

National Nursing Week May 10 - 16, 2021



COLLEGE OF
LICENSED PRACTICAL NURSES
OF NEWFOUNDLAND AND LABRADOR
LPNs - A PRACTICAL APPROACH TO QUALITY CARE

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## **PRACTICE**

The College of Licensed Practical Nurses of Newfoundland and Labrador PRACTICE magazine includes a wide array of information on nursing regulation, nursing licensure, nursing practice and many other health related topics. PRACTICE is published electronically three times a year. CLPNNL welcomes feedback, suggestions and submissions from readers at <a href="mailto:wsguires@clpnnl.ca">wsguires@clpnnl.ca</a>.

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#### **MANDATE**

The mandate of the CLPNNL is to promote safety and protect the public through the provision of safe, competent, compassionate, and ethical nursing care.

#### **VISION**

Leading regulatory excellence.

#### **VALUES**

**Collaboration** Working effectively with others

**Excellence** Commitment to the highest standards

**Accountability** Answerable for our actions

**Fairness** Fostering a culture of mutual trust, respect and social justice

**Innovation** Using information, imagination and initiative

# **MISSION**

Regulate Licensed Practical Nurses in the public interest.



# A Note from CLPNNL's CEO/Registrar

# National Nursing Week – May 10 – 16, 2021

What a year it has been! In May of 2020, during National Nursing Week, we were in the early days of a new Pandemic. COVID-19 was a relatively new word. Now, one year later our clients, our families, and our friends know words that previously were only used by health care professionals: words like *personal protective equipment, contact tracing, and variant*.

It is fitting that the theme for National Nursing Week this year is #WeAnswerTheCall. Time and time again, LPNs were on the front lines in the fight against COVID-19 and running in the race to get vaccines into arms. Not only did you answer the call, but you did so in a manner that upheld the standards of practice, the ethical expectations of your practice, and with the upmost regard for public health and safety.

The use of "We" in the nursing week theme is a reminder of the importance of collaboration, and collegiality. Practitioners this year have been inundated with new information, new and emerging science, and new best practices. It has been



Wanda Wadman RN, BAA(N), MN

through working together, learning together, and practicing together that we have been best positioned to meet the health needs of our population.

This Public Health Emergency has meant that, in our personal lives, we might not have been able to partake in activities that may bring us joy, allow us to regenerate, or even to mourn. Yet through it all in your professional life, you have continued to provide the nursing care that the people of Newfoundland and Labrador have come to know and trust.

I reflect back on my message from last Nursing Week, and think these words bear repeating:

"Through the challenges that COVID-19 have presented in your practice and your personal life, this nursing week I hope you find the time to reflect on, to recognize, and to celebrate the important role you play in health and health care".

Licensed Practical Nurses, thank you for answering the call. Happy Nursing Week.

# We answer the call

Share your story on social media

#CNA2021 #WeAnswerTheCall #IKnowANurse



National Nursing Week May 10 - 16, 2021



# **National Nursing Week 2021**

Theme: #WeAnswerTheCall

In this past year nursing has answered the call in so many ways: in providing quick and effective nursing care in the face of a new virus; in stepping up and standing together in COVID-19 screening centres; in learning about and then teaching about new respiratory health conditions; in answering phones and providing health information; in setting examples for good infection control practices at work, at home, and in the community.

The theme this year was developed by the Canadian Nurses Association to showcase the many roles that nurses play in a patient's health-care journey. The pandemic brought to light the courage and commitment that nurses work under every day and showed the important role that nurses play in the community.

Every day, LPNs answer the call in a way that reflects the public's trust and respect in the profession. This is evident in how LPNs demonstrate their commitment to safe, competent, compassionate, and ethical nursing care.

National Nursing Week provides an opportunity to celebrate the important role that LPNs play in health and health care. **Happy Nursing Week!** 

# REMINDER: KEEP YOUR INFORMATION UP-TO-DATE!

Under the College of Licensed Practical Nurses of Newfoundland and Labrador By-laws (2014) Section 34 - Accuracy of Personal Information, all LPNs are required to keep their information on file with CLPNNL up-to-date. This includes:

- Name change (copy of legal documentation required)
- Mailing address
- Email address
- Employment information
- Phone numbers



If any of the above information has recently changed, please contact the CLPNNL by phone or email to update your file.

LPNs now use online registration to complete their annual licensure renewal application. LPNs are required to provide their most up-to-date email address to the CLPNNL as this is essential for online registration. For more information, please contact the CLPNNL office at 709-579-3843.



By: Stacey Tuttle - Holistic Nutritionist.

