



jurisdictional snapshot

**COMMUNITY-BASED RAPID ACCESS CLINICS FOR
PATIENTS WITH COPD: A JURISDICTIONAL SCAN**

December 2020 | Christie Warren

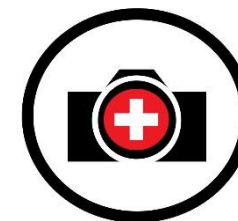
*A scan of health policies and practices implemented outside
Newfoundland and Labrador*

RAPID ACCESS CLINICS FOR PATIENTS WITH COPD

Newfoundland & Labrador Centre for
**APPLIED
HEALTH
RESEARCH**
www.nlcahr.mun.ca

Table of Contents

1. About Snapshot Reports	3
2. Executive Summary	4
3. Background & Research Objective	5
4. Focus and Scope of this report	6
5. Summary of Key Findings	8
6. Summary Tables	13
Summary Tables – Canada	14
Summary Tables – United Kingdom	20
Summary Tables – Australia	23
7. Appendices	25
8. References	52



To support our Health System Partners, CHRSP has produced this Snapshot Report of health care practices, processes, and protocols inside and outside of Canada. This report is designed to inform decision-makers about the healthcare landscape across jurisdictions, particularly with respect to practice variation and policy initiatives. It will also help guide topic selection for other CHRSP products, such as our Evidence in Context Reports and Rapid Evidence Reports.

1. About *Snapshot Reports*

In 2016, the Newfoundland and Labrador Centre for Applied Health Research (NLCAHR), under its Contextualized Health Research Synthesis Program (CHRSP), introduced *Snapshot Reports* to provide rapid decision support for stakeholders in the Newfoundland and Labrador healthcare system.

Snapshot Reports provide a brief scan of health policies, practices, or models, and a summary of established or emerging interventions from jurisdictions outside of Newfoundland and Labrador (NL) on the issue in question. These reports were created to meet health system demand for timely information about practices/programs/policies that might potentially be adapted for use in Newfoundland and Labrador. Each *Snapshot Report* is conducted in response to a specific request from CHRSP's health system stakeholders for information on a topic identified as being of priority interest. The results of a given *Snapshot Report* may provide stakeholders with all of information they require; the reports may also be a catalyst for more in-depth study on the issue, possibly in the form of a CHRSP *Evidence in Context Report* or *Rapid Evidence Report*.

Snapshot Reports are not a comprehensive or exhaustive evaluation of the practice or policy under study; rather, they offer a brief overview that includes:

- an executive summary;
- an overview of the research objective with a clear description of the policy or practice under consideration;
- the focus and scope of the report;
- a summary of key descriptive findings;
- tables listing the practices/policies/models identified in other jurisdictions, with web links to each where available; and
- appendices containing more detailed information.

Given the limitations of this approach, decision makers should not construe this *Snapshot Report* as a recommendation for or against the use of any particular healthcare intervention or policy.

2. Executive Summary

Topic: Upon a request from senior health system partners in Newfoundland and Labrador, members of the CHRSP research team carried out a jurisdictional scan of Canadian provinces and selected international jurisdictions to examine how other regions manage the care of individuals with Chronic Obstructive Pulmonary Disease (COPD)¹ who are experiencing an exacerbation of their illness.² The information gathered for this *Snapshot Report* can help inform decisions on the implementation of a community-based rapid access clinic in Eastern Health for patients with COPD.

Study approach: For this study, we searched research databases and other websites to identify programs that incorporate the emergency management of patients with COPD within their models of care. We searched for programs in national and international jurisdictions with healthcare systems that are comparable to that of Newfoundland and Labrador.

Key findings: Our jurisdictional scan uncovered eleven programs/clinics/services (hereinafter called “programs”) of interest. Some noteworthy features of these programs include:

- **A variety of program components:** The programs included in this report provide care for patients at various points along the continuum of care. Importantly, all included programs incorporate treatment for patients who are experiencing an exacerbation of their condition. The majority of the included programs also target the early stage of a patient’s respiratory illness by providing a patient assessment and/or diagnosis upon arrival. After their initial visit, patients are typically monitored and supported; however, the frequency and type of monitoring and support varies from program to program. The programs also provide patient education and self-management plans that help patients gain a better understanding of their condition and manage their illness independently. To support the management of patient conditions, a few programs also provide a care team that includes a variety of healthcare professionals who work together on a treatment plan. In addition, most programs offer access to extra services that can help to improve a patient’s overall health, such as exercise laboratories or health coaching.
- **A variety of service users:** The majority of included programs treat patients with a variety of respiratory issues and/or chronic conditions, including, but not limited to COPD. However, three programs are exclusively for people with COPD.

¹ COPD refers to a group of diseases that cause airflow blockage and breathing-related problems. COPD symptoms include: frequent coughing or wheezing, excess phlegm, mucus, or sputum production, shortness of breath, and trouble taking a deep breath (3).

² An exacerbation of COPD is a worsening of a person’s usual symptoms of COPD. Exacerbations cause some people to become extremely ill with recovery taking a month or longer (4).

- **A variety of service providers:** Service providers in the reported programs include general practitioners, nurses, and healthcare workers specializing in respiratory illnesses. Other service providers in some programs include physiotherapists, care coordinators, pharmacists, dietitians, community healthcare providers, and social workers.
- **Ease of referral:** Typically, patients can be referred to programs by any clinician and from any point of health service provision, including from an emergency department, an urgent care clinic, or an ambulatory medical unit.
- **Stated goals/outcomes:** The most common program goals are: to improve a patient's quality of life and functionality, and to decrease the frequency of general practitioner visits, emergency department visits, and hospitalizations. Only four programs included information about outcomes, reporting improvements in both outcomes for patients and outcomes for the healthcare system.

3. Background & Research Objective

In 2018-2019, chronic obstructive pulmonary disease (COPD) and bronchitis accounted for 3.6% of all inpatient hospitalizations in Newfoundland and Labrador and ranked third on a list of diagnoses responsible for inpatient hospitalizations (1). National statistics show that the incidence and prevalence of diagnosed COPD in Canada increases with age (2). Thus, we can expect the burden of COPD on the NL healthcare system to increase as the province's population ages. This report will support decision making on the possible implementation of a community-based rapid access COPD clinic for patients in the Eastern Health region. Decision makers are considering such a clinic's potential to decrease the burden of COPD for diagnosed patients and to lower costs associated with treating the disease. In particular, decision makers expressed their interest in programs that treat patients with COPD who are experiencing exacerbations of their disease.

