

## **EVIDENCE SYNTHESIS BRIEFING NOTE**

### **TOPIC: LONG COVID-19 CLINICS**

*Information finalized as of April 27, 2021.<sup>a</sup>*

This Briefing Note was completed by the Research, Analysis, and Evaluation Branch (Ministry of Health) based on information provided by members of the COVID-19 Evidence Synthesis Network. Please refer to the [Methods](#) section for further information.

**Purpose:** This note provides a summary of the development, implementation, and funding of long COVID-19 clinics across jurisdictions. Particular topics of interest include: Governance structures; program delivery, including the services provided; staffing models, including specialists employed; and funding models.

**Key Findings:** Long COVID clinics were identified in the United States (US), the United Kingdom (UK), and Italy.

- **US:** Eighty post-COVID clinics that were identified in 31 US states are actively engaging with COVID-19 patients who continue to have symptoms for months after their acute infection cleared. A survey of 64 funded US clinics reported that they had seen a combined total of nearly 10,000 patients.
- **UK:** As of December 2020, NHS England had established 68 long COVID-19 clinics across the country: 10 sites were operational in London; seven in the East of England; eight in each of the Midlands, the South East and the South West; nine in the North West; and 18 across the North East and Yorkshire. An additional 12 sites were earmarked to launch in January 2021 in the East Midlands, Lancashire, Cornwall, and Isle of Wight.
- **Italy:** An [Outpatient COVID-19 Follow-up Clinic](#) in Milan is part of a 2020 observational study on patients with COVID-19 performed at San Raffaele University Hospital.

#### **Funding**

- NHS England and NHS Improvement provided two funding investments to support the establishment of long COVID assessments clinics that will support the anticipated demand in England in 2021/2022: CAD \$17.42 million in October 2020 and CAD \$41.81 in March 2021. No identified literature reported the number of clinics that were established using these investments.

#### **Multidisciplinary Staffing**

- Long COVID clinics in the US, UK, Italy, and Canada are providing multidisciplinary rehabilitation teams that include: internists; cardiologists; rehabilitation, respiratory and cardiac consultants; physiotherapists; occupational therapists; psychologists; neurologists; nutritionists; and nephrologists.

#### **Analysis for Ontario:**

- There is little published data on the administration of long COVID rehabilitation clinics. Ontario's Ministry of Health should continue to monitor grey and research literatures for emerging information about governance structures and outcomes of such models to inform any future considerations.

<sup>a</sup> This briefing note includes current available evidence as of the noted date. It is not intended to be an exhaustive analysis, and other relevant findings may have been reported since completion.

## Supporting Evidence

[Table 1](#) below summarizes information identified on long COVID-19 clinics across jurisdictions. Additional details are provided in [Table 2](#) in the Appendix.

**Table 1: Long COVID-19 Clinics Across Jurisdictions**

<p><b>Scientific Evidence</b></p>	<p><b>Staffing</b></p> <ul style="list-style-type: none"> <li>• <u>Multidisciplinary Staff</u>: A qualitative study (N=59; United Kingdom) that documented long COVID patients' lived experiences generated patient-informed quality principles for long COVID services, including the provision of multidisciplinary rehabilitation teams that include rehabilitation, respiratory and cardiac consultants, physiotherapists, occupational therapists, psychologists and (if needed) neurologists.<sup>1</sup></li> </ul>
<p><b>International Scan</b></p>	<p><b>Long COVID Clinics</b></p> <ul style="list-style-type: none"> <li>• Long COVID clinics were identified in the United States (US), the United Kingdom (UK), and Italy.<sup>2,3,4,5</sup> <ul style="list-style-type: none"> <li>○ <u>US</u>: An NBC News article (March 2021) reported that 80 post-COVID clinics identified in 31 US states are actively engaging with COVID-19 patients who continue to have symptoms months after their acute infection cleared; 64 US clinics surveyed have seen a combined total of nearly 10,000 patients.<sup>6</sup> A Becker's Hospital Review article (April 2021) stated that 30 hospitals and health systems have launched post-COVID-19 clinics in the US.<sup>7</sup></li> <li>○ <u>UK</u>: According to a December 2020 news release, NHS England had established 68 long COVID-19 clinics across the country; the release reported that 10 sites were operational in London seven in the East of England; eight in each of the Midlands, the South East, and the South West respectively; nine in the North West; and 18 across the North East and Yorkshire.<sup>b</sup> An additional 12 sites were earmarked to launch in January 2021 in the East Midlands, Lancashire, Cornwall and Isle of Wight.<sup>8,c</sup></li> <li>○ <u>Italy</u>: An <a href="#">Outpatient COVID-19 Follow-up Clinic</a> in Milan is part of a 2020 observational study on patients with COVID-19 performed at San Raffaele University Hospital.</li> </ul> </li> </ul> <p><b>Funding</b></p> <ul style="list-style-type: none"> <li>• NHS England and NHS Improvement provided two funding investments to support the establishment of long COVID assessments clinics that will support the anticipated demand in England in 2021/2022: <ul style="list-style-type: none"> <li>○ CAD \$17.42 million in October 2020; and</li> <li>○ CAD \$41.81 in March 2021.<sup>9,d</sup></li> </ul> </li> </ul>

<sup>b</sup> The NHS release stated that, as of December 2020, there were 69 long COVID clinics in operation in England; however, the release reported a group of clinics that totaled 68. To be conservative, this briefing note is using the smaller number.

