (ILI) is defined as: fever **and** cough **and** at least one of: headache, myalgia, arthralgia, extreme fatigue/weakness, sore throat.

Testing:

For non-severe cases of ILI in the community, testing cases of influenza-like illness (ILI)* for influenza does not alter clinical management, and is not necessary.
Influenza testing, by nasopharyngeal swab, **is** indicated:

- for severe or unusual cases (e.g. patients requiring hospitalization), and
- among patients in acute care facilities and residents of long-term care facilities (where there is potential for an outbreak).

Empiric treatment: During influenza season, antiviral treatment (oseltamivir or zanamivir) is recommended for patients at high risk of complications presenting with influenza-like illness (ILI), without waiting for a lab result.

Oseltamivir or zanamivir reduces the risk of complications of influenza when started within 48 hours of the onset of symptoms for most patients, or within 96 hours of symptom onset for severely ill patients requiring hospitalization. Greater benefits occur when antivirals are initiated as soon as possible.

(Continued on page 7)

2018-19 Seasonal Influenza: What You Need to Know

(Continued from page 6)

Patients at high risk of complications are largely the same as those who are eligible for free vaccine:

- Patients with chronic medical conditions
- Residents of long-term care facilities
- Individuals 65 years of age or older
- Indigenous people
- Pregnant women and women up to 4 weeks post-partum, regardless of how the pregnancy ended.

Recommended treatment regimens for adults with normal renal function are:

- Oseltamivir 75mg twice daily x 5 days, or
- Zanamivir 10mg (two 5 mg inhalations) twice daily x 5 days

For children, treatment is based on weight. See AMMI guidelines for details.

Chemoprophylaxis: is indicated among inpatients/residents in health care facilities during influenza outbreaks declared by the Medical Health Officer. Physicians who provide care in residential care facilities are asked to **pre-sign the standard antiviral order set**, so that it is ready to go in the event of an outbreak.

For more information on antiviral use, see: https://www.ammi.ca/Content/Guidelines/Flu%20%28published%20version%29%20FINAL.pdf

References:

- BCCDC Communicable Disease Guidelines at http://www.bccdc.ca/dis-cond/commmanual/CDManualChap2.htm
- Recommended composition of influenza virus vaccines for use in the 2018-2019 northern hemisphere influenza season: WHO | Recommended composition of influenza virus vaccines for use in the 2018-2019 northern hemisphere influenza season

Flu Watch: http://www.phac-aspc.gc.ca/fluwatch/

Additional Resources:

- Northern Health Influenza information is available at: https://www.northernhealth.ca/health-topics/flu
- The National Advisory Committee on Immunization (NACI) "Statement on Seasonal Influenza vaccine for 2018-2019 available at: https://www.canada.ca/en/public-health/services/publications/healthy-living/canadian-immunization-guide-statement-seasonal-influenza-vaccine-2018-2019.html
- HealthLinkBC - Health Files: https://www.healthlinkbc.ca/services-and-resources/healthlinkbc-files or
  1. Facts about Influenza (The Flu) (12b)
  2. Inactivated Influenza Vaccine (12d)
  3. Influenza (Flu) Immunization: Myths and Facts (12c)
  4. Pneumococcal Polysaccharide Vaccine (62b)
  5. Influenza (Flu) Season
- Immunize BC website at: https://www.immunizebc.ca/ BCCDC Immunization Manual: Part 4 - Biological Products at: http:www.bccdc.ca/health-professionals/clinical-resources/communicable-diseasecontrol-manual/immunization/biological-products
- BCCDC Immunization & Vaccines for Health Professionals at: http://www.bccdc.ca/health-professionals
- Influenza Education BCCDC Influenza Courses: BCCDC Foundations of Influenza: Diseases and Vaccinations & Seasonal Influenza Update 2018/19 please visit: Immunization Courses at http://www.bccdc.ca/health-professionalseducation-development/immunization-courses

Submitted by:
Dr. Andrew Gray
Medical Health Officer
Northern Interior HSDA

Pat Strim
Regional Immunization Lead
Northern Health Authority

Influenza Control Program for Health Care Workers

The Ministry of Health has confirmed the Influenza Prevention Policy will be implemented throughout BC health care organizations this fall. Northern Health, together with all other health authorities, is in the process of implementing this policy for the 2018/19 influenza season.

The Influenza Prevention policy requires all employees, physicians, students, volunteers, contractors, and visitors to be vaccinated annually against influenza or wear a procedure mask at all times when in patient care areas during the Policy Application Period, which begins December 1, 2018.

