COVID-19
Community of Practice for Ontario Family Physicians

Feb 24, 2023
Dr. Kieran Quinn
Dr. David Kaplan
Dr. Gary Bloch

Long COVID
Long COVID

Moderator:
• Dr. Tara Kiran, Fidani Chair, Improvement and Innovation, DFCM, Toronto, ON

Panelists:
• Dr. Kieran Quinn, Toronto, ON
• Dr. David Kaplan, Toronto, ON
• Dr. Gary Bloch, Toronto, ON

Co-hosts:
• Dr. Mekalai Kumanan, Cambridge, ON

The COVID-19 Community of Practice for Ontario Family Physicians is a one-credit-per-hour Group Learning program that has been certified for up to a total of 32 credits.
Land Acknowledgement

We acknowledge that the lands on which we are hosting this meeting include the traditional territories of many nations.

The OCFP and DFCM recognizes that the many injustices experienced by the Indigenous Peoples of what we now call Canada continue to affect their health and well-being. The OCFP and DFCM respects that Indigenous people have rich cultural and traditional practices that have been known to improve health outcomes.

I invite all of us to reflect on the territories you are calling in from as we commit ourselves to gaining knowledge; forging a new, culturally safe relationship; and contributing to reconciliation.
Opinion: To improve Indigenous health, we need more rural Indigenous health-care workers

Indigenous communities in Northern Ontario lack adequate access to health care

By Aijah Hondo — Published January 30, 2023

Have you ever heard a woman say that she would prefer that her gynaecologist be female? Or what about a man saying he’d be more comfortable speaking to a male urologist about his issue with erection or some from? I’m sure we’ve all heard this before. Given this, doesn’t it make sense that patients would also feel more at ease with a health-care provider of a similar cultural, regional, or linguistic background?

https://thevarsity.ca/2023/01/30/opinion-to-improve-indigenous-health-we-need-more-rural-indigenous-health-care-workers/
Changing the way we work

A community of practice for family physicians during COVID-19

At the conclusion of this series participants will be able to:

• Identify the current best practices for delivery of primary care within the context of COVID-19 and how to incorporate into practice.
• Describe point-of-care resources and tools available to guide decision making and plan of care.
• Connect with a community of family physicians to identify practical solutions for their primary care practice under current conditions.

Disclosure of Financial Support

This CPD program has received in-kind support from the Ontario College of Family Physicians and the Department of Family and Community Medicine, University of Toronto in the form of logistical and promotional support.

Mitigating Potential Bias

• The Scientific Planning Committee has full control over the choice of topics/speakers.
• Content has been developed according to the standards and expectations of the Mainpro+ certification program.
• The program content was reviewed by a three-member national/scientific planning committee.

Potential for conflict(s) of interest:
N/A

Planning Committee: Dr. Tara Kiran (DFCM), Dr. Mekalai Kumanan (OCFP); Dr. Ali Damji (DFCM), Dr. Liz Muggah (OH), Kimberly Moran (OCFP), Mina Viscardi-Johnson (OCFP), Adrienne Spencer (OCFP), Marisa Schwartz (DFCM), Erin Plenert (DFCM)

Previous webinars & related resources:
https://www.dfcm.utoronto.ca/covid-19-community-practice/past-sessions
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Family Physician, North York Family Health Team
Vice-President, Quality, Ontario Health

Dr. Gary Bloch – Panelist
Family Physician, St. Michael’s Hospital and Inner City Health Associates; Associate Professor at the University of Toronto; AMS Phoenix Fellow and Senior Fellow, Wellesley Institute
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- Relationships with financial sponsors:
  - Grants/Research Support: CIHR
  - Speakers Bureau/Honoraria: Ontario College of Family Physicians, Public Health Ontario
  - Others: Own stocks in Merck and BioNTech who manufacture COVID therapies

- **Faculty Name:** Dr. David Kaplan
- Relationships with financial sponsors:
  - Grants/Research Support: N/A
  - Speakers Bureau/Honoraria: N/A
  - Others: Ontario Health (employee)

- **Faculty Name:** Dr. Gary Bloch
- Relationships with financial sponsors:
  - Grants/Research Support: Foundation for the Advancement of Family Medicine, CMA Foundation, University of Toronto Department of Family and Community Medicine, St. Michael's Hospital Department of Family and Community Medicine.
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  - Others: N/A
Speaker Disclosure

- Faculty Name: **Dr. Mekalai Kumanan**
- Relationships with financial sponsors:
  - Grants/Research Support: N/A
  - Speakers Bureau/Honoraria: Ontario College of Family Physicians
  - Others: Chief of Family Medicine, Cambridge Memorial Hospital

- Faculty Name: **Dr. Tara Kiran**
- Relationships with financial sponsors:
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How to Participate

• All questions should be asked using the Q&A function at the bottom of your screen.