<sup>c</sup> No updated information was available regarding whether these sites actually launched in January 2021.

<sup>d</sup> The media release reported figures of GBP £10 million and £24 million. All Canadian Dollar (CAD) amounts were calculated using Purchasing Power Parities (PPPs) as published by the Organisation for Economic Co-operation and Development (OECD) for 2019 (1 British Pound [GBP] = 1.742 CAD). PPPs are the rates of currency conversion that eliminate the differences in price levels between countries ([OECD, 2019](#)).

	<p><b>Staffing</b></p> <ul style="list-style-type: none"> <li>The team in Milan’s Outpatient COVID-19 Follow-up Clinic is multidisciplinary, comprising internists, neurologists, psychiatrists, cardiologists, nutritionists, and nephrologists.</li> </ul> <p><b>Program delivery</b></p> <ul style="list-style-type: none"> <li>All hospitalized patients are offered the opportunity to participate in Milan’s Outpatient COVID-19 Follow-up Clinic. Outpatient visits are scheduled at four weeks, three months, and six months after hospital discharge. For patients managed at home after discharge from the emergency department, telephonic consultation by a trained physician is used to discriminate patients for whom the follow-up visit is recommended.<sup>10</sup></li> </ul> <p><b>Guidelines for Long COVID Clinics</b></p> <ul style="list-style-type: none"> <li>Guidelines for establishing long COVID clinics were identified in the US and the UK:<sup>11,12</sup> <ul style="list-style-type: none"> <li><u>UK</u>: In December 2020, the National Institute for Health and Care Excellence (NICE) in partnership with the Scottish Intercollegiate Guidelines Network (SIGN) and the Royal College of General Practitioners published a guideline for clinicians on the management and care of people with long-term effects of COVID-19.<sup>13,e</sup> The NICE guidelines also make recommendations in a number of other key areas:           <ul style="list-style-type: none"> <li>Assessing people with new or ongoing symptoms after acute COVID-19;</li> <li>Investigations and referral;</li> <li>Planning care;</li> <li>Management, including self-management, supported self-management, and rehabilitation;</li> <li>Follow-up and monitoring; and</li> <li>Service organization.</li> </ul> <p>The guideline also includes a number of key recommendations for research which will help inform and enhance future versions as evidence and practice develops.<sup>14</sup></p> </li> <li><u>US</u>: Recognizing the increasing need for post COVID clinics, the National Institutes of Health (NIH) and the US Centers for Disease Control and Prevention (CDC) are currently developing protocols for these centers; established centers such as The Mount Sinai Hospital in New York City are offering guidance to those just getting up and running.<sup>15</sup> No additional information was identified.</li> </ul> </li> </ul>
<p><b>Canadian Scan</b></p>	<p><b>Private Clinics</b></p> <ul style="list-style-type: none"> <li>Lifemark Health Group, a chain of private physiotherapy and rehabilitation clinics, offers a <a href="#">Post COVID-19 Rehabilitation and Recovery Program</a> in six provincial jurisdictions: British Columbia, Alberta, Ontario, Nova Scotia, New Brunswick, and Newfoundland and Labrador. The program emphasizes a multidisciplinary approach to treatment and provides care in person and virtually.</li> </ul>

<sup>e</sup> To develop the recommendations, the authors used the following clinical definitions for the initial illness and long COVID at different times: 1) Acute COVID-19: Signs and symptoms of COVID-19 for up to four weeks; 2) Ongoing symptomatic COVID-19: signs and symptoms of COVID-19 from four to 12 weeks; and, 3) Post-COVID-19 syndrome: signs and symptoms that develop during or after an infection consistent with COVID-19, continue for more than 12 weeks and are not explained by an alternative diagnosis. In addition to the clinical case definitions, 'long COVID' is commonly used to describe signs and symptoms that continue or develop after acute COVID-19. It includes both ongoing symptomatic COVID-19 and post-COVID-19 syndrome ([National Institute for Health and Care Excellence, December 18, 2020](#)).