During a declared influenza outbreak, Northern Health's "Influenza Exclusion Criteria (Suspected and/or Confirmed Outbreak)" Policy is also activated for the affected facility, and takes precedence over the Influenza Prevention Policy in the event of any discrepancy between the two.

Physicians have access to influenza immunization from the following sources:

1. Workplace Health & Safety influenza vaccination clinics: These dedicated influenza immunization clinics will be available at most Northern Health facilities during a three week period, beginning October 15th. Clinic schedules are posted on the OurNH Flu Clinics Page. (Clinics usually occur during business hours on weekdays). Peer Immunizers (PIs) are also available in a variety of sites and departments throughout Northern Health. They immunize within their departments, when they have time between regular duties. They may be available on evenings and weekends.
2. Public Health/Primary Care Nurses: Physicians may choose to access public influenza immunization clinics. Schedules for these clinics will be distributed by each community's Health Unit.
3. Participating pharmacies and physician's offices: Physicians may choose to receive their influenza immunization at participating pharmacies, or from a colleague.

Please note that in all cases, physicians are eligible for FREE influenza immunization, as per the criteria set out by the BC Centre for Disease Control. Per provincial policy, physicians must report their immunization, or their decision to mask while working within Northern Health facilities, at the following address: https://medicalstaffhealth.phsa.ca/.

Working collaboratively with MHOs and physicians is an important part of Northern Health's influenza prevention program and physicians' support is an important factor for success. If you have any questions regarding the campaign, please email: influenza@northernhealth.ca and we will be happy to connect with you. There will be further information provided as the campaign progresses.

Submitted by: Courtenay Kelliher
Occupational Health Nurse & Safety Advisor
Workplace Health & Safety

2018-19 Seasonal Influenza: What You Need to Know

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Community Vaccine Provider
Influenza Vaccine Order Form

Name of pharmacy/clinic/facility/other: _____

Contact person: _____ Date of order: _____

Address: _____ Phone #: _____ Fax #: _____

	Vaccine	Doses requested	Doses remaining in fridge	Health Unit use only		
				Doses supplied	Date	Panorama req #
	Pneumococcal polysaccharide					
See back of page for indications by age group	Flumist (Unable to provide to pharmacists)					
	Fluviral					
	Fluzone					
	Influvac					

Community provider/designate: _____ (Sign upon receiving biologicals) **Pick-up date:** _____ **Health Unit staff signature:** _____

Community provider/designate: _____ (Sign upon receiving biologicals) **Pick-up date:** _____ **Health Unit staff signature:** _____

All vaccines supplied must be accounted for. Community vaccine providers are required to keep track of all influenza vaccines and doses given and the age groups they are provided to.

Health Unit will keep a copy of the order form.

Northwest	Northern Interior	Northeast
Atlin Health Centre T: 250-651-7677 F: 250-651-7687	**Burns Lake** T: 250-692-2460 F: 250-692-2469	**Chetwynd** T: 250-788-7300 F: 250-788-9877
Dease Lake T: 250-771-4444 F: 250-771-3911	**Fort St. James** T: 250-996-7178 F: 250-996-2216	**Dawson Creek** T: 250-719-6500 F: 250-719-6513
Hazelton T: 250-842-4640 F: 250-842-4642	**Fraser Lake** T: 250-699-8960 F: 250-699-6987	**Fort Nelson** T: 250-774-7092 F: 250-774-7096
Houston T: 250-845-2294 F: 250-845-7884	**Mackenzie** T: 250-997-8517 F: 250-997-3253	**Fort St John** T: 250-263-6000 F: 250-263-6086
Kitimat T: 250-632-3181 F: 250-632-7081	**McBride** T: 250-569-2251 ext 2026 F: 250-569-2232	**Hudson's Hope** T: 250-783-9991 F: 250-783-9125
Masset T: 250-626-4727 F: 250-626-5279	**Prince George** T: 250-565-7367 F: 250-565-7377	**Tumbler Ridge** T: 250-242-5271 F: 250-242-3889
Prince Rupert T: 250-622-6380 F: 250-622-6391	**Quesnel** T: 250-991-7571 F: 250-991-7577	
Queen Charlotte City T: 250-559-4933 F: 250-559-8037	**Valemount** T: 250-566-9138 ext. 2000 F: 250-566-4319	
Sandspit T: 250-637-5403 F: 250-637-2496	**Vanderhoof** T: 250-567-6900 F: 250-567-6170	
Smithers T: 250-847-6400 F: 250-847-5908		
Stewart T: 250-636-2221 F: 250-636-2715		
Terrace T: 250-631-4200 F: 250-638-2264		

10-400-7012 (LC - Rev. - 09/18)

2018-19 Seasonal Influenza: What You Need to Know

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Community Vaccine Provider
Influenza Vaccine Order Form

Orders will be filled based upon:
- Vaccine shipments from BCCDC over a period of 3 to 4 weeks
- Historic dosage reporting
- Availability

Note: Depending on the local health unit's inventory, specific brands may not be available and an interchangeable product may be supplied.

