COVID-19
Community of Practice for Ontario Family Physicians

Feb 9, 2024

Dr. Kieran Quinn
Dr. Michael Kolber

Long COVID and Lipid Guidelines
Long COVID and Lipid Guidelines

Co-Moderators:

• Dr. Tara Kiran, Fidani Chair of Improvement and Innovation, University of Toronto and Family Physician, St. Michael’s Academic Family Health Team, Toronto, ON

• Dr. Eleanor Colledge, CPD Program Director, University of Toronto and Family Physician, South East Toronto Family Health Team, Toronto, ON

Panelists:

• Dr. Kieran Quinn, Toronto, ON

• Dr. Michael Kolber, Edmonton, AB

Host:

• 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.
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.
OurCare held 10 roundtables with members of equity-deserving groups across the country.

Conversations were organized in collaboration with community partners and conducted in 8 languages. Here is some of what we heard:

- **Racism and other forms of discrimination** are common experiences.
- **Language barriers** are a significant challenge to receiving high quality care.
- We need to **expand the healthcare workforce to reflect the diversity of communities**.
- **Indigenous models of care** are culturally determined and have always worked.
- **Empowering individuals and communities** is part of the solution.

Read all 10 Community Roundtable reports and summaries at [OurCare.ca/communityroundtables](http://OurCare.ca/communityroundtables).
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.

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

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.

Planning Committee: Dr. Tara Kiran (DFCM), Dr. Mekalai Kumanan (OCFP), Dr. Ali Damji (DFCM), Dr. Eleanor Colledge (DFCM) Dr. Harry O’Halloran, Mina Viscardi-Johnson (OCFP), Julia Galbraith (OCFP), Pavethra Yogeswaran (OCFP), Marisa Schwartz (DFCM), Erin Plenert (DFCM)

Previous webinars & related resources:
https://www.dfcm.utoronto.ca/covid-19-community-practice/past-sessions
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

Dr. Michael Kolber – Panelist
Professor, Faculty of Medicine & Dentistry - Family Medicine Department, University of Alberta

Dr. Mekalai Kumanan – Host
Twitter: @MKumananMD
President, Ontario College of Family Physicians
Family Physician, Two Rivers Family Health Team
Deputy Chief of Family Medicine, Cambridge, ON
Speaker Disclosure

• Faculty Name: **Dr. Kieran Quinn**
  • Relationships with financial sponsors:
    • Grants/Research Support: CIHR (grants funding research into Long COVID, co-lead of RECLAIM trial)
    • Speakers Bureau/Honoraria: Public Health Ontario (Assistant Scientific Director of OPHESAC), Ontario College of Family Physicians
    • Membership on advisory boards: N/A
    • Others: Owned stocks in Merck and BioNTech who manufacture COVID therapies – DIVESTED DECEMBER 2023

• Faculty Name: **Dr. Michael Kolber**
  • Relationships with financial sponsors:
    • Grants/Research Support: CIHR (BedMed Study)
    • Speakers Bureau/Honoraria: ACFP, Alberta Health, SRPC, AMA, MEME, AAPCE, PEER North, Peterborough Health, Ontario College of Family Physicians
    • Membership on advisory boards: N/A
    • Others: EMPRSS
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: Deputy Chief of Family Medicine, Cambridge Memorial Hospital

- Faculty Name: **Dr. Eleanor Colledge**
- Relationships with financial sponsors:
  - Grants/Research Support: N/A
  - Speakers Bureau/Honoraria: Ontario College of Family Physicians
  - Others: N/A

- Faculty Name: **Dr. Tara Kiran**
- Relationships with financial sponsors:
  - Speakers Bureau/Honoraria: St. Michael’s Hospital, University of Toronto, Health Quality Ontario (HQO), Canadian Institutes for Health Research (CIHR), Ontario College of Family Physicians (OCFP), Ontario Medical Association (OMA), Doctors of BC, Nova Scotia Health Authority, Osgoode Hall Law School, Centre for Quality Improvement and Patient Safety, Vancouver Physician Staff Association, University of Ottawa, Ontario Health, Canadian Medical Association, McMaster University, Queen’s University, North American Primary Care Research Group.
  - Grants/Research Support: Canadian Institute for Health Research, Ministry of Health and Long-Term Care, St. Michael’s Hospital Foundation, St. Michael’s Hospital Medical Services Association, Women’s College Hospital Academic and Medical Services Group Innovation Fund, University of Toronto, Health Quality Ontario, Ontario Ministry of Health, Gilead Sciences Inc., Staples Canada, Max Bell Foundation.
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 panels 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

Dr. Michael Kolber – Panelist
Professor, Faculty of Medicine & Dentistry - Family Medicine Department, University of Alberta