Packing the right lunch to power you through a twelve-hour shift of hospital surprises can be a balancing act. Food is your fuel for the day, but when done right, it can also be a respite that brings moments of real joy and adds a little spring to your step. So when you're preparing to fill that lunch bag, nutritious and delicious is the name of the game. With that in mind, let's run through some simple solutions to keep your energy high and taste buds happy all shift long.

To set yourself up for success, I recommend packing one meal, one hearty snack, and one small snack to keep yourself well-fuelled. Let's start with the meals!

To break out of the sandwich, salad, and leftovers rut, think about planning balanced meals that include good sources of protein, carbohydrates, fibre, and fat. When thinking about my own lunches, I always build around quick sources of proteins such as rotisserie chicken, sausage, prosciutto, hard-boiled eggs, yogurt, cheese, or canned fish like tuna or salmon. Legumes can also be a great option and I often turn to hummus or even canned chickpeas or black beans which can be easily rinsed and ready to go. Ensuring you are eating enough protein is a great way to guarantee you stay satisfied and energized, so aim for 4 to 6 ounces or ½ cup of legumes.

When it comes to carbs, there are plenty of great easy options like microwavable brown rice, baked potato or sweet potato, pre-cooked quinoa, or Ezekiel bread. Add some pre-chopped veggies for fibre and maybe a little homemade salad dressing for fat (check the recipes at the end!) and your lunches will start coming together in a matter of minutes.

Here are a few easy meal ideas to help get you started:

- Try a ploughman's lunch or snack plate (assembly only!) boiled egg, cheese, smoked salmon, prosciutto, or turkey, Mary's crackers, crunchy veggies like snap peas or cucumber and dip of choice.
- Smoked salmon on Ezekiel bread with cream cheese + cucumber slices
- · Heartier salads like Cobb salad, Taco salad, Greek salad, or Nicoise salad
- Greek yogurt topped with berries, granola, and almond butter
- Buddha Bowl start with a base like brown rice or quinoa, add roasted, sauteed, or raw veggies, a protein like chicken, fish, or legumes, then top with your favourite sauce or dressing (keep it simple with olive oil + balsamic or either one of the 2 healthy recipes included).
- Chicken and a hard-boiled egg with sweet potato, cucumber, and ranch dressing
- Whole grain pita stuffed with feta cheese, avocado, red peppers slices, hummus, and apple

For those who like to do their cooking in advance, by simply prepping a pot of grains (rice, quinoa, pasta), roasting a tray of root veggies, shredding a store-bought rotisserie chicken, and making a simple dressing, you can set yourself up for a week of healthy and delicious lunches in less than 30 minutes.

Now lets talk snacks (you didn't skip ahead, did you?). Try fruits like apples or grapes with a few pieces of your favourite cheese. Trail mix also makes a great option, as do carrot sticks and ranch dressing, snap peas and hummus, rice cakes and peanut butter, or a high-quality protein bar like Go Macro or Real Food Bar. Personally, I always like to keep a bar of my favourite dark chocolate nearby. It's a great way to satisfy cravings and provide a little boost to my mood.



And since dehydration is a common culprit of fatigue or headaches, make sure stay well hydrated with plenty of water or herbal teas.

With a nurse for a mother, I know your days often come with a lot of unexpected twists and turns. So make sure to take care of yourself by preparing the kind of lunch that will have you ready for anything!

## Recipes:

#### Maple Dijon Dressing

3 tbsp olive oil, 1 tbsp apple cider vinegar,  $\frac{1}{2}$  tbsp mustard, 1 tsp maple syrup, salt and peppers

#### Herby Yogurt Dressing

2 tbsp yogurt of choice, 2 tbsp lemon juice, 3 tbsp olive oil, small handful of your favourite chopped herbs (dill, parsley, basil, chives, etc.), water to thin if needed

Stacey Tuttle is a holistic nutritionist at Simply For Life St. John's where she specializes in digestive wellness, women's hormones, and mental health.

Stacey graduated from the Institute of Holistic Nutrition with First Class Honours. In addition, Stacey holds a Bachelor of Arts from Memorial University of Newfoundland. Her energy, positivity, and creativity inspire people to adopt healthy habits that help them glow from the inside out.

Stacey is also the co-creator of *Well and Good Dinners*, a seasonal community pop-up dinner showcasing local ingredients through the eyes of two holistic nutritionists.



# **CLPNNL's Annual General Meeting - Save the Date!**



CLPNNL's **AGM** will be held on **Friday**, **June 25**, **2021 at 2:00 pm** (island time). The meeting will be virtual, via zoom. Registration information is available on the website. Registration closes on June 18 at 4:30 pm.