Instructions for Community Vaccine Provider (CVP)
- Using this form, submit your order by **fax** to your community Health Unit.
- Please keep a copy for your records
- The CVP or designate is required to sign for receipt of the influenza vaccine upon pick-up at the Health Unit.
- The CVP will need to submit a new order for subsequent orders.

Instructions for the Health Unit Biological Product Monitor/Designate

To fill the CVP's complete/partial order:
- Record the number of doses in the "doses supplied" column
- Record the date the vaccine is packaged and available for pick-up in the date column
- Record the Panorama Requisition Number
- Contact CVP for pick-up
- The health unit staff is required to sign when order is picked up

Influenza vaccine accountability
- Publicly funded influenza vaccine must be accounted for. Vaccine utilization must be reported in order to ensure vaccine supply for the following year.
  - Return expired/unused vaccine back to the local Health Unit when requested.
- The Publicly Funded Influenza Vaccine Tally form is available on the Northern Health website to assist with vaccine tracking.

Cold chain

Always maintain the cold chain (2° to 8°C) and contact the health unit immediately if you experience cold chain problems.

Age group	Vaccine	Comments
6 to 23 months	• Fluzone quadrivalent	• For children 6 to 23 months of age, Fluzone quadrivalent is the recommended product. If Fluzone quadrivalent is unavailable, Fluviral should be used.
2 to 17 years of age	• Flumist quadrivalent • Fluzone quadrivalent	• ***If a quadrivalent product is unavailable*, Fluviral or Influvac should be used.** • **Influvac is approved for those 3 years of age and older.**
18 years of age and older	• Fluviral • Influvac	• Influvac is a single dose thimerosal-free product and should be used for individuals with a known hypersensitivity to thimerosal. • In the event of a surplus of Fluzone quadrivalent in the provider's inventory beyond that required for those under 18 years old, this vaccine may be provided to those 18 years of age and older.

Northern Health Physicians
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Public Health Newsletter for Northern Health Physicians

Volume 14. Number 10. November 2018 • Page 1 of 4

AMS topic of the month: IV versus PO Antimicrobials

Conversion from IV to PO antimicrobials in select patients leads to positive clinical outcomes such as early discharge and reduced risk of IV line infections as well as cost savings for our healthcare system. Timely conversion from IV to PO antimicrobial therapy is an effective strategy for many infections and should be considered as soon as a patient is placed on IV antimicrobials.

When considering the oral route of administration of antimicrobials it is important to evaluate their properties of potency and bioavailability. Bioavailability is the amount of drug that is absorbed into the body and available for biological effect after being taken by mouth. The potency refers to the bioavailability plus the amount of drug that the body is exposed to after administration of each dose (the area under the plasma drug concentration-time curve (AUC)). Antimicrobials can be classified into 3 different categories based on the differences of these two properties. Some antimicrobials are classified as equally potent or high bioequivalent, meaning the oral formulation achieves the same potency as the IV. Some examples of these include: all fluoroquinolones (e.g. moxifloxacin, ciprofloxacin), metronidazole, clindamycin and fluconazole. The 2nd group is classified as less potent where the oral formulation is less potent than the IV formulation and should be used based on individual patient assessment once clinical resolution is apparent. Examples in this group include: cefuroxime, cloxacillin and penicillin G. The 3rd group is classified based on fact that there is no direct oral agent available – therefore oral conversion requires knowledge about what spectrum of activity is required for the particular infection. Examples in this group include: ampicillin, ceftazidime, ceftriaxone and piperacillin-tazobactam.

Making the switch from IV to PO when the oral agent is less potent than the IV, must be individualized based on the patient's clinical status (is the patient improving clinically?), ability to tolerate meds (are we able to use the gut?) and type of infection (do we have a bug with known sensitivity to an oral agent? Is the infection appropriate for oral management?). If the agent being used is an equally potent/high bioequivalent agent, the threshold for using the oral route is much lower in that the patient does not have to be showing signs of clinical improvement before the change is made, as long as all other parameters (i.e. gut and infection/pathogen) are met. For more information on the criteria to consider for oral conversion of antimicrobials please refer to the NH Clinical Practice Standard 1-20-6-1-010.