The main research objective of this *Snapshot Report* is to find out how other jurisdictions integrate community-based rapid access clinics into their existing models of care. Specifically, the report aims to show how these clinics might improve performance status and quality of life for patients diagnosed with COPD and whether such clinics decrease hospitalizations and Emergency Room visits.

4. Focus & Scope of this report

The focus of this report was to identify community-based clinics in other jurisdictions that provide care to patients with COPD. Specifically, we wanted to identify those clinics that incorporate treatment for patients who are experiencing an exacerbation of their disease. The report provides an overview of relevant programs/clinics in jurisdictions with healthcare systems that are comparable to that of Newfoundland and Labrador.

Search parameters

Table 1 outlines the parameters of our search. All parameters were refined in consultation with a health system partner at Eastern Health.

Table 1: Overview of search parameters, inclusion criteria, and exclusion criteria

Parameter	Inclusion criteria	Exclusion criteria
Population	<ul style="list-style-type: none"> Patients who have COPD 	<ul style="list-style-type: none"> Patients who do not have COPD
Areas of focus	<ul style="list-style-type: none"> Programs that treat chronic diseases (including COPD) or that treat only COPD Programs that treat patients with COPD who are experiencing exacerbations 	<ul style="list-style-type: none"> Programs that treat other conditions but not COPD Programs that do not treat exacerbations
Program setting	<ul style="list-style-type: none"> Community-based clinics Outpatient care 	<ul style="list-style-type: none"> Acute/inpatient care
Jurisdictions	<ul style="list-style-type: none"> Jurisdictions that have healthcare systems that are similar to that of NL, including: <ul style="list-style-type: none"> Canadian provinces and territories Australia, United Kingdom, and New Zealand 	<ul style="list-style-type: none"> Jurisdictions whose healthcare systems are substantially different from that of NL.
Timeframe	<ul style="list-style-type: none"> Programs that started operations within the past ten years and, preferably, are still active. 	<ul style="list-style-type: none"> None

Search strategy

We began with a literature search using PubMed, Google Scholar, PsychInfo, and Cochrane databases. We combined search terms (e.g., “COPD,” “rapid access clinics,” “community-based clinics,” “exacerbation management,” “chronic disease management”) with one another and with the jurisdictions of interest. Unfortunately, we could not find any relevant published literature using these search terms. We also searched publicly available websites using search terms similar to those listed above. These terms were combined with each jurisdiction of interest. To learn more about some programs, we also contacted program representatives by email. We conducted a more general Canada-wide search that focused on jurisdictions with similar healthcare systems to that of NL. Ultimately, our searches identified eleven programs: six in Canada, three in the United Kingdom, and two in Australia. Key features of these programs are outlined in the following pages. Appendix A of this report includes detailed data and contact information about each of the eleven programs.

Parameters of interest in this report include:

- program jurisdiction,
- hospital/organization,
- date of implementation,
- program description,
- program components,
- service users,
- service providers,
- referral method,
- hours of operation,
- goals/outcomes,
- program contacts, and
- any related links or references.

5. Summary of Key Findings

PROGRAMS INCLUDED IN THIS REPORT

Chronic Obstructive Pulmonary Disease Integration Care Path,
Erie St. Clair Local Health Integration Network, Ontario

Community Internal Medicine Rapid Access Clinic
(C-IMRAC), St. Joseph's Healthcare, Ontario

Chronic Obstructive Pulmonary Disease (COPD) Clinic,
Cambridge Memorial Hospital, Ontario

Montreal Chest Institute, McGill University Health Centre,
Montreal, Quebec

Respiratory Health Clinics throughout New Brunswick

Division of Respirology: tertiary care in Nova Scotia; consultative
services in New Brunswick & Prince Edward Island

COPD Respiratory HOT Clinic, National Health Service, UK

Respiratory Action Network for the Benefit of Wolverhampton
(RAINBOW), Wolverhampton, UK

Croydon Respiratory Team Services, Croydon, UK

Western Sydney Integrated Care Program (WSICP), Sydney, AUS

Integrated Respiratory Access Project, Queensland, AUS

In general, we found that rapid access clinics for patients with COPD are not widely implemented worldwide. However, we did locate eleven programs: six in Canada, three in the United Kingdom, and two in Australia that serve patients with COPD who experience exacerbations of their disease. Although some of these programs are no longer operational, we have included them in this report in case information about their care approaches might be useful to decision makers who are assessing options for use here in Newfoundland and Labrador. In summarizing the findings, several common features emerged, including program components, service users, service providers, referral methods, and program goals and outcomes. Highlighted below are the key features of the eleven programs included in this report. (See Sidebar)

Program components

The COPD programs included in this report treat patients at various points along the continuum of care. Some or all of the programs include exacerbation management, assessment and/or diagnosis, facilitating access to services, ongoing monitoring/support, COPD education/planning, and the availability of multidisciplinary teams to manage patient care.

- **Exacerbation management:** All eleven programs incorporate treatment for patients who are experiencing an exacerbation of their COPD. Eight of the eleven programs treat patients who are experiencing an exacerbation but who are not sufficiently ill either to visit the emergency department or to be admitted to hospital—the programs aim to help patients access expedited care in order to avoid acute-care visits. The remaining three programs also support patients if their symptoms worsen but specific details were lacking on their inclusion criteria. Two programs include care teams who respond rapidly when patients

experience exacerbations: rapid response teams at the COPD Integration Care Path/Model in Ontario intervene quickly with high-risk patients; in Australia, specialist teams at the Western Sydney Integrated Care Program (WSCIP) provide rapid access to care and stabilization services.

- ***Assessment and/or diagnosis:*** Nine programs assess and/or diagnose COPD and other respiratory conditions and specify that they use one or more of the following methods:
 - reviewing the patient's medical history,
 - measuring disease severity,
 - measuring functional status,
 - measuring ability to self-manage COPD, and
 - conducting medical tests, such as spirometry tests, blood tests, and chest x-rays.

In the UK, the Respiratory Action Network for the Benefit of Wolverhampton (RAINBOW) group and the Croydon Respiratory Team perform patient assessments for COPD and other respiratory conditions. In Quebec, the Montreal Chest Institute does the same. However, none of these programs reports details about how they conduct these assessments.