#### FROM THE DESK OF THE CLPNNL REGULATORY OFFICER

# Disciplinary Hearings: How are they conducted and what are the potential decisions?

In the <u>January Issue of PRACTICE</u> we described the process used by CLPNNL to address any allegation filed against a LPN in the province. In this latest installment, we will explain the process of a disciplinary hearing and possible outcomes of a hearing. A disciplinary hearing is another step in the progression of the college's Professional Conduct Review (PCR) process.

As outlined in the last article, if the Complaints Authorization Committee (CAC) after a thorough review of an allegation, determines there are reasonable grounds to believe the LPN engaged in conduct deserving of sanction, it may instruct the Registrar to file a complaint against the LPN and refer the matter to the CLPNNL disciplinary panel.

The disciplinary panel consists of 13 members, three (3) members are government appointed public representatives and the remaining 10 are LPNs from various parts of the province, appointed by the CLPNNL Board. Having a large pool of members keeps the process fair and transparent by ensuring that there be no conflicts of interest in a matter by the people hearing the case. The Board also appoints one of the 13 to take the role of chairperson of the panel. When the CAC files a complaint with the disciplinary panel, the chair chooses three (3) of its members to make an adjudication committee to hear the complaint. Of the three members chosen to hear the complaint, one (1) must be a public representative and the remaining two (2) will be LPNs.

Disciplinary hearings are public events that are announced on the website and in PRACTICE. They are usually conducted in the community nearest to the practice facility of the LPN who the complaint is against. However, in these times of COVID-19, regulatory bodies have shifted to virtual hearings given the inadvisability of gathering groups of people together in large physical locations. There may be times when the nature of the information that will be revealed during a hearing is of a sensitive nature and, for that reason, the tribunal may exclude the public from attending a hearing or parts of it. As outlined in section 19 (3) of the LPN Act, "A hearing shall be conducted in public, but an adjudication tribunal may exclude the public from a hearing, or from part of it, where it considered the desirability of protecting a party or the complaint or another person against the consequences of possible disclosure of personal matters outweigh the desirability of holding the hearing in public."

A disciplinary hearing, like any other legal proceeding, can have a number of outcomes:

- The LPN may plead guilty to all or portions of the complaint;
- The LPN may plead not guilty to the complaint;
- The adjudication tribunal may find that the LPN is either guilty of conduct deserving of sanction or not guilty of conduct deserving of sanction.

In the event that a LPN is found to be not guilty of the complaint, the adjudication tribunal will dismiss the complaint, and send a notification to the complainant in the matter of the dismissal and advise them that they may appeal the decision to the appeals division of the Supreme Court of NL within 30 days of receipt of the notification.

If a LPN pleads guilty to the conduct outlined in the complaint, or is found to be guilty of conduct deserving of sanction by the tribunal, there are a number of possible sanctions that can be imposed on the LPN by the tribunal. These sanctions are outlined in the <u>LPN Act (2005)</u> sections 20 and 21. The following list gives just a few of the options available to the panel in making its judgement:

- Reprimand
- Suspension of the LPN's license to practice nursing for a fixed period of time
- Impose restrictions or conditions on the LPN's license to practice nursing
- Cancellation of a LPN's license to practice nursing and removal of their name from the register
- Impose a fine of not more than \$10,000.00 to be paid to CLPNNL
- Order the LPN to pay all or a portion of the costs of the hearing and investigation
- Order the LPN to undergo education, medical treatment, counselling or any other order made by the tribunal
- Publish a summary of the complaint and the decision with the LPNs name and address of where they practice nursing

The preceding list is just a snapshot of some of the sanctions available to the adjudication tribunal when they render a decision in a hearing. The list is not all inclusive. The tribunal may choose any or all of the sanctions listed above when it renders its decision. The full list of options can be found in the LPN Act (2005) on the CLPNNL website (<a href="www.clpnnl.ca">www.clpnnl.ca</a>). As with a dismissal of a complaint by the tribunal, the LPN who is found guilty of conduct deserving of sanction can also appeal the guilty decision by filing their case with the appeals division of the Supreme Court of NL.

For any questions related to the Professional Conduct Review Process contact Dena Lake at 579-3843 ext. 204 or <u>dlake@clpnnl.ca</u>.

# Changes Coming to the CLPNNL MAiD Document

Amendments to Bill C-7, An *Act to amend the Criminal Code (medical assistance in dying)* received Royal Assent on March 17, 2021. CLPNNL will be revising our Medical Assistance in Dying (MAiD) document to reflect the new changes. When completed, the revised document will replace the existing document, located on the CLPNNL website, under the Policy and Practice tab. LPNs are reminded that they are accountable to adhere to current legislation in their practice.