(Continued on page 2)

Inside this Issue:

Notable Quotable:

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After hours calls to UHNBC Switchboard 250-565-2000 and ask for the MHO on-call

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(Continued from page 1)

Other Topic: Urinary Tract Infections

Are you looking for some on-line learning about urinary tract infections? Northern Health's AMS program has created a course on the learning hub, consisting of 3 separate modules (a. uncomplicated cystitis and asymptomatic bacteriuria, b. complicated cystitis and pyelonephritis, c. catheter associated UTI). Once logged into the learning hub search for course title: NHA-AMS Urinary Tract Infections. Each module will take approx. 20 – 30 min and includes a quiz and simple evaluation for future improvements. Your feedback will be reviewed!

You can access resources created and or provided by the AMS program by visiting the NH physician's website or OurNH.

Submitted by: Alicia Rahier, Antimicrobial Stewardship Program Coordinator

BC Children's Hospital—Compass Program Overview

What is Compass?
Compass is a province-wide service to support evidenced based care to all BC children and youth living with mental health and substance use concerns. This is done by supporting community care providers with the information, advice, and resources they need to deliver appropriate and timely care to children & youth close to home. The multidisciplinary team includes child and youth psychiatrists, mental health and substance use clinicians (social workers, nurses, psychologist, etc.) and a care coordinator.

Who can use this service?
The service is available to various community care providers working with children and youth with mental health & substance use issues, such as primary care providers, specialist physicians, child & youth mental health team clinicians, Foundry clinicians, and concurrent disorders/substance use clinicians.

What can you expect from the service?
When you call for a consultation, you'll have access to a multi-disciplinary team who can offer:

- Telephone advice and support
- Identification and help with connection to local & online resources
- Telehealth consultation to you and your patient, when needed
- Tailored training and education

The Compass team can help with diagnostic clarification, medication recommendations, treatment planning, consultation around cognitive behavioural therapy, dialectical behaviour therapy, substance counselling, behavioral issues, family issues, trauma treatment, etc., and general support when things aren't going well. You will receive a written record of all consultation recommendations for your patient's chart.

How quickly is the service available?
Compass aims to have a member of our multidisciplinary team answer most phone calls and answer your questions in real time. For more specialized questions, we aim to get back to you within the same or next day. Telehealth consultations are organized on an as-needed basis following the initial phone consultation.

What do you need to know to use this service?

- Compass is a consultative service a community providers retain full clinical responsibility of their patients. Recommendations provided by Compass should not supersede the best clinical judgement of an in-person care provider.
- If patients and family consent, Compass will collect identifying patient information to facilitate any needed follow up with you (or with the families directly). If patients or families don't want their information stored, Compass can provide recommendations on an anonymous basis.
- Compass is not a crisis intervention service, but will support providers with advice around safety planning, risk assessments, etc. Please contact your local crisis services for any emergencies.
- Compass will collect and store your demographic and practice-related information.
- Compass will periodically reach out to providers to better understand their experience with the service and communicate any upcoming workshops or educational opportunities.

How can you access the service?
Call 1-855-702-7272 from Monday to Friday, 9:00am-5:00pm PST/PDT.
Register online at: bit.ly/2Mn2lBj.

Submitted by: Dr. Sandra Allison,
Chief Medical Health Officer

Food Security in your Practice: A Determinant of Health

Food costing in BC report

In BC, monitoring food costs over time helps us determine the household income required to purchase a basic, healthy diet. Every two years the BC Centre for Disease Control collaborates with the regional health authorities to monitor the average cost of a basic, nutritionally adequate diet in BC.

The new food costing report shows that:

- Food costs have been rising across BC
- In Northern BC, the average price of a basic, healthy diet is the highest it's ever been: $1, 038 per month (for a reference family of four)

The Northern BC context

In the North, the *true cost of eating*, however, involves more than just food prices:

- Some households are forced to travel long distances to food stores - this can incur additional costs in both time and money
- Many food stores in Northern communities are not "full service"
- Food travels long distances to reach Northern stores - this can impact food quality and quantity
- Bad weather and road closures can affect food access and availability
- Shorter growing seasons limit the availability of locally grown foods
- Hunting, fishing, trapping, and gathering wild foods requires access to land, time, equipment, fuel and specialized skills

Rising food prices and food access issues do not affect everyone equally; fixed and low-income households are the hardest hit. These households often lack the financial resources to purchase healthy food after meeting other basic needs, such as rent, hydro and childcare.