Dr. Mekalai Kumanan – Host
Twitter: @MKumananMD
President, Ontario College of Family Physicians
Family Physician, Two Rivers Family Health Team
Deputy Chief of Family Medicine, Cambridge, ON
Improving care for Canadians living with long COVID

Kieran Quinn MD PhD
Sinai Health System, University of Toronto
February 9, 2024
~73% of Canadians have been infected with SARS-CoV-2
Current Definitions

Post COVID-19 Condition

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

Post-Acute Sequelae of COVID (PASC)

- 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*)
Prevalence and Disability: Canadian COVID-19 Antibody Survey

2022

- Prevalence 1.4M (4.6%)
  - Duration ≥ 1yr 47.3%
  - Limited Daily Function 21.3%

2023

- Prevalence 2.1M (6.8%)
  - Duration ≥ 1yr 42.2%
  - Limited Daily Function 22.3%

14.5M missed days of school/work

↑ 48% relative increase in prevalence
Care Gaps (Access)

• Minority of Canadian adults consulted with a healthcare provider (47%)
• Family physicians and nurse practitioners continue to be their main contact (83%)
• 2 in 3 who needed healthcare services reported not receiving treatment, services or support for any of their symptoms.
Treatment

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

- 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, fluudrocortisone, midodrine

- MCAS
  - Antihistamines (H1 and H2 Blockers)

- Guideline-Directed Therapy for Established Cardiovascular Disease

- Ongoing Prevention

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

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Quinn KL. CJC 2023
Treatment

**Restore Function**
- Post COVID-19 Rehabilitation Response Framework

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

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

Quinn KL. CJC 2023
### Treatment (Rehab)

<table>
<thead>
<tr>
<th>Outcome</th>
<th>Trials, No.</th>
<th>Participants, No.</th>
<th>SMD (95% Crl)</th>
<th>PrMID</th>
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<th>Favors intervention</th>
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</table>

Potential signal of experiencing exercise-induced adverse events (OR 1.68; 95% Crl 0.32-9.94).

Pouliopoulou DV. JAMA Net Open 2023
Physiotherapy In Toronto & Beyond

Cornerstone Physiotherapy is among Toronto’s most trusted therapeutic health care providers. Our clinics are conveniently located in downtown Toronto, North York and Burlington.

REQUEST AN APPOINTMENT

https://cornerstonephysio.com/
Treatment (Low Dose Naltrexone)

“For people with symptoms of post-COVID-19 condition, do **not** use naltrexone outside of randomised trials with appropriate ethical approval.”

Source: Australian National COVID-19 Clinical Evidence Taskforce
Prevention (Paxlovid)

191,057 veterans
- January–July 2022
- + SARS-CoV-2 test
- At risk for severe COVID-19
- Not hospitalized

Nirmatrelvir–ritonavir
Matched patients
no nirmatrelvir–ritonavir

38–180 days after treatment or matched case
31 potential post–COVID-19 conditions examined
Only thromboembolic events lower with treatment
**Advice on Disability**

- Be confident in assigning a diagnosis of post COVID-19 condition
- Identify patient as disabled (unable to perform any combination of duties that regularly took at least 60% of their time at work)
- Question validity of assessment tools (suggest Post COVID Functional Scale)
- Quote other jurisdictions (USA)
Advice on Disability

In the United States, long COVID is recognized as a disability under Titles II (state and local government) and III (public accommodations) of the Americans with Disabilities Act, Section 504 of the Rehabilitation Act of 1973 (Section 504), and Section 1557 of the Patient Protection and Affordable Care Act (Section 1557) when it substantially limits one or more major life activities.
Ongoing Research

RECLAIM
RECOVERING FROM COVID-19
LINGERING SYMPTOMS ADAPTIVE INTEGRATIVE MEDICINE
https://www.reclaimtrial.ca/

DEFEND
paxlovid Effectiveness For the prevention of long covid

CanTreatCOVID
Canadian Adaptive Platform Trial of Treatments for COVID in Community Settings
https://cantreatcovid.org/

CanCOVID
A double blind randomized trial of low-dose naltrexone for post-covid fatigue syndrome

https://www.reclaimtrial.ca/
Ongoing Research

https://canpcc.ca/home/
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

• Diagnostic Code 081
• Enables identification and tracking of health services delivery at population level
• Supports physician-validated diagnosis with applications to disability support
## Resources