- ***Ongoing monitoring and support:*** Seven programs monitor and support patients after the initial visit. The frequency and type of monitoring vary from program to program. Three programs monitor patients regularly: the COPD Integration Care Path/Model in Ontario and the Croydon Respiratory Team in the UK provide ongoing reviews of a patient's progress. A care team within the WSICP in Australia regularly reviews and monitors patients to ensure compliance with their care plans. Two other programs, the Integrated Respiratory Access Project in Queensland and the COPD Clinic in Cambridge, Ontario, monitor patients after discharge, but only if necessary. The Croydon Respiratory Team Services and the Integrated Respiratory Access Project in Queensland also provide home visits for housebound patients. Finally, the Respiratory Health Clinics in New Brunswick provide follow-up telephone calls after visits to the emergency department and/or after hospital stays resulting from breathing problems.
- ***Education and planning:*** Eight programs provide patients with education and/or plans to help manage their illness. The majority of these programs provide patients with education and/or resources that help to inform them about their chronic disease. In addition to providing patients with education, the Montreal Chest Institute and the New Brunswick Respiratory Health Clinics help patients manage their illness by teaching them about healthy lifestyle behaviours and techniques to cope with their symptoms. For example, New Brunswick's clinics teach patients how to use inhalers, to clear their lungs, to improve their breathing, and to quit smoking. Additionally, six programs provide individualized self-management plans for patients to follow at home.

- *Care teams:* Six programs involve care teams; however, the professionals and their roles on these teams differ from program to program. The most common care team members are nurses, physiotherapists, care coordinators/facilitators, and healthcare workers that specialize in respiratory conditions. Other professionals also mentioned include occupational therapists, social workers, dietitians, general internists, medical residents, medical students, healthcare assistants, administrators, physicians, and community-based healthcare providers.

Some of the program descriptions include information about how patients are assigned to a care team and how these teams provide support. For example, Ontario's COPD Integration Care Path/Model and the Western Sydney Integrated Care Program (WSICP) both provide care teams to selected patients only. While the Ontario program indicates that it prioritizes patients with higher disease impact, the Western Sydney program did not specify the criteria that determine assignment to a care team. The Community COPD team at the COPD Respiratory HOT Clinic in the UK provides ongoing team support to patients in their homes. Finally, the RAINBOW group in the UK conducts chronic respiratory multidisciplinary team meetings every two weeks to review the care and status of patients with chronic respiratory conditions; however, the composition of this team was not specified.

- *Access to extra services:* Six programs provide, or direct patients to, extra services that help to manage or treat their disease; however, these services may vary. The Ontario COPD Integration Care Path/Model and the New Brunswick Respiratory Health Clinics enable access to interventions, programs, or health professionals if required; however, details about these extra services were not provided. The Montreal Chest Institute and the Croydon Respiratory Team Services promote exercise programs. For example, the Montreal Chest Institute holds exercise laboratories for patients and the Croydon Respiratory Team offers individualized exercise programs that have an educational component. The Division of Respiriology in Nova Scotia has several services for patients, including a Pulmonary Rehabilitation Program and a Pulmonary Function Laboratory. The WSICP provides referrals to health coaching, self-management strategies, community services, and other specialist services.

Service users

Three programs specifically target patients with COPD. The majority of programs, however, target patients with any respiratory issue and/or chronic condition, including COPD, asthma, emphysema, lung disease, congestive cardiac failure, coronary artery disease, tuberculosis, diabetes, pulmonary fibrosis, chronic bronchitis, bronchiectasis, and pneumonia.

In addition to serving patients with respiratory issues and chronic conditions, the Croydon Respiratory Team and Queensland's Integrated Respiratory Access Project treat patients who have a prescription for oxygen. Similarly, the Division of Respiriology in Nova Scotia, the Montreal Chest Institute, and Queensland's Integrated Respiratory Access Project offer additional services for patients with sleep disorders. The Community Internal Medicine

Rapid Access Clinic (C-IMRAC) in Ontario treats patients with acute or urgent problems and patients with a history of frequent hospital admissions, emergency department visits and hospitalizations.

Service providers

The majority of the included programs incorporate general practitioners/family physicians among their service providers. Nine programs include service providers with special training in respiratory illnesses (i.e. respiratory therapists, respiratory educators, respirologists, respiratory consultants, respiratory nurses, and respiratory practitioners/physicians). Six programs include registered nurses on staff. Some programs include physiotherapists, dieticians, medical students/residents, social workers, pharmacists, community healthcare providers, and care coordinators/facilitators. C-IMRAC in Ontario includes a general internist as one of its service providers, while the Montreal Chest Institute retains a thoracic surgeon on staff.

Referral methods

In eight of the programs, patients can be referred by any clinician and at any point of service within the health care system, including being referred from the emergency department, from an urgent care clinic, or by an ambulatory medical unit. For urgent cases, the COPD Care Path/Model and C-IMRAC make referrals directly within their clinics. The COPD Respiratory HOT Clinic and the Croydon Respiratory Team allow patients who have been previously enrolled to book their appointments directly. The Respiratory Health Clinics do not require any referral. Information about the referral methods for the Montreal Chest Institute and the Integrated Respiratory Access Project in Queensland was not available.

Goals and reported outcomes

The most common goals identified in the program descriptions were: to improve patient's quality of life and functionality, to decrease the number of visits to the family doctor and to the emergency department, and to decrease hospitalizations. Additional goals included improving a patient's clinical outcomes/symptoms, providing more coordinated care, improving a patients' knowledge of their conditions, and reducing healthcare costs. One of the goals of the UK's COPD Respiratory HOT clinic is to shift the location of care from the hospital to the patient's home. The RAINBOW group in the UK includes two goals not mentioned in other programs— ensuring timely and accurate diagnosis of COPD and improving the patient's end-of-life experience.

When measuring outcomes, three programs: the Respiratory Health Clinics, the RAINBOW group, and the WSICP, reported that their patients' average length of stay in the hospital decreased. One program, Queensland's Integrated Respiratory Access project reported that their patients' average length of stay increased slightly. Three programs, the RAINBOW group, the WSICP, and the Queensland's Integrated Respiratory Access project, reported reductions in the number of hospital admission/readmission rates. Three programs, the RAINBOW group, the WSICP, and the Integrated Respiratory Access project, reported increases in uptake of their programs. Two programs measured patient quality of life before and after their implementation. One program, the Respiratory Health Clinics, reported an increase in quality of life, whereas the other program, the Integrated

Respiratory Access project, reported that patient's quality of life remained stable. Two programs, the WSICP and the Integrated Respiratory Access project, measured the level of satisfaction with the program. Patients and providers of the WSICP gave positive feedback, while patients involved in the Integrated Respiratory Access project reported no change in their satisfaction with their care. Other outcomes mentioned by single programs included decreased visits to the emergency department, improved coordination of care, and reduced wait times for patients.