• Press the thumbs up button to upvote another guest's questions. Upvote a question if you want to ask a similar question or want to see a guest’s question go to the top and catch the panel's attention.

• Please use the chat box for networking purposes only.
**Dr. Kieran Quinn – Panelist**  
General Internal Medicine and Palliative Care Clinician-Scientist, Sinai Health; General Internal Medicine and Palliative Care, Assistant Professor, Department of Medicine, University of Toronto

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Family Physician, St. Michael’s Hospital and Inner City Health Associates; Associate Professor at the University of Toronto; AMS Phoenix Fellow and Senior Fellow, Wellesley Institute
An Approach to Supporting People Living with Long COVID

Kieran Quinn MD PhD
February 24, 2023
Mr. LC - Summary

• 42M with symptomatic/RAT+ SARS-CoV-2 infection in July 2022
• PMHx: White coat HTN, anxiety
• No Rx, COVID vaccine x3
• Loving husband and father of 2 young kids
• High performance endurance athlete
• Successful career in finance
Mr. LC - Summary

SARS-CoV-2 (July 2022)

Post-exercise fatigue + palpitations (3 weeks)

Dyspnea Orthopnea (2 Months - September 2022)

Recovery + Exercise (1 week)

Denial of disability insurance (5 months - January 2023)
Mr. LC - Summary

• Appears well. Anxious on MS exam
• 10-minute stand: no change in BP, supine HR 72, standing 92-94 + orthostasis
• Routine BW reassuring
• m-Health 48-hour holter: PACs
• ECHO normal
Mr. LC – Ongoing Issues

• Fatigue/Exercise intolerance – Post exertional with symptom exacerbation
• Orthostasis (?POTS)
• Brain Fog
• Anxiety
• Insomnia
• Vaccination
• Financial supports
Part 1: Diagnosis

Diagnosing post-COVID-19 condition (long COVID) in adults

Kieran L. Quinn MD PhD, Fahad Razak MD MSc, Angela M. Cheung MD PhD

Current Definitions

- Symptoms occurring ≥12 weeks after SARS-CoV-2 infection
  - Lasting ≥8 weeks
  - Not explained by an alternative diagnosis

- Health consequences ≥4 weeks after SARS-CoV-2 infection:
  - Symptoms
  - Inclusion of additional chronic conditions (e.g. heart failure, depression) associated with high future healthcare utilization (*WHO does not include chronic conditions)
Current Incidence/Prevalence Estimates

- **Canada**
  - Prevalence: 1.4M (4.6%)
  - Incidence: 14.8%
  - Duration ≥ 1yr: 47.3%
  - Limited Daily Function: 21.3%

- **UK**
  - Prevalence: 2.3M (3.5%)
  - Incidence: NR

- **USA**
  - Prevalence: 20M (7.5%)
  - Incidence: 14.3%

Sources:
- PHAC 2022
- US Household Survey 2022
- UK Office National Stats 2023
Underlying Causes

1. Viral Persistence
   - Cellular Damage

2. Persistent Inflammation
   - Inflammatory Cytokines (IL-6, IL-1β, TNF-α)
   - Perivascular Inflammation

3. Autoimmunity
   - Production of Autoantibodies

4. Coagulopathy
   - Microvascular Clotting
Risk Factors

<table>
<thead>
<tr>
<th>Risk factors</th>
<th>No. of studies</th>
<th>No. of participants</th>
<th>OR (95% CI)</th>
<th>GRADE</th>
<th>I²</th>
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<tbody>
<tr>
<td>Female</td>
<td>15</td>
<td>33143</td>
<td>2.08 (1.73, 2.49)</td>
<td>Very low</td>
<td>59.1%</td>
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<tr>
<td>Comorbidities</td>
<td>2</td>
<td>517</td>
<td>1.99 (1.23, 3.22)</td>
<td>Low</td>
<td>0%</td>
</tr>
<tr>
<td>Invasive ventilation</td>
<td>2</td>
<td>313</td>
<td>1.61 (0.85, 3.03)</td>
<td>Low</td>
<td>0%</td>
</tr>
<tr>
<td>Asthma</td>
<td>3</td>
<td>5790</td>
<td>1.38 (1.09, 1.74)</td>
<td>Low</td>
<td>25.9%</td>
</tr>
<tr>
<td>Obesity</td>
<td>3</td>
<td>6712</td>
<td>1.18 (1.04, 1.34)</td>
<td>Low</td>
<td>9.6%</td>
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<tr>
<td>Diabetes</td>
<td>4</td>
<td>1980</td>
<td>1.15 (0.80, 1.66)</td>
<td>Low</td>
<td>25.4%</td>
</tr>
<tr>
<td>COPD</td>
<td>2</td>
<td>5933</td>
<td>1.15 (0.73, 1.79)</td>
<td>Very low</td>
<td>85%</td>
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<tr>
<td>Days in hospital</td>
<td>3</td>
<td>446</td>
<td>1.04 (1.01, 1.07)</td>
<td>Low</td>
<td>0%</td>
</tr>
<tr>
<td>Age</td>
<td>4</td>
<td>2009</td>
<td>0.99 (0.98, 1.00)</td>
<td>Low</td>
<td>0.1%</td>
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<tr>
<td>Male</td>
<td>2</td>
<td>540</td>
<td>0.69 (0.49, 0.98)</td>
<td>Low</td>
<td>0%</td>
</tr>
</tbody>
</table>