<table>
<thead>
<tr>
<th>Title</th>
<th>Organization</th>
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<tr>
<td>Clinical Summary of CMAJ Guidance</td>
<td>OCFP</td>
<td>January 2023</td>
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<td>COVID-19 RecMap</td>
<td>Cochrane Canada</td>
<td>January 2024</td>
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<td>(<a href="https://covid19.recmap.org/">https://covid19.recmap.org/</a>)</td>
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<td>Post COVID-19 Condition</td>
<td>Centre for Effective Practice (CEP)</td>
<td>January 2024</td>
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<tr>
<td>Clinical management of COVID-19: Living guideline</td>
<td>World Health Organization (WHO)</td>
<td>August 2023</td>
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<td>(<a href="https://www.who.int/publications/i/item/WHO-2019-nCoV-clinical-2023.2">https://www.who.int/publications/i/item/WHO-2019-nCoV-clinical-2023.2</a>)</td>
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<tr>
<td>COVID-19 rapid guideline: managing the long-term effects of COVID-19</td>
<td>NICE Guideline, UK</td>
<td>January 2024</td>
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<td>(<a href="https://www.nice.org.uk/guidance/ng188">https://www.nice.org.uk/guidance/ng188</a>)</td>
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# Resources

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<tr>
<td>Long COVID Web (<a href="http://www.longcovidweb.ca">www.longcovidweb.ca</a>)</td>
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## For Patients

Summary

• Post COVID-19 condition is a common and disabling condition.

• Primary care remains the foundation, but a broader provincial strategy is needed to improve access and supports.

• Screen for post-exertional malaise/symptom exacerbation.

• Several pharmacologic treatments hold promise but their current use should be restricted to RCTs.
Acknowledgements

• Pavlos Bobos
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• Doug Gross
• Grace Lam
• John Lapp

• Kelly O’Brien
• Fahad Razak
• Laura Rosella
• Beate Sander
• Amol Verma
• Nahrain Warda
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 treatments or care received
- COVID-19 vaccination status, including booster doses

**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 are 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

**COMMON SYMPTOMS OF Post–COVID-19**
- Dyspnea or increased respiratory effort
- Cough
- Chest tightness or pain
- Palpitations and/or tachycardia
- Fatigue
- Post-ventilatory malaise (PEM) and/or poor endurance
- Impaired daily function and mobility
- Fever
- Menstrual cycle irregularities
- Insomnia and other sleep difficulties
- Cognitive changes (e.g., issues with memory, concentration, and executive function)
- Headache
- Parasthesia (*pins and needles* numbness)
- Dizziness
- Joint pain
- Muscle pain
- Anxiety
- Depression
- Abdominal pain
- Diarrhea
- Ear, Nose, and Throat
- Loss of taste and/or smell
- Dermatological
- Skin rashes

**Assessment Tools**
- Functional status and quality of life
- Post–COVID-19 condition
- Cognitive/neurological conditions
- Mental health conditions
- Other conditions

**Functional Testing Tools**
- Exercise capacity test with caution in people with post-ventilatory malaise (PEM)
- Balance and fall risk
- Other

**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

**Consider referral to an interprofessional rehabilitation team**

See next page for more information

Ontario Health
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
Long COVID Web

A network of networks supporting and conducting research into Post-COVID Condition (PCC)

**Vision:** Canada without PCC

**Mission:**

1) **Accelerate** the discovery and validation of Canadian-led science in PCC.

2) **Activate** a learning health system that prioritizes the needs of individuals with PCC.

3) **Identify** the best therapeutics and practices, and accelerate equitable access to PCC care.

4) **Maintain** rigorous surveillance of the impact of PCC.

www.longcovidweb.ca  info@longcovidweb.ca  Join Long COVID Web
Expansion of Interprofessional Primary Care Teams

• The Ontario College of Family Physicians has been leading calls, with our partners for all family doctors, regardless of payment model, to have access to team support.

• In 2023, government announced an expression of interest process for the expansion of interprofessional primary care teams across Ontario with $30 million in funding available. More than 300 proposals were put forward.

• Last week, the Ontario Government announced it is tripling its initial investment to support the expansion of interprofessional primary care teams across Ontario to $90 million. An additional $20 million will go to support existing teams to help meet operational costs.

• While there is much more work to do, this announcement is a positive step forward.
The PEER Simplified Lipid Guideline

2023 Update

A simplified approach to lipid management for busy family doctors!

Read the guideline today!