	<ul style="list-style-type: none"> <li>○ <b>Staffing:</b> Staffing includes health care providers from 15 disciplines, including: Physiotherapy; occupational therapy; vestibular therapy; kinesiology; athletic therapy; chiropractic, massage therapy; psychology/social work; dietitian; and speech language pathology.</li> <li>○ <b>Funding:</b> Health insurance providers reimburse all, or a portion, of the fees. Coverage includes: All third-party insurance; extended health benefits; worker's compensation; and motor vehicle accident insurance.<sup>16,17</sup></li> </ul> <p><b>Public Clinics</b></p> <ul style="list-style-type: none"> <li>● Clinics have been identified in British Columbia (Post-COVID-19 Recovery Clinic),<sup>18,19,20,21</sup> and Quebec (Montreal Clinical Research Institute Post-COVID-19 Clinic).<sup>22</sup> Each clinic is staffed by an interdisciplinary team of specialists. For example:             <ul style="list-style-type: none"> <li>○ <b>Post-COVID-19 Recovery Clinic (BC):</b> Since February 2021, a network of three post COVID-19 recovery clinics provide specialized care and follow-up for patients recovering from COVID-19: Vancouver General Hospital (Vancouver); St. Paul's Hospital (Vancouver); and Jim Pattison Outpatient Care and Surgery Centre (Surrey). The BC program is provincially funded by the Provincial Health Services Authority (PHSA) and works in partnership with BC's regional health authorities, patients, and research organizations.<sup>23,24,25,26</sup></li> </ul> </li> </ul>
<p><b>Ontario Scan</b></p>	<ul style="list-style-type: none"> <li>● A COVID-19 Rehabilitation Clinic has been established in association with the University Health Network (UHN).</li> </ul> <p><b>Program Delivery and Staffing</b></p> <ul style="list-style-type: none"> <li>● The program at UHN (Ontario) is multidisciplinary, and is staffed by an interprofessional team of clinicians, including: A psychiatrist; a geriatrician; occupational therapists; physiotherapists; an occupational/physiotherapy assistant; a social worker; a registered nurse; and a service coordinator.<sup>27,28</sup></li> </ul>

**Methods**

The COVID-19 Evidence Synthesis Network is comprised of groups specializing in evidence synthesis and knowledge translation. The group has committed to provide their expertise to provide high-quality, relevant, and timely synthesized research evidence about COVID-19 to inform decision makers as the pandemic continues. The following members of the Network provided evidence synthesis products that were used to develop this Evidence Synthesis Briefing Note:

- Ontario Health (Cancer Care Ontario); and
- McMaster Health Forum.

For more information, please contact the [Research, Analysis and Evaluation Branch \(Ministry of Health\)](#).

**APPENDIX**

**Table 2: Long COVID-19 Clinics Across Jurisdictions**

Facility Name, Jurisdiction	Governance Structures	Program Delivery	Staffing Models	Funding Models
<p><b>Canada</b></p> <ul style="list-style-type: none"> <li>• <a href="#">Post COVID-19 Rehabilitation and Recovery Program, Lifemark Health Group</a></li> </ul>	<ul style="list-style-type: none"> <li>• <b>Organization:</b> Lifemark Health Group (private clinic).<sup>f</sup></li> <li>• <b>Jurisdictions:</b> Alberta (Calgary; Edmonton; St. Albert; and Fort Saskatchewan); British Columbia (Kelowna, West Kelowna, Langley); New Brunswick (St. John); Newfoundland and Labrador (Cornerbrook, Marystown, St. John's); Nova Scotia (Lower Sackville); Ontario (Ajax, Belleville, Brampton, Cambridge, Fonthill, Hamilton, Kingston, London, Markham, Milton, Mitchell, Nepean, Oakville, Orangeville, Oshawa, Ottawa, Peterborough, Scarborough, St. Catharines, St. Mary's, St. Thomas, Tecumseh, Toronto, Unionville, Val Caron, Whitby, Windsor).</li> </ul>	<ul style="list-style-type: none"> <li>• <b>Program delivery:</b> Virtual and in-person treatment services for long COVID-19.</li> <li>• <b>Rehabilitation services:</b> The program emphasizes a multi-disciplinary approach to treatment, tailored to patients' individual needs.</li> <li>• <b>Treatment:</b> Plans may include a combination of approaches such as: <ul style="list-style-type: none"> <li>○ Physical exercise;</li> <li>○ Manual therapy;</li> <li>○ Vestibular therapy;</li> <li>○ Cognitive behavioural therapy; and</li> <li>○ Education.</li> </ul> </li> </ul>	<ul style="list-style-type: none"> <li>• <b>Staffing:</b> Staffing includes health care providers working in collaboration from 15 disciplines: <ul style="list-style-type: none"> <li>○ Physiotherapy;</li> <li>○ Occupational Therapy;</li> <li>○ Vestibular Therapy;</li> <li>○ Kinesiology;</li> <li>○ Athletic Therapy;</li> <li>○ Chiropractic, Massage Therapy;</li> <li>○ Psychology / Social Work;</li> <li>○ Dietitian; and</li> <li>○ Speech Language Pathology.</li> </ul> </li> </ul>	<ul style="list-style-type: none"> <li>• <b>Funding:</b> Health insurance providers reimburse all or a portion of the fees. Coverage includes: <ul style="list-style-type: none"> <li>○ All third-party insurance;</li> <li>○ Extended health benefits;</li> <li>○ Worker's compensation; and</li> <li>○ Motor vehicle accident insurance.<sup>29,30</sup></li> </ul> </li> </ul>
<p><b>British Columbia</b></p> <ul style="list-style-type: none"> <li>• <a href="#">Post-COVID-19 Recovery Clinics</a>, Provincial Health Services Authority (PHSA)</li> </ul>	<ul style="list-style-type: none"> <li>• <b>Organization:</b> Since February 2021, a network of three post COVID-19 recovery clinics have provided specialized</li> </ul>	<ul style="list-style-type: none"> <li>• <b>Service provision:</b> Interdisciplinary clinics, integrated with primary care providers, and based on a model of supportive care co-</li> </ul>	<ul style="list-style-type: none"> <li>• <b>Staffing:</b> The COVID-19 clinics involve interdisciplinary teams of specialists including: <ul style="list-style-type: none"> <li>○ Neurologists;</li> <li>○ Cardiologists;</li> </ul> </li> </ul>	<ul style="list-style-type: none"> <li>• <b>Funding:</b> Provincially funded initiative in Canada.</li> <li>• <b>No further information identified</b> <sup>31,32,33,34</sup></li> </ul>