Female sex, belonging to an ethnic minority, socioeconomic deprivation and multiple chronic conditions (e.g. asthma, obesity) associated with elevated risk.

Quinn KL. *Ont Science Table* 2022
Subramanian A. *Nature* 2022
Employment

Figure 1. Association Between Post–COVID-19 Condition (PCC) and Likelihood of Working Full Time at Time of Survey in Logistic Regression Models Without and With Adjustment for Sociodemographic Features

<table>
<thead>
<tr>
<th>Variable</th>
<th>No. of patients</th>
<th>OR (95% CI)</th>
<th>P value</th>
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</thead>
<tbody>
<tr>
<td>PCC (unadjusted)</td>
<td>14 149</td>
<td>0.71 (0.63-0.80)</td>
<td>&lt;.001</td>
</tr>
<tr>
<td>PCC (adjusted)</td>
<td>14 149</td>
<td>0.84 (0.74-0.96)</td>
<td>.01</td>
</tr>
</tbody>
</table>

Long COVID associated with 29% lower odds of employment
Part 2: Assessment

Assessing common and potentially modifiable symptoms of post-COVID-19 condition (long COVID) in adults

Kieran L. Quinn MD PhD, Fahad Razak MD MSc, Angela M. Cheung MD PhD
Common Modifiable Symptoms

- Fatigue: 23-63%
- Shortness of Breath: 23-46%
- Sleep Disturbances: 11-43%
- Anxiety/Depression: 11-31%
- Racing Heart: 6-22%

Rehabilitation

Medication

Quinn KL. CMAJ 2023
Chen C. J Inf Dis 2022
Cardiovascular Symptoms

Suspected Cardiovascular Complications
(Increased with underlying RF for or with established CVD)

Recommended Initial Approach to Differentiate Between Cardiac & Other Etiologies

History – Screen for:
- PESE
- ME/CFS
- POTS

Physical Exam
- Resting vitals
- Orthostatic vitals
- 10-minute standing test
- Volume assessment

Diagnostic Tests
- CBC
- Electrolytes
- Creatinine
- RBG/HbA1c

Cardiac MRI in the presence of:
- Symptoms suggestive of cardiac involvement\textsuperscript{a}
- Abnormal biochemical, electrophysiological, or radiological testing\textsuperscript{b}

Presence of:
- Red flags
- Persistent cardiovascular symptoms

Pursue further cardiac testing or refer to multispecialty long COVID team
# Cardiovascular Symptoms

<table>
<thead>
<tr>
<th>History – Screen for:</th>
<th>Physical Exam</th>
<th>Diagnostic Tests</th>
</tr>
</thead>
<tbody>
<tr>
<td>PESE</td>
<td>Resting vitals</td>
<td>CBC</td>
</tr>
<tr>
<td>ME/CFS</td>
<td>Orthostatic vitals</td>
<td>Electrolytes</td>
</tr>
<tr>
<td>POTS</td>
<td>10-minute standing test</td>
<td>Creatinine</td>
</tr>
<tr>
<td></td>
<td>Volume assessment</td>
<td>TSH</td>
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</tbody>
</table>

Quinn KL. *Submitted 2023*
Part 3: Treatment

Treating common and potentially modifiable symptoms of post-COVID-19 condition (long COVID) in adults

Kieran L. Quinn MD PhD, Angela M. Cheung MD PhD, Fahad Razak MD MSc
Ontario launches fee code for doctors treating long COVID and one researcher says 'it's a big deal'

Advocates say move is crucial first step to better understanding, treating and destigmatizing growing problem

Liam Casey and Allison Jones · The Canadian Press ·
Posted: Jan 27, 2023 1:44 PM EST | Last Updated: January 27

• **OHIP Diagnostic Code 081**

• Enables identification and tracking of health services delivery at population level

