

Virtual Influenza-Like-Illness (ILI) Assessments

CPG: Virtual Health

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Introduction:

Virtual care is healthcare at a distance and many assessments need to be adapted in the absence of a face-to-face interaction¹. General ILI assessments may involve using a stethoscope to listen for lung sounds which is not available in virtual healthcare settings. Information will need to be gathered in other ways, such as listening to the patient's cough, or the audible presence of adverse breath sounds, such as wheezing. As with conventional assessments, determine if the patient is experiencing a particular problem and focus on that area first².

Essentials³:

1. **Set-up:** Before initiating a virtual visit, make sure you are set up properly, have access to the patient chart, and any additional information that may be required.
2. **Connect:** Determine the most appropriate method for communicating with the patient (either phone or video chat). Confirm that your audio and video connections are working properly.
3. **Get started:** Once you begin the visit, perform a rapid assessment to determine if any immediate interventions are needed. For example, does the patient appear very sick, or are they too short of breath to speak? If so, go directly to asking key clinical questions. If no immediate interventions are required, establish what the patient hopes to gain from the visit (i.e., clinical assessment, referral, reassurance).
4. **History:** Ask questions to determine a history of the present illness.
5. **Examination:** Perform a modified physical exam and ask functional inquiry questions.
6. **Vitals:** The patient may be able to take their own measurements if they have access to vitals equipment at home (i.e., blood pressure monitor, pulse oximeter, scale). Interpret results with caution and use them to support findings in the context of your wider assessment.
7. **Decision and action:** Based on the follow-up assessment, patients may be discharged from care or referred for a 911 emergency response. Patients with worsening conditions, or those exhibiting red-flag symptoms, should be instructed to immediately call 911 for assessment and conveyance to hospital. Patients whose conditions have not worsened, and present without any red-flag symptoms, may be discharged from care and asked to follow-up with their primary care provider.



Assessment Overview:

1. Patients who have entered the ILI Clinical Pathway will have been previously assessed by a paramedic and will have met the following criteria:
 - Between the ages of 17 and 60
 - No 'red flag' symptoms
 - No single NEWS2 score of 3 and have a total NEWS2 score of 3 or less
 - Meets the paramedic's clinical judgement for non-conveyance to hospital
 - Consults with ClinCall
2. Consenting patients will be contacted by a community paramedic within 24-48 hours of the initial assessment. The goal of the ILI follow-up is to assess for worsening patient conditions, or the new presence

of any red-flag symptoms.

3. Patients should be assessed using:

- The BCCDC COVID-19 Screening Tool
- Systems based approach
- Presence or absence of red-flag symptoms

Virtual Assessments:

Patients with ILI		
Section	Component	Question
BCCDC COVID-19 Screen	Are you experiencing any of the following:	<ul style="list-style-type: none"> Severe difficulty breathing (e.g. struggling to breathe or speaking in single words) Severe chest pain Having a very hard time waking up Feeling confused Losing consciousness
		If YES to any of the questions, have the patient and/or caregiver immediately call 911 for transport to hospital
	Are you experiencing any of the following:	<ul style="list-style-type: none"> Mild to moderate shortness of breath Inability to lie down because of difficulty breathing Chronic health conditions that you are having difficulty managing because of difficulty breathing
		If YES to any of the questions, have the patient and/or caregiver call 911 for transport to hospital
	Are you experiencing cold, flu or COVID-19-like symptoms, even mild ones?	Symptoms include: <ul style="list-style-type: none"> Fever/chills Cough Shortness of breath Sore throat and painful swallowing Stuffy or runny nose Loss of sense of smell Headache Muscle aches Fatigue or loss of appetite.
		If YES, ask: <ul style="list-style-type: none"> Did you develop symptoms within 14 days of travel outside Canada? Did you provide care or have close contact with a person with confirmed COVID-19?
		Refer patient to get assessed for COVID-19 by calling 811 to find the nearest centre.
		Instruct the patient to self-isolate for a minimum of 10 days, based on BCCDC recommendations.