Mike Kolber MD CCFP MSc
Community of Practice Feb 2024
PEER Simplified Guideline Principles

• By Primary Care for Primary Care
  • Evidence-based
  • Patient orientated outcomes
  • Simplified

• Focus on Primary Prevention, Shared Decision Making

• GRADE/Institute of Medicine

• Evidence team separate from guideline panel

• No financial COIs

PEER simplified lipid guideline 2023 update
Prevention and management of cardiovascular disease in primary care

Michael R. Kolber MD MSc CCFP; Scott Klarenbach MD MSc FRCPC; Michel Cauchot MD CCFP FCMP; Mike Cotterill MD CCFP; Loren Regier MD FRCPC; Rainelle D. Macaulay MD MSc; Norah Duggan MD CCFP FCMP; Rebecca Whitley MD MSc CCFP; Alex S. Halm MD MSc FRCPC; Tannis Poslizar MD, Michael Allan MD CCFP FCMP; Christina S. Korownyk MD CCFP; Joey Torr MD FRCPC; Liesbeth Freudentjes MD; Samantha S. Moe MD MSc CCFP; Danielle Perry MD MSc; Betsy S. Thomas MD FRCPC; James P. McCormack MD FRCPC; Jamie Falk MD FRCPC; Nicolas Duguid MD MSc CCFP; Scott R. Gairness MD CCFP; Jessica E.M. Kirkwood MD MD CCFP; Jennifer Young MD CCFP FCMP; Emilie Brasch MD MSc CCFP; Allison Paige MD CCFP; Jen Potter MD CCFP; Justin Weresch MD CCFP; Adrienne J. Lindblad MD MSc CCFP.

Lipid-lowering therapies for cardiovascular disease prevention and management in primary care
PEER umbrella systematic review of systematic reviews

Nicolas Duguid MD MSc CCFP; Adrienne J. Lindblad MD MSc CCFP; Danielle Perry MD MSc CCFP; Emilie Brasch MD MSc CCFP; Jamie Falk MD FRCPC; Liesbeth Freudentjes MD; Scott R. Gairness MD CCFP; Jessica E.M. Kirkwood MD CCFP; Christina S. Korownyk MD CCFP; James P. McCormack MD FRCPC; Samantha S. Moe MD MSc CCFP; Allison Paige MD CCFP; Jen Potter MD CCFP; Betsy S. Thomas MD FRCPC; Joey Torr MD FRCPC; Jennifer Young MD CCFP FCMP; Justin Weresch MD CCFP; Michael R. Kolber MD MSc CCFP.

What goes into Evidence-Based Guideline Update?

Medications
8 Systematic Review of Systematic Reviews

2015 Simplified Lipid Guideline & Rapid Reviews

Guideline Panel Questions
10 Rapid Reviews

Carry forward a few recommendations

PEER Simplified Lipid Guideline 2023 ‘Update’
Cholesterol Testing Recommendations

• When reassessing CVD risk in patients not taking lipid-lowering therapy, we suggest reassessing lipids no more than every 5 years and preferably 10, unless risk factors change.

• We recommend against the use of repeat lipid testing and cholesterol targets after a patient begins lipid-lowering therapy.

• We suggest against adding CAC scores to CVD risk assessment.

• We recommend against using Lp(a) or apoB to determine a patient’s CVD risk.
What about ancillary tests to assess CVD risk?

- Risk Calculators are ~0.75 at prediction (Area-Under-the Curve - AUC)
  - AUC Changes: Large ≥0.1, Moderate 0.05-0.1, Small 0.025-0.05, Very Small <0.025

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<tr>
<th>Test</th>
<th>Added to Risk Calculation</th>
<th>AUC Difference</th>
<th>Risk Ratio</th>
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<td>Lipoprotein (A)</td>
<td>0.0017 – 0.004</td>
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<td>Coronary Artery Ca+ Score</td>
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<td>RR 1.03-2.87</td>
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Adding Lp(a) Apo(B) or CAC to traditional risk factor calculators results in very small to small improvements in prediction.

* Risk Ratios included Hazard Ratios, Relative Risks, and Odds Ratios.
Why Simplified Guidelines do not recommend treating to target

1. Statin RCTs: use fixed dose statins (fire and forget)
2. Attained LDL levels are not associated with lower CHD

3. Some RCTs didn’t even enroll for lipids:
   - ASCOT: enrolled hypertensives
   - Jupiter: enrolled on CRP

Why Simplified Guidelines do not recommend treating to target

4. Other have similar recommendations: USPSTF\(^1\), Veterans\(^2\)

5. Those that recommend targets acknowledge lack of evidence:
   - **CCS 2021:**\(^3\) “no clear target to which LDL-C or non HDL-C or ApoB levels should be lowered is clearly identified in RCTs.”
   - **ESC/EAS 2019:**\(^4\) “aware of the limitations ... of evidence and accepts that RCTs have not examined different LDL-C goals systematically...”