• Supports physician-validated diagnosis with applications to disability support
Treatment (CV focus)

Integrated Person-Centred Care
- Listen and validate concerns
- Establish trust
- Use shared decision making
- Maintain continuity of care

Manage CVD and Complications

Ongoing Prevention

Restore Function
- Post COVID-19 Rehabilitation Response Framework

(-) PESE

(+) PESE

Multidisciplinary Rehabilitation
- Avoidance of unsupervised exercise
- Sub-threshold structured activity program + energy conservation strategies

Multidisciplinary Rehabilitation
- Trial exercise to maintain/restore function

Dysautonomia (IST, POTS)
- Behavioral modifications
- Oral Fluids, Salt
- Compression Stockings
- β-blockers, pyridostigmine, ivabradine, fludrocortisone, midodrine

MCAS
- Antihistamines (H1 and H2 Blockers)

Guideline-Directed Therapy for Established Cardiovascular Disease

SARS-CoV-2 Infection
- Masking in public spaces
- Improving indoor air quality
- Vaccination

Quinn KL. Submitted 2023
Treatment (CV focus)

**Multidisciplinary Rehabilitation**
- Avoidance of unsupervised exercise
- Sub-threshold structured activity program + energy conservation strategies

**Multidisciplinary Rehabilitation**
- Trial exercise to maintain/restore function

**Dysautonomia (IST, POTS)**
- Behavioral modifications
- Oral Fluids, Salt
- Compression Stockings
- β-blockers, pyridostigmine, ivabradine, fludrocortisone, midodrine
Prevention

- Prevent SARS-CoV-2 infection
- Vaccination before infection associated with 15-50% reduced relative risk
- Uncertain effect of vaccination after infection or after development of long COVID
- Nirmatrelvir/ritonavir (Paxlovid), metformin show early promise during acute infection
- Uncertain effects of corticosteroids during acute infection
The RECLAIM Trial

REcovering from COVID-19 Lingering Symptoms Adaptive Integrative Medicine

Goal: To reduce symptom burden and improve the quality of life among people living with long COVID
Mr. LC

• PEM/Exercise intolerance → Structured subthreshold activity program, pacing
• Orthostasis (POTS) → Fluids, salt, compression stockings, orthostatic pacing
• Brain Fog → orthostatic pacing
• Anxiety → GP managed with SSRI
• Insomnia → “Rescue” PRN zopiclone
• Vaccination → 4 doses, 1 after long COVID
• Financial supports → Approved disability
Summary

• Post COVID-19 condition is relatively common and more likely to affect females and adults in their prime years of career development and family/caregiving.
• Many people continue to experience disabling symptoms beyond 1 year.
• Vaccination and some medications hold promise for prevention.
• Trials are underway to discover new treatments.
• Primary care is the foundation of long COVID management.
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• Amol Verma
• Nahrain Warda
Post-Covid Condition
Primary Care Guidance

David M. Kaplan  MD  MSC  CCFP  FCFP
Vice-President, Quality

DFCM/OFCP COMMUNITY OF PRACTICE
FEBRUARY 24, 2023
Post–COVID-19 Condition: Guidance for Primary Care

**PERSON WITH SYMPTOMS ≥ 12 WEEKS**

**ASSESSMENT**
- Past medical history
- Social determinants of health
- Physical examination and vital signs
- Date of positive PCR or rapid antigen test if available, or epidemiological link to a known case
- Timing, duration, nature, and severity of symptoms
- COVID-19 course(s) and severity, and treatment(s) or care received
- COVID-19 vaccination status, including booster doses

**FUNCTIONAL TESTING TOOLS**
- Exercise capacity test
- Walking test
- C-reactive protein, erythrocyte sedimentation rate, ferritin
- Thyroid-stimulating hormone
- Chest x-ray

**SYMPTOM-DIRECTED LABORATORY AND OTHER TESTS**
- There are no routine tests for the post–COVID-19 condition. Tests should be ordered as indicated by symptoms and clinical judgment.
- Complete blood count
- C-reactive protein, erythrocyte sedimentation rate, ferritin
- Thyroid-stimulating hormone
- Chest x-ray

**SYMPTOMS AND FUNCTION NOT IMPROVING**
- Consider referral to an interprofessional rehabilitation team

**COMMON SYMPTOMS OF POST–COVID-19**
- Respiratory: Dyspnea or increased respiratory effort, Cough
- Cardiovascular: Chest tightness or pain, Palpitations and/or tachycardia
- Generalized: Fatigue
- Cognitive/Neuropsychological: Post-exertional malaise (PEM) and/or poor endurance, Impaired daily function and mobility, Fever
- Menstrual: Menstrual cycle irregularities
- Musculoskeletal: Joint pain, Muscle pain
- Mental Health: Anxiety, Depression
- Gastrointestinal: Abdominal pain, Diarrhea
- Ear, Nose, and Throat: Loss of taste and/or smell
- Dermatological: Skin rash