6. Summary Tables

The following tables provide a summary of the eleven COPD programs included in this jurisdictional scan:

- Tables 2-7 summarize Canadian COPD programs;
- Tables 8-10 summarize COPD programs from the United Kingdom; and
- Tables 11-12 summarize COPD programs from Australia.

Appendix A provides more detailed program descriptions and information about the date of implementation, hours of operation, key contacts, and relevant references.

Information captured in the summary tables:

- the program name and jurisdiction;
- an overview of the program;
- a list of included program components;
- the service users and service providers;
- the method of referral to access the program; and
- a summary of the goals/outcomes of the program.

Summary Tables – Canada

- Table 2: Chronic Obstructive Pulmonary Disease Integration Care Path/Model, Ontario - p.13
- Table 3: Community Internal Medicine Rapid Access Clinic (C-IMRAC), Ontario - p.14
- Table 4: Chronic Obstructive Pulmonary Disease (COPD) Clinic, Ontario - p.15
- Table 5: Montreal Chest Institute (MCI), Montreal - p.16
- Table 6: Respiratory Health Clinics, New Brunswick – p.17
- Table 7: Division of Respiriology, Nova Scotia, New Brunswick, and Prince Edward Island - p.18

Summary Tables – United Kingdom

- Table 8: COPD Respiratory HOT Clinic – p.19
- Table 9: Respiratory Action Network for the Benefit of Wolverhampton (RAINBOW) group – p.20
- Table 10: Croydon Respiratory Team Services – p.21

Summary Tables – Australia

- Table 11: Western Sydney Integrated Care Program – p.22
- Table 12: Integrated Respiratory Access Project - p.23



Table 2: Chronic Obstructive Pulmonary Disease Integration Care Path/Model (Ontario) | See Page 25 for details

Chronic Obstructive Pulmonary Disease Integration Care path/Model, Erie St. Clair Local Health Integration Network, Ontario				
<ul style="list-style-type: none"> • The COPD Integration Care Model represents a healthcare pathway for patients with COPD across the spectrum of disease severity. • The components of this model include an “Assessment, Triage, and Stabilization” phase, in which patients receive assessment, diagnosis, and resources; a “Maintenance and Primary Care” phase, in which ongoing monitoring of patient’s condition occurs; and a “Relapse” phase, in which patients receive urgent care when required. • Rapid Response Teams are incorporated into this model and intervene quickly, as needed, with high-risk patients. • A Community Care Access Centre (CACC) acts as the main point of entry and referral agency for patients at any point along the continuum of care. 				
Program Components	Service Users	Service Providers	Referral Method	Goals/Outcomes
<ul style="list-style-type: none"> • assessment and/or diagnosis • access to services • ongoing monitoring/support • education/planning • care team • exacerbation management 	<ul style="list-style-type: none"> • patients with COPD and their families 	<ul style="list-style-type: none"> • general practitioner • patients with high disease burden have the following professionals on their care team: a community health nurse, community- or acute care-based allied health professionals, a respiratory therapist, a registered nurse, a certified respiratory educator, and a registered dietitian • patients with severe COPD are provided with a care coordinator 	<ul style="list-style-type: none"> • Any clinician in acute or primary care can refer patients. • The CACC assesses the need for a rapid response and deploy or make referrals for this level of intervention. 	<ul style="list-style-type: none"> • improved clinical outcomes (e.g. stable oximetry and blood pressure, efficacious medications, acceptable spirometry values, improved quality of life, etc.) • reduced cost through decreased admissions, emergency department visits, etc. • improved functional outcomes because of increased confidence in disease management and better preparedness • increased patient satisfaction



Table 3: Community Internal Medicine Rapid Access Clinic (Ontario) | See Page 29 for details

<u>Community Internal Medicine Rapid Access Clinic (C-IMRAC), St. Joseph’s Healthcare, Ontario</u>				
<ul style="list-style-type: none"> • C-IMRAC offers family physicians rapid telephone access to general internists. • Family physicians can call a general internist to receive advice about patients with complicated medical issues. • This process allows primary care providers to receive advice quickly and helps patients avoid unnecessary emergency department visits. • C-IMRAC is also designed to provide urgent, on-site assessment. 				
Program Components	Service Users	Service Providers	Referral Method	Goals/Outcomes
<ul style="list-style-type: none"> • exacerbation management • care team 	<ul style="list-style-type: none"> • family physicians • patients with acute/urgent problems • patients with a history of repeat hospital admissions, frequent emergency department visits, and frequent hospitalizations 	<ul style="list-style-type: none"> • a General Internist • medical residents and students • a Nurse Practitioner • a social worker • a pharmacist • clerical support 	<ul style="list-style-type: none"> • Family physicians can call to book an appointment for a telephone conversation. • Referrals for patients with acute/urgent problems that need assessment within 72 hours can be made directly with C-IMRAC. 	<ul style="list-style-type: none"> • to provide coordinated care • to prevent unnecessary emergency department visits



Table 4: Chronic Obstructive Pulmonary Disease Clinic (Ontario) | See Page 30 for details

<u>Chronic Obstructive Pulmonary Disease (COPD) Clinic, Cambridge Memorial Hospital, Ontario</u>				
<ul style="list-style-type: none"> • The COPD Clinic is an outpatient clinic. • The focus of the clinic is to develop individualized management plans for patients with COPD. • A Respiriologist works with each patient to develop medication and management programs, which are focused on exacerbation management. • The clinic does the following: conducts assessments, provides education, performs ongoing monitoring, manages exacerbations, reviews referrals, and sends notes to patient’s primary care providers after each visit. 				
Program Components	Service Users	Service Providers	Referral Method	Goals/Outcomes
<ul style="list-style-type: none"> • education/planning • assessment &/or diagnosis • ongoing monitoring/support • exacerbation management 	<ul style="list-style-type: none"> • patients with COPD and their caregivers 	<ul style="list-style-type: none"> • respirologists • a primary care provider • a nurse practitioner 	<ul style="list-style-type: none"> • A referral from the patient’s physicians is required to access the COPD Clinic. • Patients can also receive referrals from respirologists, family physicians and nurse practitioners, and at the emergency department or urgent care clinics. 	<ul style="list-style-type: none"> • to help patients increase their level of functioning and quality of life by reducing their symptoms and decreasing hospitalizations