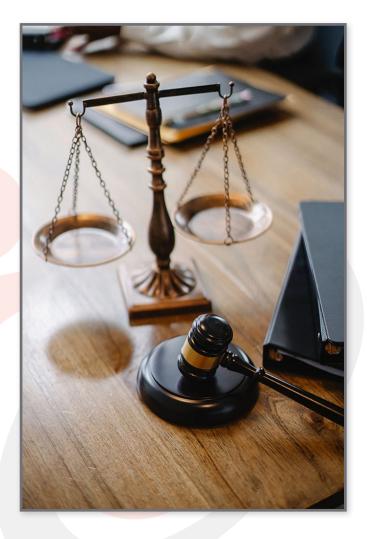
# PROFESSIONAL CONDUCT REVIEW (PCR) Notifications

On January 11, 2021 the CLPNNL Registrar resolved an allegation filed against a LPN. The Complainant was the LPN's employer. allegation related to issues with medication administration. There was no allegation of any harm to clients due to the incidents. The LPN was required to completed remedial education targeting documentation, professional accountability, jurisprudence in nursing practice and the CLPNNL Standards of Practice and Code of Ethics. The LPN is required to meet with the CLPNNL Practice Consultant to discuss insight gained from the remedial education, professionalism, and self regulation as well as to review the CLPNNL/ CRNNL Medication Management Document.

On January 14, 2021 the CLPNNL Registrar resolved an allegation against a LPN. The allegation was filed by the CLPNNL Registrar as outlined in the Licensed Practical Nurses Act (2005) Section 15 (2). The LPN practiced without having completed their annual license renewal requirements and thereby failed to maintain liability protection in accordance with the Licensed Practical Nurses Act (2005). The LPN is required to pay a \$1000.00 fine as well as complete remedial education targeting professional accountability and jurisprudence in nursing practice. Additionally, the LPN met with CLPNNL's Practice Consultant and discussed the CLPNNL's Standards of Practice and Code of Ethics, accountability, and the importance of upholding annual registration requirements.

On February 27, 2021, the CLPNNL Complaints Authorization Committee (CAC) dismissed an allegation filed against a LPN. The Complainant in the matter was the LPN's

employer. The allegation related to the LPN exhibiting behaviour in the workplace that raised concerns about their professional practice. Following an investigation into the mater, the CAC found that there were no reasonable grounds to believe that the actions of the LPN demonstrated they had engaged in conduct deserving sanction.



On March 17, 2021, the CLPNNL Registrar resolved an allegation against a LPN. The Complainant was the LPN's employer. The allegation related to a breach of professional

boundaries in relation to a patient (there was no allegation of abuse or other actual harm to the patient). The LPN had been under the care of a health professional for treatment of a health issue and COVID-19 interfered with their ability to continue treatment. The LPN felt that these circumstances contributed to poor decision making. The LPN's return to practice is subject to CLPNNL receiving confirmation from a health care provider that the LPN is safe to return to nursing practice and continues to receive treatment and counselling. The LPN is also required to take part in self-reflection follow-up with the CLPNNL Regulatory Officer for monitoring

for a period of no less than 18 months. Additionally, the LPN is required to complete remedial education targeting professional accountability, jurisprudence in nursing practice, the CLPNNL Standards of Practice and Code of Ethics as well as the importance of the nurse-client boundary. The LPN met with the CLPNNL Practice Consultant to discuss and reflect on learnings gained about the legal and professional implications of nurses maintaining fitness to practice in the interest of public safety and the importance of upholding the integrity of the nursing profession.

# CLPNNL's Virtual Leadership Workshop

Between February 23 and March 23, 2021, 23 LPNs from around the province participated in a 3-part, 9-hour workshop focused on professional regulation and leadership. This was the first time the previous 1-day in person workshop was offered virtually (via zoom) but will not be the last! Evaluation feedback was very favourable for both the content and the delivery method.

CLPNNL plans to offer the workshop again in the fall. E-mail notification of a fall workshop offering will be sent to all LPNs in September.



# Read All About It!

# The CLPNNL Board Approves Three (3) New Documents!

#### Standards of Practice for Licensed Practical Nurses in Canada 2020

The Standards of Practice for Licensed Practical Nurses (2013) document has undergone a refresh to update language and clarify indicators, and the 2020 Standards of Practice for LPNs in Canada was approved by the CLPNNL Board in February 2021.

The Standards of Practice are authoritative statements that define the legal and professional expectations for LPN practice. In conjunction with the Code of Ethics for Licensed Practical Nurses, they describe the elements of quality LPN practice.