**MANAGEMENT**
- Supported self-management
- Medications for symptom management
- Mental health support and treatment

**FOLLOW-UP VISITS AND MONITORING**
- Follow up with patients every 2 to 3 months, depending on the patient’s symptoms, condition, and illness progression.
- Patients who were critically ill may require more frequent follow-up.
- Offer in-person or remote monitoring.
- Consider more specialized diagnostic testing for persistent or new respiratory, cardiac, or other concerns in consultation with specialists.

See next page for more information
Updates in 2022/2023

• Updated definition of Post-COVID condition as symptoms continuing for 12 weeks or longer based on PHAC document
• Less emphasis on PCR testing as no longer widely available, but important to ask about re-infection and vaccine status
• Caution on use of any kind of exercise testing – may exacerbate symptoms for people with post-exertional malaise
Updates in 2022/2023

- For people with fatigue or post-exertional malaise, discuss the 4Ps of energy conservation:
  - Pacing activities to match energy level
  - Prioritizing activities that are the most important
  - Positioning to modify activities to make them easier to perform
  - Planning ahead to allocate for breaks, rests, and relaxation
Updates in 2022/2023

• Moving away from using the term ‘brain fog’ as it can minimize impacts, better to describe cognitive changes (memory, attention, executive functioning)

• Referral to an interprofessional rehabilitation program (if available) recommended based on a Post–COVID-19 Functional Status scale score of 3 or 4
Post-COVID-19 Functional Status Scale

a tool to measure functional status over time after COVID-19

A

Can you live alone without any assistance from another person? (e.g. independently being able to eat, walk, use the toilet and manage routine daily hygiene)

Yes

Are there duties/activities at home or at work which you are no longer able to perform yourself?

No

Do you suffer from symptoms, pain, depression or anxiety?

No

Do you need to avoid or reduce duties/activities or spread these over time?

No

Grade 0
No functional limitations

Yes

Grade 1
Negligible functional limitations

Yes

Grade 2
Slight functional limitations

Yes

Grade 3
Moderate functional limitations

Yes

Grade 4
Severe functional limitations

B

How much are you currently affected in your everyday life by COVID-19? Please indicate which one of the following statements applies to you most.

Corresponding PCFS scale grade

I have no limitations in my everyday life and no symptoms, pain, depression or anxiety.

0

I have negligible limitations in my everyday life as I can perform all usual duties/activities, although I still have persistent symptoms, pain, depression or anxiety.

1

I suffer from limitations in my everyday life as I occasionally need to avoid or reduce usual duties/activities or need to spread these over time due to symptoms, pain, depression or anxiety. I am, however, able to perform all activities without any assistance.

2

I suffer from limitations in my everyday life as I am not able to perform all usual duties/activities due to symptoms, pain, depression or anxiety. I am, however, able to take care of myself without any assistance.

3

I suffer from severe limitations in my everyday life: I am not able to take care of myself and therefore I am dependent on nursing care and/or assistance from another person due to symptoms, pain, depression or anxiety.

4
Assessment and Management of the Post–COVID-19 Condition

Content adapted from Post–COVID Conditions: Information for Health Care Providers and Understanding the Post–COVID-19 Condition (Long COVID) in Adults and the Expected Burden for Ontario

Background
The post–COVID-19 condition can be diagnosed and managed by primary care providers. This document provides information about the diagnosis, assessment, management, and referral of adults with symptoms related to the post–COVID-19 condition. More than 200 symptoms have been identified for the post–COVID-19 condition and are linked to reduced function, impairments in people’s ability to work and care for themselves, poor quality of life, and high health care use.

The guidance provided is based on individual medical expert opinion and the best currently available data at that time. Because our understanding of the post–COVID-19 condition is likely to evolve rapidly with ongoing research, clinical guidance will likely change over time.

Definitions
The post–COVID-19 condition (long COVID) describes a range of symptoms after probable or confirmed SARS-CoV-2 infection that persist beyond 12 weeks. This condition can arise after severe, mildly symptomatic, or asymptomatic SARS-CoV-2 infection.

Incidence
Estimates from early in the pandemic indicated more than 40% of people diagnosed with COVID-19 experience symptoms beyond the acute illness (4 or more weeks after infection), while newer evidence indicates about 10% to 20% of unvaccinated people and 2% to 10% of vaccinated people experience symptoms 12 weeks beyond the acute illness. It is postulated that this lower prevalence in more recent data is a result of high vaccination rates and less virulent variants. An estimated 57,000 to 78,000 people in Ontario have had, or are currently experiencing, the post–COVID-19 condition.