Table 5: Montreal Chest Institute Foundation (Montreal) | See Page 31 for details

Montreal Chest Institute (MCI), McGill University Health Centre, Montreal				
<ul style="list-style-type: none"> • The MCI is a centre of clinical, research, and teaching expertise in respiratory diseases. • The MCI has several components, some of which include: specialized respiratory clinics, a Respiratory Inpatient Unit, a Rapid Access clinic, a pulmonary function laboratory, a Respiratory Day Hospital, and a Physiotherapist Centre. 				
Program Components	Service Users	Service Providers	Referral Method	Goals/Outcomes
<ul style="list-style-type: none"> • exacerbation management • assessment &/or diagnosis • access to services • education/planning 	<ul style="list-style-type: none"> • The <u>specialized respiratory clinics</u> treat patients with COPD and other lung diseases. • The <u>Rapid Access Clinic</u> treats patients with respiratory problems who require urgent investigation • The <u>Pulmonary Function Laboratory</u> treats patients with lung diseases • The <u>Respiratory Day Hospital</u> specializes in the emergency management of patients with asthma, COPD, lung disease, and acutely ill respiratory patients • The <u>Physiotherapy Centre</u> treats patients with COPD 	<ul style="list-style-type: none"> • The Respiratory Inpatient Unit is staffed by respirologists, family physicians, residents, specialized nurses, respiratory therapists, physiotherapists, a dietitian, a social worker, and other multidisciplinary team members. • The Rapid Access Clinic is staffed by a respirologist, a thoracic surgeon, and a nurse. 	<ul style="list-style-type: none"> • not found 	<ul style="list-style-type: none"> • to help patients improve their breathing • to help patients achieve the highest possible quality of life



Table 6: Respiratory Health Clinics (New Brunswick) | See Page 33 for details

Respiratory Health Clinics, Vitalite Health Network, New Brunswick				
<ul style="list-style-type: none"> • Respiratory Health Clinics are located in a variety of locations throughout New Brunswick. • Respiratory Health Clinics help patients who have trouble breathing, and patients who have chronic lung conditions. • The clinics provide information about illnesses and methods to control the factors that make them worse. • The clinics: <ul style="list-style-type: none"> ○ educate patients about using inhalers, clearing the lungs, and breathing; ○ help patients create personalized action plans; ○ provide professional support for patients if their symptoms worsen; ○ deliver individual and group programs; ○ provide methods to help patients quit smoking; ○ follow up with patients after they visit the emergency department; and ○ refer patients to other health professionals, as needed. 				
Program Components	Service Users	Service Providers	Referral Method	Goals/Outcomes
<ul style="list-style-type: none"> • education/planning • exacerbation management • access to services • ongoing monitoring/support 	<ul style="list-style-type: none"> • patients who have trouble breathing or have a chronic lung condition such as asthma, COPD, emphysema, chronic bronchitis, and pulmonary fibrosis 	<ul style="list-style-type: none"> • respiratory therapists 	<ul style="list-style-type: none"> • no referral needed • patients can call to book an appointment 	Outcomes reported: <ul style="list-style-type: none"> • improved quality of life • fewer visits to the emergency department • less time spent in the hospital



Table 7: Division of Respiriology, (Nova Scotia, New Brunswick, and Prince Edward Island) | See Page 35 for details

<u>Division of Respiriology, Dalhousie University, N.S., N.B., & P.E.I.</u>				
<ul style="list-style-type: none"> • The Division of Respiriology provides specialized tertiary care within the province of N.S., and provides consultative services for N.B. and P.E.I. • The program includes ambulatory and inpatient services, some of which include: <ul style="list-style-type: none"> ○ a Respiriology Clinic, ○ a Rapid Referral Clinic, ○ a Pulmonary Rehabilitation Program, and ○ inpatient consultations and emergency. • Division members devote time to undergraduate and postgraduate education and clinical research activities and also provide emergency on-call coverage for patients. • The program has implemented the INSPIRED COPD program. 				
Program Components	Service Users	Service Providers	Referral Method	Goals/Outcomes
<ul style="list-style-type: none"> • exacerbation management • access to services 	<ul style="list-style-type: none"> • patients that experience urgent, semi-urgent, or non-urgent respiratory issues 	<ul style="list-style-type: none"> • respirologists 	<ul style="list-style-type: none"> • For urgent cases, physicians fax referrals and/or phone the respirologists with patient’s recent spirometry results. • For semi- and non-urgent cases, physicians fax or mail referrals with patient’s recent chest x-rays, spirometry results, consultation reports, and bloodwork. 	<ul style="list-style-type: none"> • The primary goal of this division is to relieve patient’s symptoms, and improve patient’s quality of life.



Table 8: COPD Respiratory HOT Clinic (United Kingdom) | See Page 37 for details

<u>COPD Respiratory HOT Clinic, National Health Service, United Kingdom</u>				
<ul style="list-style-type: none"> • The COPD Respiratory HOT Clinic contains specialist COPD practitioners that treat patients who are experiencing exacerbations of COPD. • The COPD respiratory team, which are a part of the clinic, helps patients with COPD avoid hospital admissions, General Practitioners visits, and emergency department visits. • A respiratory specialist on staff sees patients that risk attending the Accident and emergency department, because their condition has suddenly worsened, on the same or next day. 				
Program Components	Service Users	Service Providers	Referral Method	Goals/Outcomes
<ul style="list-style-type: none"> • exacerbation management • care team • assessment and/or diagnosis • education/planning • ongoing monitoring/support 	<ul style="list-style-type: none"> • patients with a diagnosis of COPD • patients with COPD who have exacerbation symptoms that could lead to hospital admission 	<ul style="list-style-type: none"> • a respiratory consultant • a specialist services manager • a Band 8 respiratory physiotherapist/practitioner • a specialist respiratory physiotherapist • a community COPD team that consists of five respiratory nurse specialists and one specialist respiratory physiotherapist 	<ul style="list-style-type: none"> • General Practitioners, community matrons, other healthcare professionals, and staff within the hospital are encouraged to refer patients with an exacerbation of COPD and meet the referral criteria. • Patients can refer themselves to the clinic, if they have previously been selected to do so, and if they meet certain criteria. 	<ul style="list-style-type: none"> • to help patients with COPD exacerbations avoid General Practitioner and emergency department visits • to reduce avoidable hospital admissions • to provide specialist assessment and follow-up care at the patient’s home