There are four broad standards, applicable to LPNs in all practice settings which provide the benchmark to which LPNs are measured: *Professional Accountability and Responsibility; Evidence-Informed Practice; Protection of the Public through Self-Regulation; Professional and Ethical Practice.* Beneath each Standard are *indicators*, which describe more specifically the expectations for LPN practice.

The Code of Ethics for Licensed Practical Nurses in Canada, 2013, was previously located in the same document as the Standards of Practice. They are now in 2 separate documents.

For more information on the changes to the Standards of Practice, see page 15.

# Resolving Professional Practice Issues: A Resource for LPNs

When LPNs identify issues in their practice setting that potentially impede professional, ethical, or legal practice they have an obligation to take action. This Interpretive Document outlines a step-by-step process LPNs may utilize to identify and work to resolve professional practice issues should they arise in their practice areas. A five-step process is presented to assist LPNs: Define the Issue, Identify Resources, Develop and Implement an Action Plan, Document, and Evaluate. A template for a letter is also provided, which can be used to guide LPNs in communicating concerns in their practice settings.

# **Aesthetic Nursing Services**

Aesthetic nursing services, which are different from esthetic services, are becoming more prevalent in society. While some of the tasks associated with this practice are within the skills of LPNs (e.g., injections) the application of those skills in the context of aesthetic services had not been previously identified as within the scope of practice for LPNs. The CLPNNL Board,

in February 2021, identified the criteria that must be met for aesthetic services to be considered within the scope of practice for LPNs in Newfoundland and Labrador. The full criteria is outlined in the Aesthetic Nursing Services Practice Guideline.



These documents, and all practice support tools, are located on the CLPNNL website, <a href="https://www.clpnnl.ca">www.clpnnl.ca</a> under the <a href="https://www.clpnnl.ca">Practice and Policy</a> tab.

# NOT RECEIVING CLPNNL E-MAILS?



Each year on the licensure renewal form we ask you to confirm or update your e-mail address...That is the address we use to send you important regulatory information. Be sure to check all your inboxes, including spam folders, when looking for CLPNNL e-mails.

# STANDARDS OF PRACTICE CHANGES

In February 2021, the CLPNNL Board approved the adoption of the <u>Standards of Practice for LPNs</u> in Canada, 2020.

Recognizing the need to update the 2013 Standards of Practice document, the Canadian Council for Practical Nurse Regulators (CCPNR) developed a working group comprised of nurses from two of the subgroups within the CCPNR, the Practice Consultants Group (PCG) and the Investigation and Discipline Group (IDG). When the working group completed their draft, a feedback survey was prepared. This survey was sent to all LPNs in Newfoundland and Labrador. Thank you for taking the time to review the draft and provide your feedback.

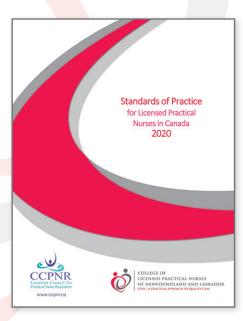
The Standards of Practice for Licensed Practical Nurses in Canada provides a national framework for LPN practice. Standards of practice are authoritative statements that define the legal and professional expectations of LPN practice. In conjunction with the Code of Ethics, they describe the elements of quality LPN practice and facilitate movement through inter-jurisdictional mutual understanding and agreement of expectations and requirements for practice.

The Standards of practice are broad enough to be used by LPNs in all practice settings. They provide the benchmark to which LPNs are measured. LPNs are accountable and responsible to adhere to the *Standards of Practice*.

Standard	2013 Standard Heading	2020 Standard Heading
1.	Professional Accountability and	Professional Accountability and
	Responsibility	Responsibility
2.	Knowledge Based Practice	Evidence-Informed Practice
3.	Service to the Public and Self	Public Protection through Self
	Regulation	Regulation
4.	Ethical Practice	Professional and Ethical Practice

The 2020 revision includes updated language and minor changes to headings as well as indicators under the standards to aid in clarity. Some indicators have been combined. Edits have been made to the Preamble and the foundational principles upon which the standards are built. For example, principles have been condensed from six to four.

In the coming months, CLPNNL will hold webinars to discuss the revised Standards of Practice. To register for educational webinars or other events at CLPNNL, check out the Events page.