<sup>f</sup> Lifemark Health Group is a national health care company that provides comprehensive health care services in community rehabilitation services, workplace health and wellness, and medical assessments ([Lifemark Health Group, n.d.](#)).

Facility Name, Jurisdiction	Governance Structures	Program Delivery	Staffing Models	Funding Models
	<p>care and follow-up for patients recovering from COVID-19:</p> <ul style="list-style-type: none"> <li>○ Vancouver General Hospital (Vancouver);</li> <li>○ St. Paul's Hospital (Vancouver); and</li> <li>○ Jim Pattison Outpatient Care and Surgery Centre (Surrey).</li> </ul> <ul style="list-style-type: none"> <li>● <u>Governance</u>: The PHSA's Post COVID-19 Interdisciplinary Clinical Care Network works in partnership with BC's regional health authorities, patients, and research organizations.</li> <li>● <u>Partnerships</u>: The Post COVID-19 Interdisciplinary Clinical Care Network includes clinicians, academics, and patients who provide leadership to the post COVID-19 recovery clinics by strengthening collaboration, developing best practices, and enhancing access to care.</li> <li>● PHSA provides provincial oversight and support to the network.</li> <li>● Clinics' partners include: <ul style="list-style-type: none"> <li>○ BC health authorities (Fraser Health, Providence Health, Vancouver Coastal Health, Northern Health, Interior Health, Island Health);</li> </ul> </li> </ul>	<p>designed by clinicians and survivors of COVID-19.</p> <ul style="list-style-type: none"> <li>● <u>Care delivery</u>: Services are provided: <ul style="list-style-type: none"> <li>○ On-site; and</li> <li>○ Telehealth-enabled.</li> </ul> </li> <li>● <u>Eligibility</u>: Patients must be referred to a clinic by their primary care provider, using the post-COVID recovery clinic <a href="#">referral form</a>. Clinics accept patients who: <ul style="list-style-type: none"> <li>○ Have had a positive COVID-19 swab;</li> <li>○ A positive serology test; and</li> <li>○ Were sick during the early stages of the pandemic (January-May 2020) and did not have access to a COVID-19 test.</li> </ul> </li> </ul>	<ul style="list-style-type: none"> <li>○ Rheumatologists;</li> <li>○ Psychiatrists;</li> <li>○ Dermatologists;</li> <li>○ Physiotherapists; and</li> <li>○ Nurses.</li> </ul>	

Facility Name, Jurisdiction	Governance Structures	Program Delivery	Staffing Models	Funding Models
	<ul style="list-style-type: none"> <li>○ BC Academic Health Sciences Network;</li> <li>○ BC Centre for Disease Control;</li> <li>○ BC Ministry of Health;</li> <li>○ BC Renal Agency;</li> <li>○ Divisions of Family Practice: Patient Attachment Initiative;</li> <li>○ Michael Smith Foundation for Health Research post-COVID research program;</li> <li>○ PHSA Office of Virtual Health;</li> <li>○ PSS Pathway;</li> <li>○ Rural Coordination Centre of BC;</li> <li>○ Shared Care BC;</li> <li>○ Simon Fraser University Faculty of Health Science; and</li> <li>○ University of British Columbia, Faculties of Medicine and Nursing and the School of Population and Public Health.</li> </ul>			
<p><b>Ontario (Toronto)</b></p> <ul style="list-style-type: none"> <li>● COVID-19 Rehab Clinic, University Health Network Clinic</li> </ul>	<ul style="list-style-type: none"> <li>● <u>Governance</u>: No information identified.</li> </ul>	<ul style="list-style-type: none"> <li>● <u>Service Provision</u>: Program is multidisciplinary.</li> <li>● <u>Program Delivery</u>: Care is provided through a virtual and in-person model that includes:               <ul style="list-style-type: none"> <li>○ <u>Initial Interprofessional Assessment</u>: An initial assessment includes a virtual visit with an:                   <ul style="list-style-type: none"> <li>▪ Occupational therapist (OT);</li> <li>▪ Physiotherapist (PT); and</li> </ul> </li> </ul> </li> </ul>	<ul style="list-style-type: none"> <li>● <u>Staffing</u>: Interprofessional team of clinicians includes:               <ul style="list-style-type: none"> <li>○ Psychiatrist;</li> <li>○ Geriatrician;</li> <li>○ Occupational therapists;</li> <li>○ Physiotherapists;</li> <li>○ Occupational/Physiotherapy Assistant;</li> <li>○ Social Worker;</li> <li>○ Registered Nurse; and</li> <li>○ Service Coordinator.</li> </ul> </li> </ul>	<ul style="list-style-type: none"> <li>● <u>Funding</u>: No information identified.<sup>35,36</sup></li> </ul>