To illustrate, for those on a fixed income, almost half – about 44% – of their income goes to food alone, compared to 14% of the household income of higher wage earners. This 44% doesn't include other costs associated with food (e.g. travel to food stores) which can drive costs higher. Many households in this situation struggle to put food on the table.

Household food insecurity: A Determinant of Health

Here in Northern BC, almost 1 in 5 households worry about having enough food, due to financial constraints. This is household food insecurity (HFI): *when a household worries about or lacks the financial means to buy healthy, safe, and personally acceptable food.* It is a serious public health and human rights issue in BC.

Household food insecurity: health impacts

Health is strongly determined by the social and economic environments in which we are born, live, work, learn, play and are cared for. HFI is closely linked to income, therefore the health impacts of food insecurity go far beyond individual and household food patterns, or food and lifestyle "choices". Patterns of eating that promote health may not be within reach of those who are income insecure. In fact, households who are food insecure are more likely to experience a variety of chronic diseases, including diabetes, heart disease and impacts on mental health. Managing existing health conditions can also be challenging.

Addressing household food insecurity in your practice

- Acknowledge that the social environment influences health
- Inquire about HFI as one step in assessing income level:
  - Poverty Intervention Toolkit (PIT)
  - Primary Care Interventions in Poverty
- Highlight food insecurity in the patient record and when liaising with other providers involved in a patient's care:
  - Assessment forms/electronic charting
  - Other communications with the healthcare team (e.g. social workers/registered dietitians)
- Assist clients in accessing additional financial supports (e.g. tax forms, nutrition supplements, etc.)

Northerners are resilient, but HFI is a serious concern in the North. The social determinants of health illustrate that much of what impacts our health begins at home and in our communities, before we even seek out medical care. In order to improve the health of Northerners, it is here that we must focus. Fortunately, income based solutions to HFI can be addressed through policies and programs.

For more information please visit:

- PROOF: Food Insecurity Policy Research
- Canadian Community Health Survey: Household Food Insecurity Module

Submitted by: Laurel Burton, Population Health Dietitian, Food Security Lead

Dr. Jong Kim, Northeast Medical Health Officer

Interested in Becoming an Opioid Agonist Treatment Provider?

Opioid Agonist Treatment (OAT) is the first line treatment for opioid use disorder. Now more than ever, every community in BC needs access to OAT, but many communities still lack the capacity to meet the demand. Help turn the tide of the overdose crisis, and help your patients on the road to recovery! We are looking to create a network of OAT providers that can support each other and assist the community to meet the demands.

Buprenorphine/ Naloxone

There have been changes to provincial regulations for prescribing buprenorphine/ naloxone:

- A methadone exemption is no longer required to prescribe buprenorphine/naloxone. Any licensed BC physician can prescribe this medication for treatment of opioid use disorder.
- Health Canada has removed the two month minimum of supervised daily dispensing for this medication. Due to its relative safety profile, take home does of buprenorphine/ naloxone can be provided as soon as the patient is deemed clinically stable by the treating physician.
- Buprenorphine/ naloxone is a first line benefit under BC Pharmacare and the Non-insured Health Benefits program. Patients are no longer required to "fail" methadone first.

Note: Those seeking to prescribe buprenorphine/naloxone do not need a methadone exemption but completing the BCCSU online training is recommended: http://www.bccsu.ca/provincial-opioid-addiction-treatment-support-program/

Methadone

The process to meet the requirement for methadone prescribing (includes methadone exemption) involves:

- Methadone Education (4 hours online interactive module) No cost (4 Mainpro + or MOC Section 1 Credits)
- 2 half day preceptorships or additional learning as needed (with BCCSU approved providers)
- PharmNet review

Note: if you have previously completed Methadone 101 through the College of Physicians and Surgeons of BC but have not yet completed a preceptorship or you have completed educational requirements in another province or jurisdiction please contact: **Amanda Giesler Project Coordinator, Implementation (604) 416-1535 agiesler@cfenet.ubc.ca**

Helpful Resources:

- Online Addiction Medicine Diploma No Cost (16 Mainpro or MOC Credits). The Online Addiction Medicine Diploma is a free online certificate course targeted at health care professionals interested in learning more about providing care to patients with alcohol, tobacco and opioid substance use disorders.
- A Guideline for the Clinical Management of Opioid Use Disorder
- Rapid Access to Consultative Expertise (RACE) Line. Call (604)682-2344. Website available in a downloadable APP.
- MSC Payment Schedule Information Oral Opioid Agonist Treatment and GP Point of Care Testing for Opioid Agonist Treatment