6. Hitting targets not possible for many:
   ~50% not at LDL target on max statin therapy\(^5\)

7. Basing treatment on risk (vs lipids) maximizes benefits
   - Patients with low LDL but higher risk not missed.

\(^1\)JAMA 2022;328(8):746, \(^2\)Ann Intern Med 2020;173(10):822
\(^3\)Can J Cardiol 2021;37(8):1129, Eur Heart J 2021;42(34):322 \(^5\)CMAJ 2008;178(5):576,
Why Simplified Guidelines do not recommend treating to target

8. New RCT evidence (LODESTAR): first RCT directly comparing treat to target versus fixed dose statin. At 3 years:
   • MACE: 8.3% target, 8.5 fixed dose statin
   • Mortality: 2.5% each

9. Simple: less testing for patients, less labs for us, less cost (labs and temptation for escalating medications)

<table>
<thead>
<tr>
<th>Drug</th>
<th>Systematic Reviews</th>
<th>Patients</th>
</tr>
</thead>
<tbody>
<tr>
<td>Bile Acid Sequestrants</td>
<td>(4 RCTs)</td>
<td>53-3,806</td>
</tr>
<tr>
<td>Ezetimibe</td>
<td>3</td>
<td>18,921-23,499</td>
</tr>
<tr>
<td>Fibrates</td>
<td>3</td>
<td>16,112-46,099</td>
</tr>
<tr>
<td>Niacin</td>
<td>5</td>
<td>34,294-39,195</td>
</tr>
<tr>
<td>Omega-3s (DHA+EPA)</td>
<td>7</td>
<td>65,819-149,051</td>
</tr>
<tr>
<td>EPA (e.g. icospent)</td>
<td>2</td>
<td>8,179-18,645</td>
</tr>
<tr>
<td>PCSK-9 inhibitors</td>
<td>26</td>
<td>6,281-97,910</td>
</tr>
<tr>
<td>Statins</td>
<td>30</td>
<td>625-192,977</td>
</tr>
</tbody>
</table>
Outcomes for lipid lowering agents: Overall (1’ + 2’ prevention)

<table>
<thead>
<tr>
<th>Intervention</th>
<th>MACE</th>
<th>All-cause mortality</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>Median RR (stat sign/N)</td>
<td>Median RR (stat sign/N)</td>
</tr>
<tr>
<td>BAS</td>
<td>0.83 (0/3 RCT)</td>
<td>XX (0/3 RCT)</td>
</tr>
<tr>
<td>Ezetimibe</td>
<td>0.93 (3/3 SR)</td>
<td>0.94 (0/2 SR)</td>
</tr>
<tr>
<td>Fibrates</td>
<td>0.86 (2/2 SR)</td>
<td>0.98 (0/3 SR)</td>
</tr>
<tr>
<td>Niacin</td>
<td>0.93 (0/2 SR)</td>
<td>1.04 (0/4 SR)</td>
</tr>
<tr>
<td>Omega-3s (EPA+DHA)</td>
<td>0.98 (0/3 SR)</td>
<td>0.98 (0/2 SR)</td>
</tr>
<tr>
<td>EPA only</td>
<td>0.78 (1/1 SR)</td>
<td>0.97 (0/2 SR)</td>
</tr>
<tr>
<td>PCSK9 Inhibitors</td>
<td>0.84 (14/14 SR)</td>
<td>0.93 (1/17 SR)</td>
</tr>
<tr>
<td>Statins</td>
<td>0.74 (6/6 SR)</td>
<td>0.91 (6/8 SR)</td>
</tr>
</tbody>
</table>
Outcomes for lipid lowering agents

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<td>0.93 (1/17 SR)</td>
</tr>
<tr>
<td>Statins</td>
<td>0.75 (6/6 SR )</td>
<td>0.91 (4/8 SR)</td>
</tr>
<tr>
<td>Statins</td>
<td>0.74 (6/6 SR )</td>
<td>0.91 (6/8 SR)</td>
</tr>
</tbody>
</table>
Medication Recommendations

Primary prevention patients

- 10-y CVD risk of > 20%, recommend discussing statins (high-intensity)
- 10-y CVD risk of 10-19%, suggest discussing statins (moderate-intensity)
- Recommend against non-statin drugs (monotherapy or combined with statins)

Secondary prevention patients

- Recommend, discuss and encourage high-intensity statin.
- If additional CVD risk reduction desired, recommend discussing ezetimibe or PCSK9.
  - Due to potential harms (AFib, bleeding), consider icosapent after above.
**Who to screen and when**