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		<ul style="list-style-type: none"> <li>▪ Either a psychiatrist or geriatrician, depending on the patient's age.</li> <li>○ <u>Treatment Plan</u>: From that initial assessment, a care plan is created, and other professions, such as social work, are introduced as needed, since the team estimates that about one-third of patients require mental or psychosocial support.</li> </ul>		
<p><b>Quebec (Montreal)</b></p> <ul style="list-style-type: none"> <li>• Montreal Clinical Research Institute (ICRM) Post-COVID-19 Clinic.</li> </ul>	<ul style="list-style-type: none"> <li>• <u>Governance</u>: No information identified.</li> <li>• <u>Purpose</u>: Follow patients for five years in order to collect robust research on the experiences of post-COVID individuals;               <ul style="list-style-type: none"> <li>○ The ICRM Post-COVID-19 Clinic provides informed post-COVID patient care and connects patients to research trials to help doctors evaluate, treat and better understand the full impact of the disease.</li> </ul> </li> </ul>	<ul style="list-style-type: none"> <li>• <u>Intake</u>: Two step intake process:               <ul style="list-style-type: none"> <li>○ <u>Online</u>: Patients are first screened online, using questionnaires to gather information about their dietary history, their general well-being and activity level.</li> <li>○ <u>In-person</u>: Appointment is then scheduled and includes a complete physical exam.</li> </ul> </li> <li>• <u>Eligibility</u>: Individuals must:               <ul style="list-style-type: none"> <li>○ Reside in Quebec;</li> <li>○ Be 18 years of age or older; and</li> <li>○ Have documentation of a COVID-positive PCR or antibody test.</li> </ul> </li> <li>• <u>Treatment timeline</u>: Not yet established.</li> </ul>	<ul style="list-style-type: none"> <li>• <u>Staffing</u>: Multidisciplinary;               <ul style="list-style-type: none"> <li>○ Clinic is staffed by a team of specialists for each organ system, dietitians, and kinesiologists.</li> </ul> </li> </ul>	<ul style="list-style-type: none"> <li>• <u>Funding</u>: No information identified.<sup>37</sup></li> </ul>



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<p><b>England</b></p> <ul style="list-style-type: none"> <li>National Health Service (NHS)</li> </ul>	<ul style="list-style-type: none"> <li><b>Locations:</b> NHS England has established 68 long COVID-19 clinics across the country. <ul style="list-style-type: none"> <li>10 sites are operational in London<sup>9</sup></li> <li>Seven in the East of England;</li> <li>Eight each in the Midlands, the South East and the South West;</li> <li>Nine in the North West; and</li> <li>18 across the North East and Yorkshire.<sup>9</sup></li> <li>As of December 2020, 12 more sites were earmarked to launch in January 2021 in the East Midlands, Lancashire, Cornwall and Isle of Wight.<sup>h</sup></li> </ul> </li> </ul>	<ul style="list-style-type: none"> <li><b>Services:</b> The assessment centres are taking referrals from general practitioners (GPs) for people experiencing brain fog, anxiety, depression, breathlessness, fatigue and other debilitating symptoms.</li> <li><b>Eligibility:</b> Patients can access services if they are referred by a GP or another health care professional.</li> <li><b>Best practices:</b> The National Institute for Clinical Excellence (NICE) has also issued official guidance on best practices for recognizing, investigating and rehabilitating patients with long COVID.</li> </ul>	<ul style="list-style-type: none"> <li><b>Staffing:</b> The new centres bring together doctors, nurses, physiotherapists and occupational therapists to offer both physical and psychological assessments and refer patients to the right treatment and rehabilitation services.</li> </ul>	<ul style="list-style-type: none"> <li><b>Funding:</b> NHS England has provided CAD \$17.42 million for the network of clinics, which started opening in November 2020.<sup>38,i</sup></li> </ul>
<p><b>United Kingdom National Health Service</b></p> <ul style="list-style-type: none"> <li><a href="#">National Guidance for Post-COVID Syndrome Assessment Clinics</a></li> </ul>	<ul style="list-style-type: none"> <li><b>Governance:</b> NHS England and NHS Improvement regional teams are to work with health care systems and commissioners on the best arrangements for service delivery to ensure universal geographic coverage, support communications with patients and stakeholders and inform future delivery of service. Services are to provide</li> </ul>	<ul style="list-style-type: none"> <li><b>Scope of Service:</b> As a minimum, the post-COVID assessment clinics should: <ul style="list-style-type: none"> <li>Ensure coverage of the population in each system;</li> <li>Be available, following general practice or other clinician, referral, to all affected patients, whether hospitalized or not from four weeks after the start of</li> </ul> </li> </ul>	<ul style="list-style-type: none"> <li><b>Staffing:</b> The NICE/SIGN/RCGP have made recommendations regarding having a multidisciplinary team that can provide a 'one-stop' service: <ul style="list-style-type: none"> <li><b>Physiotherapists</b> can provide a holistic assessment to identify the specific needs of the patient and agree a personalized plan. They offer support,</li> </ul> </li> </ul>	<ul style="list-style-type: none"> <li><b>Funding:</b> NHS England and NHS Improvement provided two funding investments to support the establishment of long COVID assessments clinics that will support the anticipated demand in 2021/2022: <ul style="list-style-type: none"> <li>CAD \$17.42 million in October 2020; and</li> <li>CAD \$41.81 in March 2021.</li> </ul> </li> </ul>