For more information on becoming an Opioid Agonist Treatment Provider please contact: Northern Health Addictions Medical Lead, Dr. Gerrard Prigmore at gerrardprigmore@me.com

Submitted by: Dr. Andrew Gray
Northern Interior Medical Health Officer

Distribution Update

It has come to our attention that some physicians are not receiving this newsletter. If you would like to receive this newsletter by email please send an email to NHPhysiciansNewsletter@northernhealth.ca

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Northern Health Physicians
Partners in Wellness

Public Health Newsletter for Northern Health Physicians

Volume 14. Number 11. December 2018 • Page 1 of 4

Influenza Update

During week 50, influenza activity remains elevated in BC, with ongoing A (H1N1)pdm09 predominance.

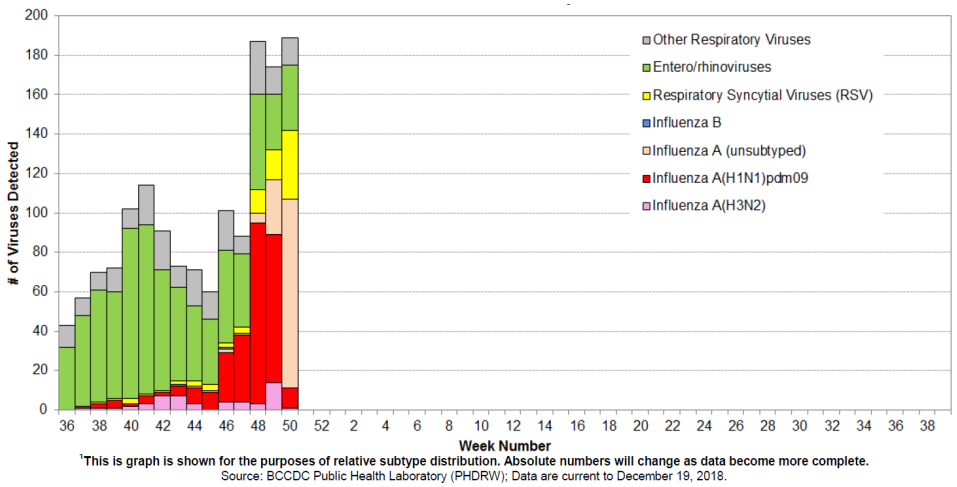
In week 50, 34% of specimens tested by laboratories in BC were positive for influenza, a further increase from recent prior weeks. Among influenza viruses typed at the BCCDC PHL since week 40, virtually all have been influenza A and, among those subtyped, just under 90% have been A(H1N1)pdm09.

Children less than 10 years of age and non-elderly adults comprise 80% of all A (H1N1)pdm09 detections to date, with children in particular disproportionately involved. Conversely, elderly adults are overrepresented among A(H3N2) detections in BC, accounting for three quarters of detections thus far.

Since our last bulletin in week 49, no further outbreaks in long term care facilities (LTCF) have been reported (Since week 40, there have been a total of 3 lab-confirmed LTCF outbreaks this season (two attributable to A(H3N2), one of unknown subtype). In contrast, between weeks 40 and 50 of the A(H3N2) dominant 2016-17 and 2017-18 seasons, 16 and 10 lab confirmed LTCF outbreaks, respectively had been reported. The lower number to date this season is consistent with fewer LTCF outbreaks expected during seasons of dominant A (H1N1)pdm09 compared to dominant A(H3N2) circulation.

Please note that this will be the last bulletin of the 2018 calendar year. Reporting will resume in the New Year.

Figure 6: Influenza and other virus detections among respiratory specimens submitted to BCCDC Public Health Laboratory, 2018-19



[1]This is graph is shown for the purposes of relative subtype distribution. Absolute numbers will change as data become more complete.
Source: BCCDC Public Health Laboratory (PHDRW); Data are current to December 19, 2018.