Everyone gets Lifestyle

Everyone gets Risk Estimated

Risk <10%, repeat in 5-10 yrs

Risk 10-19%, offer mod statin

Risk ≥20%, offer high statin

On statin: No further lipid test or CK or ALT unless indicated

**Potency and benefits**
### Benefits, Adverse Effects and Costs and some evidence

### Risk of muscle symptoms on statins and what to do

### Frequently asked questions & QR code links to resources

#### Lipid Lowering Agents

<table>
<thead>
<tr>
<th>Drug</th>
<th>Prescribing Considerations</th>
<th>CVD Relative Risk Reduction</th>
<th>90-day cost $</th>
</tr>
</thead>
<tbody>
<tr>
<td>Statins</td>
<td>The only lipid lowering agent that decreases all-cause mortality. Muscle symptoms in first year: 15% versus 14% placebo. Do not worsen cognition or dementia.</td>
<td>25-35%</td>
<td>$30-50</td>
</tr>
<tr>
<td>Ectetimibe</td>
<td>Mostly studied when added to statins in secondary prevention. Well tolerated; 15mg daily.</td>
<td>7%</td>
<td>$30-45</td>
</tr>
<tr>
<td>PCSK9 inhibitors</td>
<td>Mostly studied when added to statins in secondary prevention. Injection site reactions: 3.5% versus 2.1% placebo. Subcutaneous injections q 2 weeks: Alirocumab 75-150mg or evolocumab 140mg.</td>
<td>-15%</td>
<td>$1500-2400</td>
</tr>
<tr>
<td>Fibrates</td>
<td>Increase serum creatinine (2-11% more than placebo), paracemals (0.1% more), altered liver function tests (5-6% more) example fenofibrate.</td>
<td>0-14%*</td>
<td>$60-150</td>
</tr>
<tr>
<td>EPA ethyl ester (icosapent)</td>
<td>Mostly studied when added to statins. Atrial fibrillation 5.3% versus 3.9% placebo; serious bleeds (2.7% versus 2.1% placebo); 2g BID.</td>
<td>-20%</td>
<td>$1000</td>
</tr>
</tbody>
</table>

* Only if added to statins; up to 14% if not on a statin

#### Management of Muscle Symptoms Related to Statins

Out of 100 patients on statins, 15 report muscle symptoms, but only 1 is due to statins.

<table>
<thead>
<tr>
<th>Outcomes</th>
<th>Action</th>
</tr>
</thead>
<tbody>
<tr>
<td>If a patient does not tolerate a statin, discuss statin rechallenge</td>
<td></td>
</tr>
<tr>
<td>OPTIONS</td>
<td></td>
</tr>
<tr>
<td>Same statin at same dose</td>
<td></td>
</tr>
<tr>
<td>Lower dose or intensity</td>
<td></td>
</tr>
<tr>
<td>Different statin</td>
<td></td>
</tr>
<tr>
<td>Alternate day dosing</td>
<td></td>
</tr>
<tr>
<td>If a patient is unable to tolerate or unwilling to try a re-challenge</td>
<td></td>
</tr>
<tr>
<td>PRIMARY PREVENTION</td>
<td></td>
</tr>
<tr>
<td>Suggest against non statin lipid lowering therapy</td>
<td></td>
</tr>
<tr>
<td>SECONDARY PREVENTION</td>
<td></td>
</tr>
<tr>
<td>Suggest discussing ecretimbe, fibrates, PCSK9 inhibitor or EPA ethyl ester (icosapent)</td>
<td></td>
</tr>
</tbody>
</table>

#### FAQ & Helpful Resources

Q: Why do PRED guidelines recommend against targeting LDL levels?  
A: The vast majority of clinical trials have prescribed fixed statin doses based on CVD risk. Best evidence suggests both strategies (targeting LDL levels or using statins at proven doses) are similarly effective in reducing CVD risk. Targeting cholesterol levels is more complex than use of proven doses. A simplified approach of using proven doses reduces the burden of unnecessary testing for both patients and health professionals. Read more about this issue in the guideline.

Q: Which cardiovascular decision aid should I use?  
A: There are many cardiovascular risk calculators. The Framingham model has been validated in Canada. The PRED Cardiovascular Decision Aid (https://decisionaid.ca/cvd/), based on Framingham, has been created for this guideline.

Q: How can I help patients with positive lifestyle changes?  
A: Encourage smoking cessation. Providing exercise prescription and information about the Mediterranean diet may be helpful.

![QR code links to resources]
PEER Simplified Lipid guideline 2023 Summary

• Lipid measurement with CV risk assessment (5-10 years)
• Lifestyle for all: Physical activity, Mediterranean diet
• Target your Treatments: statins for primary and secondary prevention
• Secondary prevention: Ezetimibe, PCSK9 if wish for additional risk reduction
  • Icosapent only if others explored (due to AF and bleeding)
• Older adults:
  • 1’ prevention: against lipid testing/assessment, routine statin initiation >75 years
  • Don’t stop @ 75 years, just because age
  • 2’ prevention: discuss benefits (even >75 years)
• Shared Decision Making: clinical decision aid: https://decisionaid.ca/cvd/
Sign Up for the PEER Newsletter

Don’t miss out on the latest from PEER. Get first access the latest PEER research and notified when PEER releases new guidelines and tools.