<sup>9</sup> The NHS release stated that, as of December 2020, there were 69 long COVID clinics in operation in England; however, the release reported a group of clinics that totaled 68. To be conservative, this briefing note is using the smaller number.

<sup>h</sup> No updated information was available regarding whether these sites actually launched in January 2021.

<sup>i</sup> The media release reported figures of GBP £10 million and £24 million. All Canadian Dollar (CAD) amounts were calculated using Purchasing Power Parities (PPPs) as published by the Organisation for Economic Co-operation and Development (OECD) for 2019 (1 British Pound [GBP] = 1.742 CAD). PPPs are the rates of currency conversion that eliminate the differences in price levels between countries ([OECD, 2019](#)).

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	<p>assurance that they are meeting the service requirements and specifically:</p> <ul style="list-style-type: none"> <li>○ Geographical coverage of the entire regional population by the services, including a plan for ensuring equity of access, and delivery of care;</li> <li>○ Services are to have a nominated service lead, and appropriate multidisciplinary teams to account for the multi-system nature of post-COVID syndrome. As a minimum this should include: <ul style="list-style-type: none"> <li>▪ Specialist mental health input and ability to refer to the 'Improving Access to Psychological Therapies' (IAPT) program, physiotherapy, occupational therapy, and dietetics. Patients with complex needs requiring coordinated input should have an individual rehabilitation prescription and access to specialist rehabilitation with a single point of access;</li> </ul> </li> <li>○ Referral routes should include all affected patients whether hospitalized or not and based on clinical diagnosis in the absence of</li> </ul>	<p>acute COVID-19 illness, if required;</p> <ul style="list-style-type: none"> <li>○ Have locally agreed thresholds for referral, based on guidance from the National Institute for Health and Care Excellence (NICE), the Scottish Intercollegiate Guidelines Network (SIGN) and the Royal College of General Practitioners (RCGP);<sup>39</sup></li> <li>○ Ensure that access to the post-COVID assessment services of groups who experience health inequalities are: <ul style="list-style-type: none"> <li>▪ Predicated upon an assessment framework (e.g., Equality and Health Inequalities Assessment Framework);</li> <li>▪ Monitored (via clinic data and the health equity audit); and</li> <li>▪ Acted upon urgently if discrepancies are identified.</li> </ul> </li> <li>○ Have an internal and external communication plan for raising awareness within the clinical community and key stakeholders including: <ul style="list-style-type: none"> <li>▪ Patients, and the public; and</li> <li>▪ Primary care networks, community services,</li> </ul> </li> </ul>	<p>rehabilitation and self-management advice for patients dealing with symptoms such as breathlessness, de-conditioning, fatigue and dizziness and can include specific guidance on pacing, rest and recovery time;</p> <ul style="list-style-type: none"> <li>○ <u>Speech and language therapists</u> provide holistic assessments to identify the specific needs of the patient and agree a personalized plan. They support the rehabilitation and self-management of individuals who have identified common clinical presentations seen in post-COVID syndrome, including cognitive communication (incl. brain fog), swallowing, voice (incl. muscle tension dysphonia) and respiratory difficulties;</li> <li>○ <u>Occupational therapists</u> can provide a personalized and occupation-focused approach to assessment such as cognition, delirium, mental health and functional outcome, independence and activity measures, including support for self-management and social prescribing;</li> </ul>	<ul style="list-style-type: none"> <li>○ Funding will be allocated to NHS England and NHS Improvement's regional teams to work with health care systems to agree the best arrangement for delivery of these clinics, including how children and young people will be assessed. This will allow for pooling of the funding where joint clinics across health care systems would be deemed appropriate.<sup>42</sup></li> </ul>