Source: BC Centre for Disease Control Influenza Surveillance Bulletin: Report No. 6, December 9-December 15, 2018

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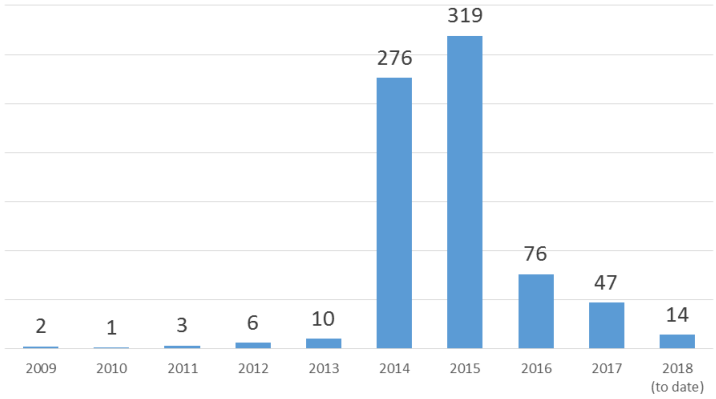
Pertussis Immunization Booster in Pregnancy

A Tdap booster in every pregnancy, ideally at 27-32 weeks gestation, is currently recommended, but not currently funded, in BC.

A maternal Tdap booster is very effective in reducing the risk of severe pertussis outcomes in infants. However, this risk is already small. The last infant death from pertussis in BC occurred five years ago. The number needed to vaccinate (NNV) in pregnancy, to prevent one infant death, has been estimated at 265,000. The NNV to prevent severe illness requiring hospitalization has not yet been estimated for BC.

In Northern Health, there was a pertussis outbreak in 2014-2015, with close to 600 cases across the region (all ages), particularly in the Northwest. Between outbreak years, pertussis is endemic at low levels.

Number of pertussis cases in Northern Health, 2009-2018 (to date)



In terms of overall health benefits, the top priority in immunization practice should be to ensure that clients are up-to-date for vaccines which are publicly funded, especially individuals who are at higher risk. That said, it is also considered best practice to inform patients about vaccines which are recommended but not publicly funded.

A provincial budgetary decision on public funding of Tdap for this indication is currently pending. In the meantime, it is up to individual clients to decide whether paying for the vaccine themselves, in order to achieve a small reduction in pertussis risk for their child, is the best use of their disposable income.

References:

National Advisory Committee on Immunization (2018). *Update On immunization in pregnancy with Tdap vaccine*. https:/www.canada.ca/enpublic-health/services/publications healthy-livingupdate-immunizationpregnancy-tdapvaccine.html

BC Centre for Disease Control. *Communicable Disease Control Manual: Biological Products (Vaccines and Immune Globulins)*. http://www.bccdc.cahealth-professionals/clinical-resources communicable-disease-control-manualimmunization/biological products

ImmunizeBC. *Vaccines Recommended for Adults in BC*. https:/immunizebc.casites/default/files/graphics vacines_recommended_for_adults_in_b-screen.pdf

Submitted by: Dr. Andrew Gray,
Northern Interior Medical Health Officer

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Antimicrobial Stewardship Topic of the Month: C Difficile Infection

NH Research: Retrospective Evaluation of *Clostridium Difficile* Infection Risk Factors and Management at a University Teaching Hospital in Northern BC.

Abstract

Background: *Clostridium difficile* (*C.diff)* is the primary cause of healthcare associated diarrhea and is a major and often preventable threat to patient safety. In Northern Health (NH) during the 2013/2014 fiscal year, the rate of hospital-associated *C.diff* Infection (CDI) acquired at the University Hospital of Northern British Columbia (UHNBC) per 1000 patient days was 0.42, a 35% increases from the previous year. Currently in Northern Health there is no standard policy or protocol for treatment of CDI.

Objective: The primary objective of this research project was to assess if local management of CDI complies with provincial and national standards in the absence of Health Authority CDI management support tools.

Methods: A retrospective chart review of patients with *C. diff* positive stool sample collected greater than 72 hours after admission or less than 72 hours after admission but with a recent discharge from UHNBC within the previous 4 weeks from April 1st, 2010 to March 31st, 2016 was performed. Data pertaining to CDI treatment, modifiable risk factors (presence, spectrum and duration of antibiotics, presence of proton-pump inhibitors or histamine-2 antagonists) and patient outcomes (length of hospital stay, mortality rate and recurrence rate) were analyzed.

Results: A total of 257 patient cases were identified, of which 178 were included for review. The investiagtors found that the compliance rate to provincial and national standards during the studied period was 32%.

Conclusion: The compliance rate with provincial and national standards was found to be below the predetermined acceptable rate of 80%. Modifiable risk factors were identified for the majority of patient cases reviewed. Future studies are required to determine if these directly impact length of hospital stay, recurrence and mortality rates. The results from this study support development and implementation of a CDI management protocol and order set at UHNBC.

The full manuscript is available online on physician's website or OurNH.