		<p>on BC CDC recommendations.</p> <p>"Self-isolate for a minimum of 10 days, so you do not potentially spread the disease to others.</p> <p>You may return to your regular activities when:</p> <ul style="list-style-type: none"> • At least 10 days have passed since your symptoms started; AND • Your fever is gone without the use of fever-reducing medications (e.g. Tylenol, Advil), AND • You are feeling better (e.g. improvement in runny nose, sore throat, nausea, vomiting, diarrhea, fatigue).
		<p>Stay home and do not go to work, school or public places and do not use public transit, taxis or ride shares. Do not have visitors to your home. If you live with other people, avoid contact with others at home by staying and sleeping in a separate room and using a separate bathroom if possible.</p> <p>Cover your coughs and sneezes</p> <ul style="list-style-type: none"> • When you feel a cough or sneeze coming on, cover your mouth and nose with a tissue. Don't have a tissue? Cough or sneeze into your upper sleeve or elbow, not your hands. Wash your hands right away after you sneeze, cough or touch used tissues or masks. Throw used tissues into a lined trash can in your room and tie up that trash bag before adding it with other household waste. <p>Wash your hands</p> <ul style="list-style-type: none"> • Wash your hands often with soap and water for at least 20 seconds. It is best to dry your hands with a paper towel and throw it away after use. If you can't wash your hands, use an alcohol-based hand sanitizer. Avoid touching your eyes, nose, and mouth with unwashed hands. Learn more. <p>Do not share household items</p> <ul style="list-style-type: none"> • Do not share dishes, cups, eating utensils, towels, bedding, or other shared belongings. After using these items, wash them with soap and water. <p>Flush the toilet with the lid down</p> <ul style="list-style-type: none"> • COVID-19 virus may also be present in poop (stool or feces). Always wash your hands with soap and water after using the toilet. <p>General cleaning</p> <ul style="list-style-type: none"> • Water and detergent (e.g., liquid dishwashing soap) or common household cleaning wipes should be used. Apply firm pressure while cleaning. Surfaces should be cleaned at least once a day. Next, use a store bought disinfectant or diluted bleach solution, one part bleach to 50 parts water (20ml of bleach to 1 litre of water), and allow the surface to remain wet for one minute. Clean surfaces that are touched

		<p>often (e.g., counters, table tops, doorknobs, toilets, sinks, taps, etc.) at least twice a day.</p> <p>Wear a face mask</p> <ul style="list-style-type: none"> When you are sick, wearing a face mask (surgical or procedure mask) helps to stop the spread of germs from you to others. Wear a face mask when you are in the same room with other people and when you get medical care. If your mask gets wet or dirty, change it and wash your hands right away. You and those you live with do not need to buy and wear other types of masks, such as an N-95 respirator mask. <p>Note that sometimes people with mild symptoms at the start of their COVID illness may suddenly worsen and require urgent medical care.</p> <ul style="list-style-type: none"> Pay attention to how you are feeling. If it becomes harder to breathe, you can't drink anything or feel much worse, seek
		<p>urgent medical care at an urgent care clinic or emergency department.</p> <p>If you are a health care worker</p> <ul style="list-style-type: none"> Follow the advice of your employer. If you need more information, go to this BCCDC site for healthcare workers.
FUNCTIONAL INQUIRY		
FOCUSED ASSESSMENT	Nervous System	Presence of a headache
		Presence of dizziness
		Episodes of confusion and memory problems
		Episodes of altered mental status or syncope
		Seizure-like activity
		Neck stiffness
		Altered vision, hearing, taste or smell
		<p><i>The most common neurologic infections which may produce fever are:</i></p> <ol style="list-style-type: none"> Meningitis: Risk factors include age <5 or >65, crowded housing arrangements, immunocompromise, cancer, unvaccinated and HIV/AIDS. Patients may present with headache, confusion, neck stiffness, photophobia seizures or vomiting, although many patients over 65 will present with confusion alone. Encephalitis: Presents with a very similar clinical picture to

		<i>Meningitis, although additional risk factors may include recent viral infections, organ transplantation and animal or insect bites</i>
	Respiratory System	Presence of cough, including colour and quantity of sputum
		Pharyngitis (sore throat)
		Dyspnea (both whilst at rest and on exertion)
		Orthopnea (dyspnea whilst supine)
		Paroxysmal nocturnal dyspnea (shortness of breath during the night)
		Wheezing
		Painful breathing
		Recent chest wall trauma
		Recent respiratory investigations (peak expiratory flow, chest x-ray)
		<i>There are many respiratory infections which may produce fever (including COVID-19, to be discussed separately). Some of the more common include:</i>
		1. Pneumonia: Risk factors include age >65, residence in a nursing home, chronic respiratory diseases (COPD, asthma), chronic heart disease, diabetes, alcohol misuse, smoking and poor oral hygiene. Patients commonly present with a cough and mucopurulent sputum, although elderly patients may not present with a cough, dyspnea, pleuritic chest pain, rigors or night sweats, confusion and crackles and decreased breath sounds on auscultation or dullness to percussion
		2. Acute Bronchitis: Risk factors include recent exposure to viral illness or smoking. Patients may present with a cough up to 30 days, clear or white sputum and no other suspected respiratory disease
		Recent episodes of tachycardia
		Hypotension
		Chest pain or discomfort (abnormal sensations)
		Palpitations
		Central edema (increased jugular venous pressure)