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	<p>a positive SARS-CoV-2 serology;</p> <ul style="list-style-type: none"> <li>○ Evidence of internal and external communications plans for local clinical and patient community; and</li> <li>○ Services are to have a data lead who liaises with the regional data lead.</li> </ul>	<p>voluntary services, secondary care services, mental health services.</p> <ul style="list-style-type: none"> <li>○ Have access to a multidisciplinary team of professionals to account for the multi-system nature of post-COVID syndrome;</li> <li>○ Have access to diagnostic tests as recommended by NICE/SIGN/RCGP;<sup>40</sup></li> <li>○ Support collaboration across localities where patients' needs require this;</li> <li>○ Have access to direct referrals to specialist services in the community and secondary care, multidisciplinary rehabilitation services and specialist mental health services; and</li> <li>○ Have a named lead to provide data in line with national requirements.</li> </ul>	<ul style="list-style-type: none"> <li>○ <u>Psychologists</u> can provide assessment of cognition, mental health, provide support for patients managing persistent symptoms and can also provide access into services such as IAPT, wider health, social care and third sector provision and pain, fatigue and neuro-rehab services;</li> <li>○ <u>Specialist nursing</u> functions and roles (e.g., district nursing, community nursing, psychiatric nursing, clinical nurse specialists and general practice nurses) can support holistic assessment and treatment of both the patient and wider family needs while also supporting the coordination of services more widely where appropriate; and</li> <li>○ <u>Dietitians</u> who can support people living with post-COVID syndrome in a range of ways, including advice on the impact of COVID-19 on nutritional status and provision of support to address malnutrition because of loss of appetite, breathlessness, swallowing difficulties or other long COVID symptoms.<sup>41</sup></li> </ul>	

Facility Name, Jurisdiction	Governance Structures	Program Delivery	Staffing Models	Funding Models
<p><b>Italy (Milan)</b></p> <ul style="list-style-type: none"> <li>• <a href="#">Outpatient COVID-19 Follow-up Clinic</a>, San Raffaele University Hospital</li> </ul>	<ul style="list-style-type: none"> <li>• <b>Governance:</b> No information identified.</li> <li>• <b>Program:</b> The COVID-19 Follow-up Program is part of the COVIDBioB study, a large observational investigation performed at San Raffaele University Hospital, a tertiary health-care hospital in Milan, Italy.</li> </ul>	<ul style="list-style-type: none"> <li>• <b>Program delivery:</b> All hospitalized patients are offered the opportunity to participate in the follow-up program.</li> <li>• For patients managed at home after discharge from the Emergency Department, telephonic consultation by a trained physician identifies patients for whom the follow-up visit is recommended.</li> <li>• Outpatient visits are scheduled at four weeks, three months, and six months after hospital discharge.</li> </ul>	<ul style="list-style-type: none"> <li>• <b>Staffing:</b> The Outpatient COVID-19 Follow-up Clinic's team is multidisciplinary, comprising: <ul style="list-style-type: none"> <li>○ Internists;</li> <li>○ Neurologists;</li> <li>○ Psychiatrists;</li> <li>○ Cardiologists;</li> <li>○ Nutritionists; and</li> <li>○ Nephrologists.</li> </ul> </li> <li>• No additional information identified.</li> </ul>	<ul style="list-style-type: none"> <li>• No information identified.<sup>43</sup></li> </ul>