Table 9: Respiratory Action Network for the Benefit of Wolverhampton group (United Kingdom) | See Page 39 for details

Respiratory Action Network for the Benefit of Wolverhampton (RAINBOW) group, The Royal Wolverhampton NHS Trust, United Kingdom				
<ul style="list-style-type: none"> • The RAINBOW group oversees the integration of community, acute trust, and palliative care services for patients with COPD. • Some of the services they offer include: <ul style="list-style-type: none"> ○ chronic respiratory multidisciplinary team meetings, which incorporate discussions about patients with chronic respiratory conditions; ○ respiratory HOT clinics that prevent admissions to the hospital and are a single point of access for patients with any respiratory problem; and ○ respiratory in-reach into the acute medical unit (AMU) that is equipped with a respiratory consultant. 				
Program Components	Service Users	Service Providers	Referral Method	Goals/Outcomes
<ul style="list-style-type: none"> • care team • exacerbation management • education/planning • assessment and/or diagnosis 	<ul style="list-style-type: none"> • patients with respiratory problems such as asthma, pneumonia, and COPD 	<ul style="list-style-type: none"> • The core RAINBOW members include: <ul style="list-style-type: none"> ○ a consultant respiratory physician, ○ a group manager, ○ a clinical commissioning group manager, ○ a lung function manager, ○ a home oxygen service lead, ○ a physiotherapist, ○ a pharmacy lead, ○ a nursing manager, and ○ a general practitioner that specializes in respiratory diseases. 	<ul style="list-style-type: none"> • referrals come from general practitioners, the emergency department, and the ambulatory medical unit 	<ul style="list-style-type: none"> • The goals are to ensure timely and accurate diagnosis of COPD, to integrate respiratory services, to improve the end-of-life experience and management of patients, and to improve communication across different healthcare sectors. • The outcomes include reduced length of stay for patients admitted with an exacerbation of COPD, increased average activity of the HOT clinics, and decreased hospital admissions for patients who visited the HOT clinic compared to those who had not visited the HOT clinic.



Table 10: Croydon Respiratory Team Services (United Kingdom) | See Page 41 for details

<u>Croydon Respiratory Team (CRT) Services, NHS Croydon Health Services, United Kingdom</u>				
<ul style="list-style-type: none"> • The CRT Services has four components: <ul style="list-style-type: none"> ○ the <u>CRT</u>, that consists of a multi-disciplinary team, which improves patient outcomes, and provides home visits for patients who are housebound; ○ the <u>Pulmonary Rehabilitation Program (PRP)</u>, which offers individualized exercises and education; ○ the <u>HOT clinic</u>, which is rapid access clinic that treats patients who are at risk of attending the Accident and emergency department; and ○ the <u>Home Oxygen Service and Review (HOSR)</u>, which provides assessments and reviews for long-term oxygen therapy and ambulatory oxygen. 				
Program Components	Service Users	Service Providers	Referral Method	Goals/Outcomes
<ul style="list-style-type: none"> • care team • ongoing monitoring/support • access to services • education/planning • exacerbation management • assessment &/or diagnosis 	<ul style="list-style-type: none"> • The CRT provides care to patients with COPD. • The PRP treats patients with limiting symptoms that are caused by chronic lung disease. • The HOT clinic treats patients with COPD that have symptoms that may require admission. • The HOSR treats patients with a prescription for oxygen (HOOF). 	<ul style="list-style-type: none"> • The CRT consists of a multidisciplinary team of Nurses, Physiotherapists, health care assistants, administrators, and doctors. • The PRP is run by a team of respiratory physiotherapists. • The HOT clinic staffs a specialist respiratory practitioner and a respiratory physician. • The HOSR is run by the CRT. 	<ul style="list-style-type: none"> • The referral form for the HOT clinic can be emailed with the patient’s telephone number, and a brief summary of medical history and recent medications. • Patients who are already under the care of the CRT can self-refer to the clinic. • To be referred to the HOSR, a referral form, with a brief summary, can be emailed to the clinic. 	<ul style="list-style-type: none"> • The goal of the CRT is to improve outcomes for patient with COPD. • The benefits that patients receive from the PRP include reduced breathlessness and hospital admissions; increased walking distance, control of symptoms, muscle strength and fitness levels; and improved knowledge of their condition. • The goal of the HOT clinic is to help COPD patients avoid hospital admission.



Table 11: Western Sydney Integrated Care Program (Australia) | See Page 44 for details

Western Sydney Integrated Care Program (WSICP), New South Wales Health Care System, Australia				
<ul style="list-style-type: none"> • The WSICP was designed to improve the care of patients with chronic conditions by assisting them, their families, and health care providers. • The program applied a proactive process of enrolled, planned, and monitored care, which was designed and delivered through a network of patients, carers and health professionals. • The program was based around the <u>Patient-Centered Medical Home (PCMH) model</u>, which emphasizes an ongoing relationship between patients and their General Practitioner. The General Practitioner leads a multidisciplinary practice team and the patient’s primary care • The goal of the program was to provide comprehensive, coordinated, and accessible care to patients. • Some key components that the WSICP included are as follows: <ul style="list-style-type: none"> ○ an <u>integrated care team</u>, which were assigned to selected patients, that monitored and managed patient’s care plans; ○ <u>care facilitators</u> that ensured patients had regular reviews, and provided referrals to health coaching, self-management strategies, and community and other specialist services; and ○ <u>Rapid Access and Stabilization Services (RASS)</u> that reduced waiting times for patients and either prevented or expedited hospital admissions. 				
Program Components	Service Users	Service Providers	Referral Method	Goals/Outcomes
<ul style="list-style-type: none"> • education/planning • exacerbation management • care team • ongoing monitoring/support • access to services 	<ul style="list-style-type: none"> • The WSICP was for Patients with one or more of the following long-term chronic conditions: congestive cardiac failure, coronary artery disease, COPD, and diabetes. 	<ul style="list-style-type: none"> • care facilitators (Registered Nurses) • General Practitioner • primary care team • specialist team • community health care providers 	<ul style="list-style-type: none"> • To receive an Integrated Care Team, patients were enrolled through primary care, community, or hospital specialist teams, depending on the point of first contact. Patients were then registered in a central database. 	<ul style="list-style-type: none"> • The goals of this program were to improve the management, health and experience of patients with chronic conditions, to reduce emergency department visits, hospital admissions and healthcare costs, to shorten the length of stay in the hospital, and to provide better support for health professionals. • The outcomes published in the midterm report include: general practitioner involvement; decreased hospital admissions and length of stay; positive feedback from patients and providers; and improved information sharing.