New Guidelines

The IDSA has recently published updated their guidelines for the management of CDI. The main change in this update involves removal of Metronidazole as a first line treatment option for mild/moderate disease including first recurrences, making Vancomycin PO the mainstay therapy for all severities and episodes of CDI. The NH AMS program, including Dr. Hamour, would like to remind prescribers that these new guidelines are based on resistance patterns found primarily in the USA (virulent strains) and that in Canada we have had successful treatment with oral Metronidazole in the past. Therefore, work is currently being done to create a NH specific protocol to help guide clinicians in the management of CDI. It will encourage the use of oral Metronidazole for 1st episode mild CDI, reserving use of Vancomycin PO for all moderate – severe cases, mild cases with no improvement by day 4 on Metronidazole and all recurrent episodes. At this time Fidaxomicin (2nd line after Vancomycin PO) is a non-formulary medication in BC and is a highly cost prohibitive agent.

You can access resources created and or provided by the AMS program by visiting the NH physician's website or OurNH or by contacting the AMS program coordinator at 250-565-5956.

Submitted by: Alicia Rahier, Antimicrobial Stewardship Program Coordinator

Updated: NH Infant Toddler Nutrition Guidelines for Health Professionals

Families of infants and toddlers access nutrition information from various sources, and may receive conflicting messages. There are opportunities to support parents and guardians with clear recommendations. For example:

- Recommend the introduction of solid food at around six months, based on infants' signs of readiness
- Advise that, for the majority infants, introduction of common food allergens can start at about six months; delays are generally not recommended
- Recommend iron-rich first foods, such as meats, poultry, eggs, beans, lentils, and iron-fortified cereals. These should be offered two or more times per day from six months onwards
- For children who are no longer receiving breast milk, advise that full-fat, pasteurized cow's milk may replace infant formula starting at 9-12 months
- Advise that lower-fat animal milks and plant-based beverages (e.g. soy, almond, coconut) are not appropriate milk choices for children younger than two years
- Support continued breastfeeding to two years and beyond
- It can be difficult to obtain adequate vitamin D from food sources alone. Recommend a 400 IU (10 mcg) supplement for children who receive breastmilk, or who do not obtain adequate vitamin D from their diets

The NH Infant Toddler Nutrition Guidelines for Health Professionals is a long-standing resource that serves as a compilation of feeding recommendations from current, evidence-informed sources. It includes information on each of the above topics, and many others, to assist health professionals in supporting families of healthy, young children with common feeding questions and concerns. Key practice points are summarized in the Executive Summary of this document, and supporting information is presented in six chapters:

1. Breastfeeding and Human Milk
2. Human Milk Substitutes
3. Animal Milks and Other Beverages
4. Feeding by Age
5. Issues of Concern
6. Nutrients of Concern

This resource has recently been updated in the Fall of 2018. A summary of changes can be found on page ii. Those who have a previous copy of this resource should consider replacing it with the current, updated version. This resource can be accessed via the Population Health Nutrition OurNH page, or by emailing PopHlthNutrition@northernhealth.ca.

In addition to these guidelines, other tools and resources exist to support health professionals in their work to support families regarding infant and toddler feeding:

- The BC Pediatric Nutrition Guidelines (Six Months to Six Years) for Health Professionals:
  - This desk reference is organized by age group (i.e. 6-9 months, 9-12 months, 12-24 months, 2-6 years) and provides a summary of recommendations for food and fluids, as well as nutrition risk indicators.
  - These provincial nutrition guidelines are concise and are an excellent complement to the NH Infant Toddler Nutrition Guidelines for Health Professionals (which is more comprehensive, and provides additional information, rationale, and resources to support recommendations).

- The NH display: "Feeding Babies Age 6-12 Months"
  - This display is compromised of a set of colourful posters, with key recommednations for families, suitable for a bulletin board display or for a tri-fold display board
  - The backgrounder to this display provides key messages for health professionals, and lists recommended client resources to accompany the display.
  - The display can be ordered from NH Document Source (order #10-421-6069)

- The list of NH Population Health Nutrition resources available for order at Document Source features colourful client resources related to a variety of child feeding topics

- The NH Nutrition webpage includes information for the public on Nutrition in the First Year and Nutrition for Toddlers and Preschoolers.

The above resources are also featured on the Population Health Nutrition OurNH page. Comments and questions can be forwarded to: Lise.Luppens@northernhealth.ca

Submitted by: Lise Luppens, Population Health Dietitian, Regional Lead, Early Years Nutrition