Enter peerevidence.ca/newsletter or scan QR Code to join.
Updated PEER Simplified Decision Aid
Shared Decision Making

1. Estimate your risk
Where do you live? Canada (Framingham)
How old are you? 53 years
What is your sex? Male
Do you currently smoke? No
Do you have diabetes? No
What is your systolic blood pressure? 130 mmHg
Do you take medications for blood pressure? No
What is your total cholesterol? 6.5 mmol/L
What is your HDL cholesterol? 1.2 mmol/L
Wondering why family history is not included? Please see the FAQ

10-year risk of cardiovascular disease
(heart attack, angina, heart failure, stroke, or intermittent claudication)
Your risk 13.5% With treatment 13.5%

2. Choose your treatments
Lifestyle options
- Mediterranean diet
- Physical activity

Medication options (only select one)
- Statin (low to moderate dose)
- Statin (high dose)
- Single blood pressure medication (thiazide, ACEI/ARB, or CCB)
Non-statin options not recommended for primary prevention in our guideline
- Ezetimibe
- PCSK9 inhibitor
- Fibrates

FAQ Languages: English (EN)
1. Estimate your risk

Where do you live? Canada (Framingham)

How old are you? 53 years

What is your sex? Male

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Your risk 13.5% With treatment 7.1%
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  - Ezetimibe
  - PCSK9 inhibitor
  - Fibrates

- Risk of side effects over placebo: Muscle pain (1%)
- 90-day cost: $30-$50
- Routine: One pill once a day

Print
1. Estimate your risk

Where do you live?  
Canada (Framingham)

How old are you?  
53 years

What is your sex?  
Male  Female

Do you currently smoke?  
No  Yes

Do you have diabetes?  
No  Yes

What is your systolic blood pressure?  
130 mmHg

Do you take medications for blood pressure?  
No  Yes

What is your total cholesterol?  
6.5 mmol/L

What is your HDL cholesterol?  
1.2 mmol/L

Wondering why family history is not included?  
Please see the FAQ

10-year risk of cardiovascular disease  
(heart attack, angina, heart failure, stroke, or intermittent claudication)

Your risk 13.5%  With treatment 12.8%

2. Choose your treatments

Lifestyle options

- Mediterranean diet
- Physical activity

Medication options (only select one)

These options have clear and direct evidence for primary prevention

- Statin (low to moderate dose)
- Statin (high dose)
- Single blood pressure medication (thiazide, ACEI/ARB, or CCB)

Non-statin options not recommended for primary prevention in our guideline

- Ezetimibe
- PCSK9 inhibitor
- Fibrates

- Risk of side effects over placebo: None
- 90-day cost: $30–$50
- Routine: One pill once a day
What can I do to lower my risk?

**Stop smoking:** This is likely the best thing you can do for your health. If you need help, talk to a healthcare provider.

**Eat a Mediterranean diet:** This diet typically includes lots of vegetables, fruits, Fish, nuts, and olive oil.

**Increase physical activity:** Find an activity you enjoy and can stick with! One type of physical activity is usually not better than another.

**Consider medicines:** Based on your risk, your healthcare provider may suggest a statin (e.g., atorvastatin and rosvastatin).

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Healthy Patients & Cholesterol Management: Frequently Asked Questions

For people who have not had a heart attack or stroke

Your cholesterol is one of many known risk factors for heart attack or stroke. Other risk factors include age, sex, smoking, blood pressure, and other conditions such as diabetes.

**How often should I have my cholesterol checked?**

Your cholesterol changes slowly, about one percent every year, so we don’t need to check your cholesterol more than every 5 to 10 years. If you are taking a medicine called a statin, you don’t need to recheck your cholesterol. Statins help prevent heart attacks and strokes no matter what your cholesterol is.

Health care providers used to check cholesterol every year. They now use cholesterol as one part of your overall risk of having a heart attack or stroke.

**What is my risk of having a heart attack or stroke?**

Use this link to the PEER Cardiovascular Decision Aid and talk to your health care provider.

**How well do statins work?**

Statins may lower the risk of heart attacks and strokes by 25 percent. For example, if your 10-year risk of having a heart attack or stroke is 20 percent, a statin can lower your risk to 15 percent. Statins are the only cholesterol medicine that may lower your risk of dying. Statins are generally well tolerated. Some patients report muscle pains; however, muscle pains occur as often with a placebo (a pill that contains no medicine) as they do with statins.

If you have questions about this information, go to the PEER cardiovascular decision aid or talk to your healthcare provider.

The information provided in this pamphlet is based on recommendations from the 2015 PEER Simplified Lipid Guideline Update.
Toronto Public Health has launched community vaccination clinics to help school-aged children catch up on their routine immunizations and avoid suspension, and to provide COVID-19 vaccinations to children five years of age and under and Novavax vaccines for residents 12 years of age and older who are unable (due to allergies) or unwilling, to get an mRNA vaccine.

