Care Models for Long COVID/Post COVID-19 Condition
A Rapid Systematic Review

Simon Décary, PT, PhD
Assistant professor
University of Sherbrooke
Primary Care Rehabilitation Lab

Expanding Our Understanding of Post COVID-19 Condition
World Health Organization
October 6th 2021
Meanwhile in Canada…

- Despite strong vaccination efforts, 1.64M cases, 27K deaths, for a 38M population
- We are currently in our 4th wave of the pandemic
- Quick facts about Canada:
  - 13 provinces and territories
  - Independent, but one universal federal law.
  - Population spread across a large geography, including northern territories.
- SPOR Evidence Alliance and COVID-END knowledge synthesis infrastructure.
A Review of Care Models?

• Long COVID was recognized very early in Canada
• Among our first Long COVID clinics was set-up by an infectious disease specialist named Dr. Alain Piché from Sherbrooke in May 2020
• Alberta was also among the first province to create a task force to organize care models for Long COVID
• My team obtained a first research grant in July 2020
• Rise of concerns in Canada in January 2021 amid the second wave.
• First query to COVID-END was asked in April 2021
• Public Health Agency of Canada officially recognized Post COVID-19 Condition in July 2021
Care Models for Long COVID

A Rapid Systematic Review

Date of Literature Search: 5/27/2021
Date of Submission: 6/18/2021

Prepared by:
Simon Décary, PT, PhD
Léa Langlois, MSc
Annie LeBlanc, PhD

Michèle Dugas, MSc
Becky Skidmore, PhD

Théo Stefan, MSc
Anne Bhéreur, MD

For and in close collaboration with:
Alberta Health Services
Stephanie Hastings, PhD
Branden Manns, MD, MSc
Lynora Saxinger, PhD

Methods

- **Objective:** To provide the best-available evidence about care models for people living with Long COVID
- We performed a rapid systematic review following the Joanna Briggs Institute’s Manual for Evidence Synthesis
- We systematically searched on May 27th 2021 seven electronic database: MEDLINE, Embase, Web of Science, COVID-END, L-OVE, CDRS and WHO Ovid
- Two independent reviewers screened title, abstract and full text
- We included studies reporting on 1 - people living with Long COVD and 2- a specific care model (i.e. structured clinic, care pathway).
- We extracted characteristic of studies, referral pathways, clinical settings of care model, healthcare professions included in the care models, clinical settings, care model principles, care model components and reporting of the care model implementation.

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**Eligibility Criteria**

Our inclusion criteria (PICO) were as followed:

**Population:** Persons living with Long COVID (children and adults) or healthcare professionals managing Long COVID. We included all definition of persistent symptoms of COVID-19 (e.g., post-COVID syndrome).

**Intervention:** Care models (including pathways, trajectories, frameworks or structured clinics) to organise health care services for Long COVID.

**Comparator:** Natural recovery, usual care models, inter-jurisdiction models comparison if available.

**Outcomes:** Any outcomes or specifically system-level outcomes (e.g., cost, access, quadruple aim), patient-level outcomes (e.g., specific PROMS related to symptoms), clinician-level outcome (e.g., satisfaction with the care pathways).

**Study design:** Any design.

**Settings:** Any setting.
Results

• We screened 2181 citations, read 65 full texts and included 12 international care models for Long COVID.
• Half of studies were from the United Kingdom.
• 7 out of 12 studies reported conceptual models without a description of implementation.
• All but one model was designed for discharge and long-term follow-up of hospitalized patient and half for non-hospitalized.
• A total of 30 healthcare professions and medical specialities were proposed for staffing Long COVID services.
• More than half studies proposed multidisciplinary teams, integrated/coordination of care, evidence-based care, and patient patient-centred care as key model principle.
• Standardized assessment, follow-up system and virtual care were the most frequent care model components.
A proposed care pathway for Long COVID
based on a rapid systematic review of care models for Long COVID - June 2021

OVERARCHING PRINCIPLES
- Patient-centered care
- Patient empowerment
- Evidence-based care
- Integrated & coordinated care
- Shared & multidisciplinary care

Patient Pathway

People who had COVID in the community
- Primary care visit (4–12 wks)
  - Assessment and investigation of new or ongoing symptoms
  - Alternative diagnoses ruled out

People hospitalized with COVID
- Post-discharge follow-up (6–8 wks)
  - Assessment and investigation of new or ongoing symptoms
  - Alternative diagnoses ruled out

Post-COVID assessment & triage
- Care and referral coordination
- Standardized assessment
  - Respiratory issues
  - Fatigue & strength
  - Pain & discomfort
  - Sleep
  - Cognition
  - Mood & mental health
  - Nutrition & weight
  - Usual activities & occupation
  - Social determinants
- Personnel
  - Any physician
  - Trained healthcare professional

Post-COVID Learning Ecosystem

Rehabilitation
- Disability management (long term if needed)
- Targeted personnel
  - Physiotherapist
  - Occupational therapist
  - Nutrition
  - Speech & language therapist

Primary care
- Care coordination
- Medication management
- Comorbidities management
- Self-management support
- Targeted personnel
  - General practitioner
  - Social worker
  - Nursing
  - Pharmacist

Specialty care
- Further investigation for organ impairment & follow-up
- Targeted specialties
  - Pulmonary/respiratory
  - Cardiovascular
  - Psychiatry/psychology
  - Neurology
  - Hepatology
  - Otolaryngology
  - Dermatology

Provider support:
- Standardized assessment
- EMR template
- Referral and follow-up system
- Training

Patient support:
- Home-based care
- Patient education
- Patient support groups
- Telehealth/virtual care

OUTCOMES
- Quality of life
- Patient experience
- Provider experience
- Sustainable cost
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Discussion

• Rapid review… to living review! Update coming in November.
• The implementation of care models from Long COVID is underway in several countries.
• Evidence concerning rehabilitation interventions is building rapidly and this will impact model pathways and trajectories.
• There is still unmet needs in the current form of rehab models (e.g. return to work, children).
• Rehabilitation care models require more precision (e.g. service framework).
• New research super clusters (e.g. LOCOMOTION) will rapidly produce missing evidence, but limited to large countries.
• Real-time and locally contextualized data could be captured from already running clinical initiatives worldwide.
• No impact and cost analysis data
I am taking history lessons from patient communities…

A care model that is safe, adaptable, integrated, equitable, accessible, financially sustainable and most importantly that improves the experience and engagement with care for people with disabilities from Long Covid, post infectious conditions and any other chronic or episodic disabilities.
Thank you!

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Email: simon.decary@usherbrooke.ca
Twitter: @SimonDecary