	Cardiovascular System	Peripheral edema (lower limb edema, abdominal edema)
		Dyspnea (at rest and on exertion)
		Orthopnea
		Paroxysmal nocturnal dyspnea
		<p><i>There are some cardiovascular infections which may produce fever. The more common include:</i></p> <ol style="list-style-type: none"> 1. Myocarditis: Risk factors include HIV/AIDS, autoimmune disease and the postnatal period. Patients generally present with a viral prodrome, including fever, myalgia for 3 weeks preceding the initial presentation. 2. Endocarditis: Risk factors include a previous history of infectious endocarditis and the presence of artificial heart valves. Patients frequently present with fever, as well as night sweats, malaise, weight loss, weakness and shortness of breath
	The Gastrointestinal System	Difficulty swallowing
		Changes in appetite
		Nausea
		Frequency, consistency and colour of bowel movements
		Pain on defecation
		Abdominal pain
		Jaundice
		Previous liver or gallbladder issues
		<p><i>There are multiple gastrointestinal infections which may produce fever. The more common include:</i></p> <ol style="list-style-type: none"> 1. Viral Gastroenteritis: Risk factors include consumption of contaminated food or water, close contact with other patients, poor hygiene, and chronic comorbidities. Patients will generally present with watery diarrhea, acute onset of vomiting and abdominal cramping without tenderness or rebound tenderness 2. Acute Appendicitis: Will most commonly presented with mid-abdominal pain which later shifts into the right lower quadrant, worsened by movement, significantly decreased

		<p><i>appetite and a low-grade fever</i></p> <p>3. Acute Cholangitis: Risk factors include patients over 50 with a previous history of cholelithiasis. Patients will typically present with right upper quadrant tenderness, jaundice and fever and may also have pale stool colour</p>
	The Urinary System	Frequency of urination (including polyuria and nocturia)
		Increased urinary urgency
		Pain or burning on urination
		Flank pain
		Suprapubic pain
		Incontinence (new or chronic)
		Previous urinary infections
		Recent catheter changes
		<p><i>There are multiple urinary infections which may produce fever. The most common is:</i></p> <p>1. Urinary Tract Infection: Risk factors include sexual activity, history of recurrent UTI and female sex. Patients typically present with dysuria, increased frequency of urination and hematuria. Foul smelling urine is not a diagnostic sign of UTI. Costovertebral angle tenderness may indicate Pyelonephritis.</p>
	The Musculoskeletal System	Recent trauma (swelling, contusions, tenderness)
		Muscular or joint pain
		Unusual swelling, redness or pain to touch
		Chronic back or neck pain
		Limitations of movement
	The Integumentary	Recent trauma (abrasions, punctures, penetrations, burns)
		Rashes (particularly non-blanching rashes)
		Lumps or sores

	System	Itching
		Changes in colour of skin
		Changes in hair or nails
	The Immune System	Swelling of glands
		Painful glands
		Excessive weakness or fatigue
		On-going fever
	The Endocrine System	Fluctuations in blood glucose level
		Unusual weight gain or loss
		Heat or cold intolerance
		Excessive diaphoresis
		Excessive thirst or hunger
		Change in shoe size

Risk Identification

Traffic light system for identifying risk in ILI patients			
	<ul style="list-style-type: none"> Green Flag - Low Risk Document visit and report as normal 	<ul style="list-style-type: none"> Yellow Flag - Medium Risk 	<ul style="list-style-type: none"> Red Flag - High Risk Initiate 911 Response
Skin	<ul style="list-style-type: none"> Normal Colour** 	<ul style="list-style-type: none"> Pale 	<ul style="list-style-type: none"> Cyanosis** Non-blanching rash
Respiratory	<ul style="list-style-type: none"> Breathing problems have not changed <ul style="list-style-type: none"> SOB Cough Sputum 	<ul style="list-style-type: none"> Cough Rhinorrhea Congestion 	<ul style="list-style-type: none"> Severe Dyspnea while at rest Dyspnea on exertion Ongoing dyspnea Hemoptysis
Circulatory	<ul style="list-style-type: none"> Normal skin colour** No new onset chest pain 		<ul style="list-style-type: none"> Pain or pressure in the chest Cold, clammy, pale or mottled skin
Neurological	<ul style="list-style-type: none"> Normal mentation 	<ul style="list-style-type: none"> Headache Dizziness 	<ul style="list-style-type: none"> New Confusion Altered mental status Neck stiffness

5,6,7,8,9,10,11,12,13

* If able to measure using the patient's supplied equipment

** If able to assess using video conferencing tools

Decision and Action

- All patients with worsening conditions, or those presenting with any red-flag symptoms, should be instructed to call 911 for emergency assessment and conveyance to hospital.
- Patients without worsening conditions, and absent of red-flag symptoms, can be discharged and asked to follow up with their primary care provider. Prior to discharge:
 - Patients and/or caregivers should be provided with sufficient discharge advice to be able to identify potential deterioration in condition and act accordingly. This should be documented in the care planning section of SIREN.
 - Patients should be advised to call 911, 811, or the COVID information line (1-888-COVID19) if their condition worsens, or for additional information.

References & Further Reading:

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