Physical Examination and Vital Signs
- Because multiple organ systems may be involved, a thorough physical examination should be completed.
- Standard vital signs: blood pressure, heart rate, respiratory rate, pulse oximetry, body temperature, body mass index
- Ambulatory pulse oximetry for people with respiratory symptoms, fatigue, or malaise
- Orthostatic vital signs for people with postural symptoms, dizziness, fatigue, cognitive impairment, or malaise

Assessment Tools
Functional Status and Quality of Life
- Post–COVID-19 Functional Status Scale (PCFS)

Post–COVID-19 Condition
- COVID-19 Yorkshire Rehabilitation Screening (C19-YRS)

Cognitive/Neurologic Conditions
- Montreal Cognitive Assessment (MoCA)
- Mini–Mental State Examination (MMSE)

Mental Health Conditions
- General Anxiety Disorder-7 (GAD-7)
- Patient Health Questionnaire-9 (PHQ-9)

Functional Testing Tools
Exercise Capacity
- 3-minute sit-to-stand (STS) test (consider 30-second STS test in people with PEM)
  - Patient is encouraged to transition from sitting to standing as many times as possible in 1 minute without the use of upper extremities (if possible)
  - A fall in oxygen saturation of ≥5% or below 90% for people without known lung pathology (88% with known lung pathology) is considered abnormal
- 12 Meter Walk Test (12MWT)

Balance and Fall Risk
- Berg Balance Scale
- Timed Up and Go Balance Assessment Tool

Other
- Orthostatic Heart Rate Assessment

Past Medical History
- Perform a comprehensive review of the person’s past medical history. Having pre-existing medical conditions is a risk factor for post–COVID-19 condition and can complicate its presentation.

Social Determinants of Health
Consider the following, and refer to local services where available:
- Social supports and isolation
- Loss of income
- Food and housing insecurity
- Barriers to accessing health care
- Substance use disorder (screen, if appropriate)
Management

If symptoms are moderate to severe or worsening on the initial visit, consider referral to a relevant specialist or interprofessional rehabilitation team. A list of publicly funded post-COVID-19 condition rehabilitation programs in Ontario can be found here.

Support Self-Management

- Advise the person that post-COVID-19 condition is not yet well understood and that support will continue to be provided as new information emerges.
- Develop a comprehensive management plan through shared decision making and based on presenting symptoms, underlying medical and mental health conditions, personal and social situations, and realistic treatment goals.
- For people with fatigue and/or post-awarness malaise (PAM), discuss the role of energy conservation and pacing activities to manage energy levels.
- Prioritize activities that are the most important.
- Positioning to modify activities to make them easier to perform and planning ahead to allocate for breaks, rest, and respite.
- A conservative physical rehabilitation plan might be indicated for some people with PAM. Caution about exercise may be useful. If there is a risk of falls, advise the person not to exercise alone.
- Patient diaries and calendars might be useful for documenting changes in health conditions and symptom severity, and for identifying potential triggers such as exertion (physical and cognitive), foods, maniatertions, and treatments or medications.
- Provide the World Health Organization’s Support for Rehabilitation Self-Management After COVID-19 Related Illness leaflet, if appropriate.

Medications

- Medications may be helpful for indications of symptoms or linessias (e.g., headache, anxiety, or depression).
- If over-the-counter medication for pain and/or fever is being considered, acetaminophen may be a safer alternative to non-steroidal anti-inflammatory drugs in people with increased cardiovascular or bleeding risk.
- Ask about people’s use of supplements, herbal remedies, or other treatments.

Mental Health Supports

- Refer to community mental health services and/or provide ConnectOntario as a resource, as appropriate.
- Consider the mental health needs of caregivers as well.

Additional Condition-Specific Assessment Tools

Functional Status and Quality of Life

- EQ-5D-5L
- WHO Disability Assessment Schedule 2.0 (WHODAS 2.0)
- mHIT Short Form Survey Instrument (MFI-9)

Respiratory Conditions

- Modified Medical Research Council Dyspnea Scale (mmRC)
- St. George’s Respiratory Questionnaire (SGRQ)

Cognitive/Neurologic Conditions

- Composite Autonomic Symptom Score (COSSAPSS-3; for dyssynoventrion)
- Neurobehavioral Symptom Inventory (NSI)
- Insomnia Severity Index (ISI)

Mental Health Conditions

- Hospital Anxiety and Depression Scale (HADS)
- PTSD Checklist for DSM-5 (PCL-5)

Fatigue

- Fatigue Severity Scale (FSS)
- Modified Fatigue Impact Scale (MFIS)

Referral to Interprofessional Rehabilitation Teams

- Consider a referral if symptoms are not improving with self-management and have moderate to severe impacts on daily functioning.
- Referral to an interprofessional rehabilitation program for the post-COVID-19 condition would be recommended based on a post-COVID-19 Functional Status (PCFS) scale score of 3 or 4.
- A list of publicly funded post-COVID-19 condition rehabilitation programs in Ontario can be found here.