## REFERENCES

- <sup>1</sup> Ladds, E., et al. (December 2000). [Persistent symptoms after COVID-19: Qualitative study of 114 “long COVID” patients and draft quality principles for services](#). *BMC Health Research Services*, 20.
- <sup>2</sup> Edwards, E. (March 1, 2021). [Inside 'post-COVID' clinics: How specialized centers are trying to treat long-haulers](#). NBC News.
- <sup>3</sup> Carbajal, E. (April 2, 2021). [30 hospitals, health systems that have launched post-COVID-19 clinics](#). Becker's Hospital Review.
- <sup>4</sup> National Health Service. (December 18, 2020). [Long COVID patients to get help at more than 60 clinics](#). National Health Service.
- <sup>5</sup> Rovere-Querini, P., et al. (2020). [Post-COVID-19 follow-up clinic: Depicting chronicity of a new disease](#). *Acta Biomed*, 91 (9), 22-28.
- <sup>6</sup> Edwards, E. (March 1, 2021). [Inside 'post-COVID' clinics: How specialized centers are trying to treat long-haulers](#). NBC News.
- <sup>7</sup> Carbajal, E. (April 2, 2021). [30 hospitals, health systems that have launched post-COVID-19 clinics](#). Becker's Hospital Review.
- <sup>8</sup> National Health Service. (December 18, 2020). [Long COVID patients to get help at more than 60 clinics](#). National Health Service.
- <sup>9</sup> National Health Service. (April 26, 2021). [National Guidance for post-COVID syndrome assessment clinics](#). National Health Service.
- <sup>10</sup> Rovere-Querini, P., et al. (2020). [Post-COVID-19 follow-up clinic: Depicting chronicity of a new disease](#). *Acta Biomed*, 91 (9), 22-28.
- <sup>11</sup> National Institute for Health and Care Excellence. (December 18, 2020). [COVID-19 rapid guideline: Managing the long-term effects of COVID-19](#). NICE guideline [NG188].
- <sup>12</sup> Salomon, L. (February 2021). [The increasing need for post COVID-19 clinics](#). ContagionLive.
- <sup>13</sup> Venkatsean, P. (2021). [NICE guideline on long COVID](#). *The Lancet*, 9 (2), 129.
- <sup>14</sup> National Institute for Health and Care Excellence. (December 18, 2020). [COVID-19 rapid guideline: Managing the long-term effects of COVID-19](#). NICE guideline [NG188].
- <sup>15</sup> Salomon, L. (February 2021). [The increasing need for post COVID-19 clinics](#). ContagionLive.
- <sup>16</sup> Lifemark Health Group (n.d.). [Post COVID-19 Rehabilitation and Recovery Program](#). Lifemark Health Group.
- <sup>17</sup> Lifemark Health Group (October 5, 2021). [Introducing the post COVID-19 rehabilitation and recovery program](#). Lifemark Health Group.
- <sup>18</sup> Bains, C. (January 31, 2021). [COVID-19 clinics for 'long haulers' aim to treat patients stuck in limbo](#). CTV News.
- <sup>19</sup> Marketplace. (January 22, 2021). [COVID-19 long-haulers: Canada's forgotten patients](#). CBC News.
- <sup>20</sup> Survivor Corps. (N.D.) [Post-COVID Care Centres](#). Survivor Corps.
- <sup>21</sup> Provincial Health Services Authority. (n.d.). [Post COVID-19 Recovery Clinics](#). Provincial Health Services Authority.
- <sup>22</sup> Survivor Corps. (N.D.) [Post-COVID Care Centres](#). Survivor Corps.
- <sup>23</sup> Bains, C. (January 31, 2021). [COVID-19 clinics for 'long haulers' aim to treat patients stuck in limbo](#). CTV News.
- <sup>24</sup> Marketplace. (January 22, 2021). [COVID-19 long-haulers: Canada's forgotten patients](#). CBC News.
- <sup>25</sup> Survivor Corps. (N.D.) [Post-COVID Care Centres](#). Survivor Corps.
- <sup>26</sup> Provincial Health Services Authority. (n.d.). [Post COVID-19 Recovery Clinics](#). Provincial Health Services Authority.

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- 27 University Health Network. (February 16, 2021). ['I'd rather be back in the acute stage of COVID, than live this way'](#). University Health Network.
- 28 Marketplace. (January 22, 2021). [COVID-19 long-haulers: Canada's forgotten patients](#). CBC News.
- 29 Lifemark Health Group (n.d.). [Post COVID-19 Rehabilitation and Recovery Program](#). Lifemark Health Group.
- 30 Lifemark Health Group (October 5, 2021). [Introducing the post COVID-19 rehabilitation and recovery program](#). Lifemark Health Group.
- 31 Bains, C. (January 31, 2021). [COVID-19 clinics for 'long haulers' aim to treat patients stuck in limbo](#). CTV News.
- 32 Marketplace. (January 22, 2021). [COVID-19 long-haulers: Canada's forgotten patients](#). CBC News.
- 33 Survivor Corps. (N.D.) [Post-COVID Care Centres](#). Survivor Corps.
- 34 Provincial Health Services Authority. (n.d.). [Post COVID-19 Recovery Clinics](#). Provincial Health Services Authority.
- 35 University Health Network. (February 16, 2021). ['I'd rather be back in the acute stage of COVID, than live this way'](#). University Health Network.
- 36 Marketplace. (January 22, 2021). [COVID-19 long-haulers: Canada's forgotten patients](#). CBC News.
- 37 Survivor Corps. (N.D.) [Post-COVID Care Centres](#). Survivor Corps.
- 38 National Health Service. (December 18, 2020). [Long COVID patients to get help at more than 60 clinics](#). National Health Service.
- 39 National Institute for Health and Care Excellence. (December 18, 2020). [COVID-19 rapid guideline: Managing the long-term effects of COVID-19](#). NICE guideline [NG188].
- 40 National Institute for Health and Care Excellence. (December 18, 2020). [COVID-19 rapid guideline: Managing the long-term effects of COVID-19](#). NICE guideline [NG188].
- 41 National Institute for Health and Care Excellence. (December 18, 2020). [COVID-19 rapid guideline: Managing the long-term effects of COVID-19](#). NICE guideline [NG188].
- 42 National Health Service. (April 26, 2021). [National Guidance for post-COVID syndrome assessment clinics](#). National Health Service.
- 43 Rovere-Querini, P., et al. (2020). [Post-COVID-19 follow-up clinic: Depicting chronicity of a new disease](#). *Acta Biomed*, 91 (9), 22-28.