# **CCP UPDATE**

# New licensing year...New CCP evaluation and plan

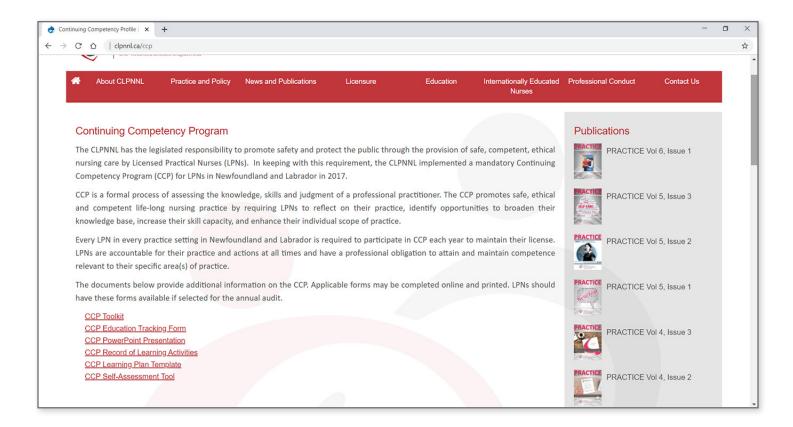
The start of the licensing year is a great time to start anew with your CCP. Your CCP toolkit is located on the <u>CLPNNL website</u>. The forms are now fillable PDFs. That means you can type right into the forms and save them to your computer. Of course, you can always print them off and keep your paper copies if that is preferred. Remember to keep these files in a safe place in the event that you are audited.

## Wondering where to start?

It all starts with your self-assessment. The CCP toolkit walks you through each step in the process.

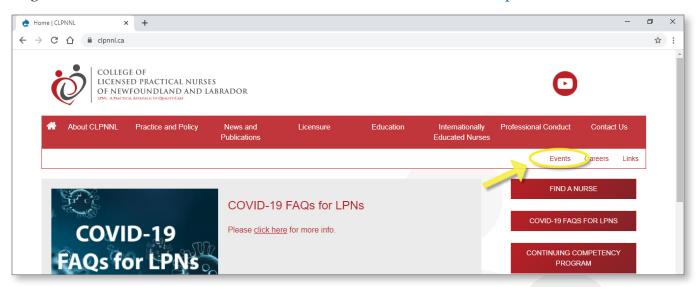
**Tip:** Keep a record of <u>ALL</u> learning on the *Record of Learning Activities form*.

**Tip:** LPNs are required to have a minimum of 14 hours of learning each year. Seven (7) of those hours must be formal learning. The remaining required seven (7) hours could be formal and/or informal.



# **CLPNNL Spring Webinars**

Register on-line at the Events section of the CLPNNL website www.clpnnl.ca.



Click on the event of your choice and complete the registration information.

You will receive an e-mail outlining your log-in information.

Complete the on-line evaluation after attending the event and receive your certificate of attendance for your CCP file.

#### List of events:

DATE	TIME	TITLE	PRESENTER
May 12/21	2-3pm	CLPNNL's NEW documents	Siobhainn Lewis – Policy Consultant
May 19/21	7-8pm	ССР	Wanda Sq <mark>uires</mark> – Practice Con <mark>sult</mark> ant
May 26/21	2-3pm	CLPNNL's NEW Standards of Practice	Wanda Sq <mark>uire</mark> s – Practice Consultant
June 9/21	2-3pm	CLPNNL's NEW Standards of Practice	Wanda Squires – Practice Consultant
June 16/21	2-3pm	Professional Accountability and Responsibility	Dena Lake – Regulatory Officer & Wanda Squires – Practice Consultant

# Technologies with High Potential to Transform Health Care in 2021

The fast pace of medical technology development is already transforming the Canadian health care system. But what game-changers are waiting around the corner? To help health care decision-makers prepare for the adoption of technologies that are not yet widely used, CADTH is continuously scanning the horizon to identify the ones that are the most promising.



CADTH is an independent agency that finds, assesses, and summarizes the research on drugs, medical devices, tests, and procedures. CADTH recently released its <u>List of 2021 Health Technology Trends to Watch</u> — a list of emerging health technology trends that have potential to significantly influence the future of health care in Canada.

To develop its Watch List, CADTH looked for technologies with an FDA Breakthrough Devices Designation and for any other technologies that could change how health care is delivered. Then, CADTH consulted with its <u>Device Advisory Committee</u> for more context and to help determine which technologies had the highest likelihood of having an impact.

This article describes just a few of the technologies featured in the Watch List.

#### **WEARABLES**

The market for wearable devices — or "wearables" — developed for use in health care continues to grow. Two new wearables have been designed to learn the wearer's normal vital signs and detect changes in them. One has recently been developed for people with nightmare disorder or who have nightmares associated with post-traumatic stress syndrome. Worn on the wrist (like a smartwatch) while sleeping, the device detects and learns an individual's normal sleeping heart rate and body movements. When it senses a change that suggests a nightmare is beginning, the device vibrates gently enough to stop the nightmare without waking up the wearer.