Table 12: Integrated Respiratory Access Project (Australia) | See Page 48 for details

<u>Integrated Respiratory Access Project, Queensland Government, Metro South Health, Australia</u>				
<ul style="list-style-type: none"> • This project sought to expand the existing integrated respiratory services model by increasing the number of clinics and transforming the way current services were provided. • The initiative included: <ul style="list-style-type: none"> ○ twice-weekly Rapid Access Clinics, which provided prompt assessment of patients who required urgent review; ○ an outpatient clinic, which attended to patients who waited longer than a year for an appointment; ○ expansion of post-discharge home visiting services; and ○ early intervention of a respiratory nurse and scientist for patients in the Medical Assessment and Planning Unit. 				
Program Components	Service Users	Service Providers	Referral Method	Goals/Outcomes
<ul style="list-style-type: none"> • exacerbation management • ongoing monitoring/support • assessment &/or diagnosis • education/planning 	<ul style="list-style-type: none"> • patients diagnosed with COPD, asthma, bronchiectasis, pulmonary fibrosis, lung cancer, pulmonary hypertension, or sleep disorders • patients who have been prescribed home oxygen 	<ul style="list-style-type: none"> • General Practitioners • a Respiratory Nurse • a scientist 	<ul style="list-style-type: none"> • not found 	<ul style="list-style-type: none"> • The goals of this project were to reduce emergency department visits, to alleviate General Practitioner and patient concern, to promote a better sense of health and independence for patients, and to inform patients of available resources. • The outcomes of this project were: decreased number of long-wait category 3 patients; reduced readmission rates for patients with COPD; increased average length of stay for patients with COPD; increased number of home service visits; and no improvement on patient’s satisfaction or quality of life.

Appendices

Appendix A: Data Extraction

This section contains more detailed information about the programs in the Summary Tables. Available website links and references are included. Most of the information was obtained from websites, reports, and published literature associated with the programs. Some details were obtained through email correspondence with program contacts.

Data Extraction – Canada

Program Name	Chronic Obstructive Pulmonary Disease Integration Care Path/Model for Chatham-Kent
Jurisdiction	<ul style="list-style-type: none"> • Ontario
Hospital/Organization	<ul style="list-style-type: none"> • Erie St. Clair Local Health Integration Network
Date Implemented	<ul style="list-style-type: none"> • This model was introduced in 2012; however, a new model is currently being developed.
Description	<ul style="list-style-type: none"> • The Chatham-Kent COPD Working Group was established to address the needs of COPD patients in the Erie St. Clair Region. The Working Group proposed an integrated care model/path for patients with COPD. • The model represents a healthcare pathway for COPD patients across the spectrum of disease severity. It contains two tiers, a ‘Relapse’ Phase, and Rapid Response Teams: <ul style="list-style-type: none"> ○ <u>Tier I - ‘Assessment, Triage and Stabilization Phase’:</u> <ul style="list-style-type: none"> ▪ This phase can last up to 21 days. ▪ The goals of this phase were to simplify access to care through one key service provider (the Community Care Access Centre (CCAC)); to enable access to appropriate interventions; and to complete detailed assessments of patient’s disease severity, complications, functional status, and ability to manage their condition. ▪ Newly diagnosed/discharged patients were provided with education, home support, and resources. ○ <u>Tier II - ‘Maintenance and Primary Care Phase’:</u> <ul style="list-style-type: none"> ▪ Patients spend most of their time within this phase. ▪ It included planned and integrated reviews of patient’s progress toward their goals; clear communication of assessment, interventions, and outcomes to the

	<p>care team; and access to professional best practices and evidence-based interventions, in a standardized manner.</p> <ul style="list-style-type: none"> ○ <u>'Relapse' Phase:</u> <ul style="list-style-type: none"> ▪ The 'Relapse' phase occurs when patients experience an exacerbation of their condition and therefore, require an increase in the intensity of care. ▪ The emphasis of this phase was for the General Practitioner, or a care team member, to recognize early signs of exacerbations, and to act quickly. ▪ Patients received a self-management plan that outlined the appropriate level of assessment, intervention, and support that is required for this phase. Assessment could be a review from a General Practitioner, an intervention of the rapid response team, rapid access to a Respiratory Therapist, or an emergency department visit, depending on the severity of the patient's symptoms. ▪ If this phase requires hospitalization, it will typically take 2 - 6 weeks. After patient's baseline care requirements are reassessed, and their self-management plan is reestablished, they re-enter the 'Maintenance and Primary Care Phase'. ○ <u>Rapid Response (mobile) Teams:</u> <ul style="list-style-type: none"> ▪ Rapid response teams were deployed when patients experienced exacerbations of their condition. ▪ The teams could be deployed in the Tier 1 or Tier 2 phase. Within the Tier 2 phase, teams were deployed when patients relapsed or showed early signs of exacerbations that required an immediate response and direct referrals to the CCAC. <ul style="list-style-type: none"> ● In the Tier 1 and Tier 2 phases, the CCAC was the main point of entry (or referral agency) for assessing the need to deploy or make referrals for a rapid response.
<p>Program Components</p>	<ul style="list-style-type: none"> ● Assessment and/or Diagnosis: <ul style="list-style-type: none"> ○ This model included a detailed assessment of patient's disease severity, complications, functional status, and ability to manage their condition. ● Access to services: <ul style="list-style-type: none"> ○ This model enabled access to the appropriate interventions. ● Ongoing monitoring/support <ul style="list-style-type: none"> ○ General Practitioners and care teams provided ongoing monitoring of patient's progress. ● Education/planning