Health Care Professional Resources

- Answers to Frequently Asked Questions About Long COVID—Ontario College of Family Physicians
- Post-COVID Condition Long COVID—Ontario College of Family Physicians
- Assessment, Monitoring and Management of COVID—Hamilton Family Medicine, care pathway
- Ontario eConsult Service for Post-COVID Condition—Ontario eConsult Centre of Excellence
- SCOPE: Grantless Care Optimizing the Patient Experience—a shared virtual interprofessional care team for primary care providers in Trento who are unaffiliated with teams.
- Long COVID—Consultation—Rehabilitative Care Alliance
- Long COVID—An Update for Primary Care—British Medical Journal

Patient Resources

- CIANCY Patient Resources—Canadian COVID-19 Prospective Cohort Study (CANCOVID)
- COVID-19 Resources for Patients and Families—University Health Network
- COVID-19 Long-Healers Canada—patient support and advocacy group
- Long COVID Resources Canada—patient support and advocacy group

References


Updated December 2022

Long COVID resources from the OCFP

Answers to Family Physician questions

Summary of guidance for diagnosing, and assessing and treating symptoms

Guidance for income support applications for long COVID patients

Checklists and tips for completing ODSP applications

ontariofamilyphysicians.ca/tools-resources/covid-19-resources/long-covid
Resources

Specialized Clinics and Health Care Professional Resources for Post–COVID-19 Condition in Canada
11 Different COVID-19 related BASE™ Managed Specialty Groups are available province-wide:

- COVID-19 & Infectious Diseases
- COVID-19 Vaccine – Public Health
- COVID-19 Vaccine – Allergy/Immunology
- COVID-19 and Respirology
- COVID-19 and Autoimmune Disorders
- COVID-19 and Pregnancy
- Post-COVID Condition – Chronic Fatigue Syndrome, Environmental Health Group
- Post-COVID Condition – Internal Medicine
- Post-COVID Condition – Neurology
- Post-COVID Condition – Physical Medicine & Rehabilitation
- Post-Covid Condition – Respiratory Recovery Group
National Research Network

www.LongCOVIDWeb.ca
Long COVID and Disability Income Programs

OCFP Community of Practice, February 24, 2023

Gary Bloch MD CCFP, St. Michael’s Hospital FHT and Inner City Health Associates

With support from: Anu Bakshi, Debbie Carswell, Sang-Hun Mun, Devorah Kobluk, John Stapleton and Sonya Torreiter
Why Canadians with long COVID struggle to access financial aid

As more Canadians with long COVID try to apply for insurance and government disability support, many are encountering the same hurdles that have long been familiar to residents with chronic fatigue syndrome.

ERICA ALINI
PUBLISHED JULY 20, 2022

Ontario woman enduring effects of long COVID begins process for medically assisted death

Thompson, a Toronto resident in her 50s, says the enduring illness and lack of substantive financial support has led her to begin the process of applying for Medical Assistance in Dying (MAiD), a procedure that first became legal in Canada in 2016.
Equity and Long COVID

• **Incidence:** COVID “disproportionately impacted members of racialized communities, those with low incomes and essential workers”

• **Outcomes:** “rates of hospitalizations have been disproportionately higher” for racialized

• **Long COVID:** "observed positive relationship between the severity of acute symptoms and greater risk of long COVID.”

Sarah Sanford and Rishika Wadehra, Long COVID: Literature Scan to Inform Policy Response in the GTA. Wellesley Institute: Nov 2022
Equity and Long COVID

“Our income support schemes need to pivot to ensure that people are not doubly impacted by long COVID and by our inability to adapt our social support systems.”

Sarah Sanford and Rishika Wadehra, Long COVID: Literature Scan to Inform Policy Response in the GTA. Wellesley Institute: Nov 2022
ESTIMATED BENEFIT EXPENDITURES FOR PERSONS WITH DISABILITIES
CANADA 2018-19
$37.8 B

- Disability Tax Measures $3.6
- CPP-D & QPP-D $5.0 B
- EI Sickness $1.8 B
- Veterans' Disability Pensions & Awards $2.5 B
- Private Disability Insurance $7.6 B
- Workers' Compensation $5.9 B
- Social Assistance - Disabled Component $11.4 B

John Stapleton and Anne Tweddle, Sept. 2020
Challenges applying with Long COVID

1. Proving diagnosis

2. Determining prognosis

3. Evidence of invisible symptoms

4. Lack of access to specialized care

5. Fatigue and cognitive symptoms limit engagement
Understanding Programs

Does this individual meet the program’s threshold for disability?