Another new wearable has been developed for users of opioids who are at risk of opioid-induced respiratory depression. This device is worn on the chest to detect and learn the normal breathing patterns of the wearer. When it detects abnormal breathing, which could mean the wearer is experiencing respiratory depression, the device sends an alert to first responders.

#### **AUGMENTED AND VIRTUAL REALITY**

Augmented reality and virtual reality (VR) technologies are also providing new treatment options for people with various conditions. A new contact lens has been developed that uses augmented reality to help people with low or impaired vision see better — by increasing contrast or brightness, for example. And a VR headset has recently been designed to provide cognitive behavioural therapy, mindfulness, and relaxation programs for people with conditions such as fibromyalgia or chronic low back pain.

#### ARTIFICIAL INTELLIGENCE

Other innovations included in the Watch List involve the use of artificial intelligence (AI) to create systems for performing health care-related tasks that typically require human intelligence. Two of these are AI-based systems for analyzing diagnostic images — one analyzes CT scans of the brain to detect critical abnormalities that could lead to stroke (such as intracranial hemorrhage and large vessel occlusion), and another analyzes MRI scans of the breast to detect abnormalities that could suggest the presence of breast cancer.

Al-based imaging systems are already being used in all Canadian provinces and some territories. Data on where Al imaging technology is being used in Canada is captured in CADTH's Canadian Medical Imaging Inventory, available at <u>cadth.ca/cmii</u>.

#### COVID-19

CADTH also identified new technologies that directly address issues related to COVID-19. As testing for the virus remains an important part of managing the pandemic, new COVID-19 tests are being approved rapidly. A number of home sampling kits have been developed — one that has been approved by Health Canada could soon be available at your local pharmacy. There are also new tests being developed that can detect and differentiate between COVID-19 and influenza from a single sample — some are for use in the lab, while others are for use at the point of care.

In addition, 3-D printer designs are emerging that address ventilator shortages resulting from the COVID-19 pandemic. Examples include a new low-cost ventilator design as well as a design for a plastic adaptor that converts BiPAP (bilevel positive airway pressure) machines into mechanical ventilators — both of which can be quickly 3-D printed on location in a hospital.

As is the case with new and emerging technologies, there's only limited evidence so far on how effective these devices are or how they compare with existing treatments. But CADTH's Watch List provides an early look at the technologies that could change and impact Canadian health care in the coming years — which can help health care decision-makers see around the next corner.

You can access the entire CADTH Watch List at cadth.ca/health-technology-trends-watch. To learn more about our Horizon Scanning program, visit <a href="mailto:cadth.ca/horizon-scanning">cadth.ca/horizon-scanning</a>, or to suggest a new or emerging health technology for CADTH to review, email us at <a href="mailto:HorizonScanning@cadth.ca">HorizonScanning@cadth.ca</a>. If you'd like to learn more about CADTH, visit <a href="mailto:cadth.ca">cadth.ca</a>, follow us on Twitter @CADTH\_ACMTS, or speak to Sheila Tucker, CADTH's Liaison Officer for Newfoundland and Labrador at Sheilat@cadth.ca.

Questions about COVID-19? Visit CADTH's COVID-19 Evidence portal at: https://covid.cadth.ca/.

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# Tuberculosis -

# Information for Health Care Providers in NL

By: Jennifer Bull End TB Regional Action Plan Project Manager Department of Health and Social Development, Nunatsiavut Government

Tuberculosis (TB) has been around for thousands of years. It is present throughout recorded history and evidence of TB infections have even been found in ancient Egyptian mummies. It is believed that one-quarter of the world's population (approximately two billion people) are infected with TB and a new infection is diagnosed every second! Although preventable and treatable, tuberculosis remains one of the world's top infectious diseases, **taking the lives of approximately 4,000 people every day**. This statistic is scary but it's a global statistic, do you need to worry in Newfoundland and Labrador you might ask? The simple answer is yes.

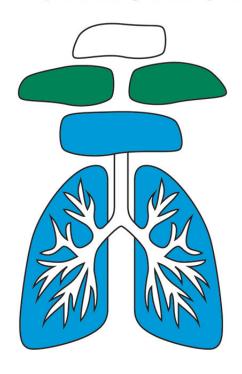
When certain risk factors for TB are present among individuals, families or communities, it increases the chances of a person developing TB disease. These risk factors include poverty, gaps in the social determinants of health and health inequalities. In our province many of our indigenous communities face these hardships every day, resulting in them carrying the major

burden of TB cases in Newfoundland and Labrador. Between 2015 and 2019 for example, Nunatsiavut (Labrador Inuit) had **79 cases of active TB** and a five year average incidence rate of **644.2 cases / 100,000**. Compared to the Canadian five year incidence rate of **4.6 - 5.0 cases / 100,000** the astounding gap is clearly seen.