- **Clinics are by appointment only, and are open Tuesdays, Wednesdays, and Thursdays from 12:30 p.m. to 6:30 p.m.** for the rest of the school year at the following locations:
  - Etobicoke Civic Centre: 399 The West Mall
  - Scarborough Civic Centre: 150 Borough Drive
  - North York Civic Centre: 5100 Yonge Street
  - **To book an appointment for school catchup vaccination:** Toronto Public Health Appointment Booking System – City of Toronto
  - **To book an appointment for pediatric COVID-19 vaccination:** Toronto Public Health - COVID-19 Immunization Clinics (frontdesksuite.ca)

- The clinics will offer vaccines under the Province of Ontario’s Immunization of School Pupils Act (ISPA) and Student Immunization Program (SIP); Hep B, HPV, Diphtheria, Tetanus, Polio, Measles, Mumps, Rubella, Meningococcal, Pertussis, and Varicella (if born in 2010 or later).
- In the coming weeks, clinic offerings will expand to include weekends, PA days and weekend appointments.
Pharmacies Providing Pediatric COVID-19 Vaccinations

• The resource list has a [PDF with maps of pharmacies in Toronto Region](https://ontariofamilyphysicians.ca/wp-content/uploads/2024/02/TPH-Map-of-Pharmacies-Providing-Pediatric-COVID-19-Vaccinations.pdf) that were providing pediatric COVID-19 vaccinations as of December 28, 2023.

• **We recommend that people searching for pediatric vaccinations call these pharmacies to confirm that they are still offering pediatric vaccinations, or check their websites, before attempting to access vaccination.**

• **PLEASE NOTE:**

  • The Ministry of Health (MOH) provided Toronto Public Health (TPH) and Ontario Health Toronto with a list of pharmacies that were offering COVID-19 vaccinations to kids aged 5 years old and under, as well as 2 years old and under. TPH contacted all of these pharmacies and provided Ontario Health Toronto with the list of 59 verified pharmacies in Toronto offering pediatric COVID-19 vaccinations as of December 28, 2023. The updated pharmacy list was shared by TPH to assist parents and caregivers to ensure that their children receive COVID-19 vaccinations. **The attached document provides a map of the location of the 59 pharmacies by OHT** (map developed by Ontario Health Toronto).

  • Many thanks to Toronto Public Health for surveying pharmacies in late December. As this information was valid at that point in time and may change based on pharmacy operations, **individuals are strongly encouraged to phone each pharmacy prior to visiting, to determine if the service is still available.**
Are you a healthcare professional with a question about COVID-19 therapeutics?

Staffed by a registered pharmacist, OPA’s COVID-19 Therapeutic Support Line provides Ontario vaccinators and prescribers with a dedicated resource to assist with timely, evidence-based clinical decision-making support.

1-888-519-6069
10 am – 8 pm EST, 7 days per week

https://www.opatoday.com/covid19support/
## RECENT SESSIONS

<table>
<thead>
<tr>
<th>Date</th>
<th>Topic</th>
<th>Presenters</th>
</tr>
</thead>
</table>
| October 27    | **Respiratory and Flu Season: Counselling Kids & Balancing Workload**                   | Dr. Joan Chan  
Dr. Janine McCready                                                     |
| October 6     | **Update on COVID-19, influenza and RSV vaccines**                                       | Dr. Zain Chagla  
Dr. Elizabeth Muggah                                                      |
| September 15  | **Preparing for the fall**                                                              | Dr. Kieran Michael Moore  
Dr. Daniel Warshafsky                                                       |
| December 15   | **Winter virus season and Changes to breast cancer screening in Ontario**                | Dr. Allison McGeer  
Dr. Jonathan Isenberg  
Dr. Anna M. Chiarelli  
Maggie Keresteci                                                          |
| January 19    | **COVID-19 Updates and Managing Respiratory Illness in Kids**                           | Dr. Alon Vaisman  
Dr. Tasha Stoltz                                                             |

Previous webinars & related resources:  
Accessing Previous Sessions and Self Learning

Previous webinars & related resources
https://www.dfcm.utoronto.ca/past-covid-19-community-practice-sessions
Thank you!

Past team members:
- Trish O’Brien,
- Kirsten Eldridge
- Adrienne Spencer
- Leanne Clark
- Susan Taylor
- Kim Moran
- Jennifer Young
- Leslie Greenberg
- Brian Da Silva
- David Kaplan
- Elizabeth Muggah

To all those who have helped make the COVID-19 Community of Practice a success!
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: February 23, 2024

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.