(We don’t determine eligibility, but knowledge is power)
ODSP

- **Substantial** impairment

- **Continuous or recurrent;** for one year or more

- **Limits function in 3 areas:** work, self care, and community participation

CPP-D

- **Severe** impairment

- **Indefinite** duration

- **Unable to perform** any substantial or gainful work
Private disability insurance

• Substantially unable to complete the duties of one’s own occupation

• > 2 years: unable to participate in any occupation

WSIB

• Requires proof of workplace transmission
Tips for Providers - 1

1. Document “invisible” impairments and impact

2. Ask about risk of workplace transmission

3. List treatments, adherence, and barriers

Amended from Anu Bakshi, ISAC
Tips for Providers - 2

4. Refer to specialists (demonstrates severity)

5. List all medical conditions

6. Avoid making cost a barrier

Amended from Anu Bakshi, ISAC
Resources

• Long COVID and ODSP: https://stepstojustice.ca/questions/income-assistance/i-think-i-have-long-covid-can-i-get-odsp/

• Disability benefits in Ontario: Who can get them and how to apply - CLEO (Community Legal Education Ontario / Éducation juridique communautaire Ontario)

• How do I start an ODSP application? - Steps to Justice

• Completing-ODSP-applications.pdf (legalclinic.ca)

• CPP-D Self Help Guides | Application Guide | DABC (disabilityalliancebc.org)


• https://www.wsib.ca/en/covidclaim


Expanded eligibility for PCR testing – now includes:

People who are eligible for Paxlovid treatment

• **Symptomatic**
  o aged 60+
  o aged 18+ and **immunocompromised or have one or more comorbidity** that puts them at higher risk of severe COVID-19 disease
  o aged 18+ and **unvaccinated or have not completed primary series**
  o aged 18+ and **last dose of COVID-19 vaccine was more than six months ago** and no COVID infection in the past six months

Staff in high-risk settings, for facilitating return to work

• **Asymptomatic**
  o **close contact** within past 10 days with someone who has COVID-19 symptoms or positive test

*Full list of eligible groups: [https://www.ontario.ca/page/covid-19-testing-and-treatment#section-1](https://www.ontario.ca/page/covid-19-testing-and-treatment#section-1)*
Pre-prescribing Paxlovid to non-COVID patient

• **May pre-prescribe Paxlovid** to be held with pharmacy for future dispensing to patient at risk for severe illness if infected

• **At time of dispensing:**
  - eligible patient must have COVID-19 symptoms and positive test (RAT or PCR)
  - pharmacist to assess if Paxlovid is appropriate, i.e., health/medication changes, and follow up with prescriber as needed

• **Paxlovid may not be dispensed** to a patient who does not have COVID-19 symptoms or a positive test, such as for travel purposes

**MOH: Prescribing and Dispensing Paxlovid in Ontario Pharmacies – Frequently Asked Questions, pp 10-11**

Immunization fact sheets and social resources

- Collection of MOH resources to help to motivate parents and caregivers to get their child’s routine childhood immunizations and COVID-19 vaccines back on track: https://drive.google.com/drive/folders/1ISLaua3gh6le6caNMHYTSZqEkF7yEfD7?usp=sharing

- Includes:
  - Children and youth COVID-19 vaccine fact sheet
  - General vaccination key messaging, which covers routine childhood immunization, influenza and COVID-19 vaccines
  - General COVID-19 booster dose fact sheet
  - Ministry of Health social posts covering:
    - Routine childhood immunization
    - COVID baby vaccine for children 6mos to <5yrs
    - COVID kids bivalent booster dose for children aged five to 11

- Information about places parents and caregivers can go if they have questions:
  - COVID-19 poster developed by Government of Ontario
  - SickKids hotline material provided by SickKids
  - VaxFacts hotline material provided by VaxFacts
Questions?

Webinar recording and curated Q&A will be posted soon
https://www.dfcm.utoronto.ca/covid-19-community-practice/past-sessions

Our next Community of Practice: March 24, 2023

Contact us: ocfpcme@ocfp.on.ca

Visit: https://www.ontariofamilyphysicians.ca/tools-resources/covid-19-resources

The COVID-19 Community of Practice for Ontario Family Physicians is a one-credit-per-hour Group Learning program that has been certified for up to a total of 32 credits.

Post session survey will be emailed to you. Mainpro+ credits will be entered for you with the information you provided during registration.