It is obvious that TB continues to be of great concern in our province and it must not be forgotten or pushed aside due to the current COVID-19 pandemic, but how do we do this? A recent report estimates that 12 months of COVID-19 has reversed 12 years of global progress towards TB elimination. In general, diagnosis and treatment of TB is down 25% around the world which is very unfortunate and ultimately, unacceptable. The path forward requires that all health care professionals are educated and aware of the current TB situation and are encouraged to "Think TB". Since Newfoundland and Labrador has several communities that meet the definition the World Health Organization (WHO) has set forth to be considered **high incidence TB communities**, this is especially important for us.

Tuberculosis is caused by mycobacteria, specifically

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Nunagijavut, Ikkiavut, TB puvallungimagilluta katingaluta

those in a grouping called the Mycobacterium tuberculosis complex (MTB complex). Transmission of TB bacteria is primarily **person-to-person**, through inhalation of **airborne droplets** (droplet nuclei) that contain TB bacteria. After exposure a person might develop active TB disease within 18-24 months. TB bacteria can invade different parts of the body and the resultant signs and symptoms are dependant on what site is affected. The most common type of TB is pulmonary TB which significantly increases the likelihood of spread. Some of the common signs and symptoms of TB are: unexplained weight loss, fever, night sweats, loss of appetite, fatigue, cough for at least two or three weeks, and bloody sputum (hemoptysis).



It is important to note that not everyone who comes in contact with TB bacteria will develop active TB disease and this is where it gets tricky. A proportion of people that are exposed to TB bacteria will get infected, but the bacteria will lie dormant in their body creating no signs and symptoms. This is called Latent TB Infection (LTBI) or 'sleeping TB'. It is not possible to know for certain which people with LTBI will develop active TB or when. Targeting LTBIs is therefore a very important part of any TB prevention program.

In the Labrador-Grenfell Health region of the province the Regional Health Authority works together with Nunatsiavut's Department of Health and Social Development to deliver a comprehensive TB program in Nunatsiavut (Nain, Hopedale, Makkovik, Postville and Rigolet). Once a client has been identified as a possible TB case, nurses and physicians must act quickly to ensure the disease does not spread to others. The client is immediately placed on airborne precautions and testing is initiated. The client will be given a **Tuberculin** Skin Test (TST) if not contraindicated and once read (in 48-72 hours) a positive result Illusuak Centre, Nain, Labrador



indicates the presence of TB bacteria. At the same time the client will be asked to provide a minimum of three **sputum samples** and often a chest x-ray is also done. Sputum samples can be collected on the same day but must be at least an hour apart with one sample being an early morning specimen (prior to the client eating or drinking anything). Initial examinations of specimens submitted for TB testing include **acid-fast bacilli (AFB) smear** and **mycobacterial culture**. A positive AFB (i.e. smear positive sample) indicates that the client is infectious and they will need to remain on isolation for approximately two weeks (or until no longer smear positive) while treatment is initiated.



Nain, Labrador

In Canada, treatment of active TB is not optional and all clients receive their medications via directly observed therapy, or DOT. This form of treatment helps to ensure that the entire course of antibiotics are taken to decrease the risk of a drug-resistant strain of TB developing. Treatment is lengthy (often lasting 6 - 9 months) and comprehensive, requiring much more then just DOT. The Public Health nurse assigned to the client will meet with them regularly to assess for symptoms, do a weight check, draw blood work to check liver function and collect sputum samples and/or schedule chest x-rays as required. Treatment for LTBIs is very similar however recent changes to the standard regimen have shortened the duration considerably, allowing most clients to complete a full course in approximately 12 weeks. This new shortened regimen has resulted in greater uptake of LTBI treatment which unlike active TB, is not legislated by law to be treated. This is very positive since tackling sleeping TB is a critical part of eliminating TB from our communities.

In 2014, the WHO adopted an **End TB Strategy** to eliminate the global TB epidemic by 2035, by reducing 90% of TB cases (compared to the 2015 baseline). The Federal Government of Canada has also committed to this target and has partnered with **Inuit Nunangat** (the Inuit homeland in Canada) to work towards elimination. Tuberculosis is a complex infectious disease and it will require complex strategies as well as innovative and effective tools to prevent, diagnose, and treat TB. It will also require much more then just medical management since the social determinants of health typically play a significant role in tuberculosis spread and disease progression. Health care providers in Newfoundland and Labrador need to always **"Think TB"** to ensure timely diagnoses of TB disease, which will ultimately save lives and prevent spread in our communities.



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