	<ul style="list-style-type: none"> ○ Patients were provided with education, resources, and self-management plans to help them cope with their disease. ● Exacerbation management <ul style="list-style-type: none"> ○ Rapid response teams were deployed when patients experienced exacerbations of their condition. The teams intervened quickly with high-risk patients and facilitated caregiving to help restore, maintain, or develop their functional performance. ○ The teams aimed to prevent emergency department visits, delay institutionalization, and facilitate reintegration into the community. ○ The teams allowed patients to receive rapid access to a Respiratory Therapist, or to the emergency department. ○ The goal of the teams was to stabilize patients so they could remain at home. ● Care team <ul style="list-style-type: none"> ○ Patients with a higher disease impact were given a maintenance care team.
Service Users	<ul style="list-style-type: none"> ● Patients with COPD and their families.
Service Providers	<ul style="list-style-type: none"> ● General Practitioner ● Those with higher disease impact had some or all of the following professionals on their maintenance care team: <ul style="list-style-type: none"> ○ a community health nurse, ○ a respiratory therapist (RRT), ○ a Registered Nurse, ○ a certified respiratory educator, ○ a registered dietitian, and ○ community- or acute-care-based allied health professionals (such as an Occupational Therapist, a Physiotherapist or a Social Worker). ● For those with severe COPD who frequently used inpatient or emergency department services, the community-based CCAC Case Manager took the role of the care coordinator. <ul style="list-style-type: none"> ○ The care coordinator provided regular access to intensive support, which aimed to improve patient’s quality of life and to promote appropriate resource usage.
Referral Method	<ul style="list-style-type: none"> ● Any clinician in acute or primary care could refer patients. <ul style="list-style-type: none"> ○ Before the model was implemented, it was anticipated that, initially, suitable patients would primarily be identified during hospital inpatient episodes for exacerbations, or at specialist clinic appointments. Over time, however, referrals would be encouraged and accepted from all points within the healthcare continuum, like primary care.

	<ul style="list-style-type: none"> • When a rapid response was required for patients in the Tier I and II phases, they would go to the CCAC to receive referrals.
Hours of Operation	<ul style="list-style-type: none"> • Four CACCS were in the community: <ul style="list-style-type: none"> ○ Three CACCs were open from Monday to Friday, 8:30 a.m. - 4:30 p.m., while telephone inquiries were accepted daily, from 8:30 a.m. - 8:30 p.m. ○ One CCAC was open from Monday to Friday, 8 a.m. - 6 p.m., and Saturday to Sunday, 8 a.m. - 4 p.m.
Goals/Outcomes	<p>The goals of the model were as follows:</p> <ul style="list-style-type: none"> • Clinical outcomes: <ul style="list-style-type: none"> ○ stable oximetry, Blood pressure, heart rate, and cognitive status, ○ efficacious medications, ○ acceptable spirometry values, ○ improved Cognitive Abilities Test score, ○ increased walking distance, ○ improved quality of life, and ○ completion of the MRC scale. • Cost outcomes: <ul style="list-style-type: none"> ○ reduced admissions and readmissions to the hospital, ○ decreased visits to the emergency department and to acute care, ○ reduced Complex Continuing Care (CCC), and ○ reduced Rehab Patient Days per 1000 population. • Functional outcomes: <ul style="list-style-type: none"> ○ patients, and their families, feel confident in managing their disease/symptoms; ○ patients, and their families, are able to take on a greater proportion of self-care; ○ patients, and their families, have a safety/contingency plan in place for flare-ups; ○ patients understand triggers of an illness event; and ○ patients are able to achieve activities of daily living. • Patient satisfaction outcomes: <ul style="list-style-type: none"> ○ the model assists patients, meets their needs, and satisfies their expectations; ○ patients are willing to purchase the service, if required; and ○ patients, and their families, feel capable of living with the disease.
Related Web Links	<ul style="list-style-type: none"> • Chronic Obstructive Pulmonary Disease Integration Care/Model for Catham-Kent • Erie St. Clair LHIN • Erie St. Clair Local Health Integration Network Contacts

<p>Contacts</p>	<ul style="list-style-type: none"> • Home and Community Care, Chatham Site 712 Richmond Street, Box 306 Chatham, ON, N7M 5J5 Tel: 1-888-447-4468 Fax: 519-351-584 • Home and Community Care, Windsor Site 5415 Tecumseh Road East, Windsor, ON, N8T 1C5 Tel: 1-888-447-4468 Fax: 519-258-6288 • Home and Community Care, Chatham Clinic Site 462 Riverview Drive, Chatham, ON N7M ON2 Tel: 1-888-447-4468 • Home and Community Care, Sarnia Site 1150 Pontiac Drive, Sarnia, ON, N7S 3A7 Tel: 1-888-447-4468 Fax: 519-337-4331
<p>Program Name</p>	<p>Community Internal Medicine Rapid Access Clinic (C-IMRAC)</p>
<p>Jurisdiction</p>	<ul style="list-style-type: none"> • Ontario
<p>Hospital/Organization</p>	<ul style="list-style-type: none"> • St. Joseph’s Healthcare, Hamilton, Medical Outpatient Department
<p>Date Implemented</p>	<ul style="list-style-type: none"> • Not found.
<p>Program Description</p>	<ul style="list-style-type: none"> • C-IMRAC provides patients, who have highly complex and complicated medical issues, with access to internal medicine consultation to eliminate the need for emergency department visits. • C-IMRAC offers family physicians that are seeking advice and assistance, direct telephone access to the General Internal Medicine and Inter-professional team. • The process was designed to provide urgent, on-site assessment. • Using principles of patient-centered care, the clinic shifts the care of patients, who have complex chronic diseases, from the hospital to the community.
<p>Program Components</p>	<ul style="list-style-type: none"> • Exacerbation management <ul style="list-style-type: none"> ○ C-IMRAC allows primary care providers urgent access to the consultants when patients are experiencing an exacerbation. This process eliminates the need for emergency department visits. • Care team <ul style="list-style-type: none"> ○ Patients receive a care team.

Service Users	<ul style="list-style-type: none"> • Family physicians. • Patients with acute/urgent problems that need assessment within 72 hours, but are unlikely to require hospitalization. Many of these patients have undifferentiated problems, which are difficult to diagnose, or have experienced poor responses to treatment. • Patients with a history of repeat hospital admissions and frequent emergency department visits. These patients often have complex medical and/or mental health and addiction problems. They are seen separately by an inter-professional health team, with on-site internal medicine and psychiatry consultation, as needed.
Service Providers	<ul style="list-style-type: none"> • Patient's care teams include a General Internist (MD), Medical Residents and students, a Nurse Practitioner, a Social Worker, a Pharmacist and Clerical Support.
Referral Method	<ul style="list-style-type: none"> • Family physicians can call the clinic to receive appointments for a telephone conversation. • Referrals for patients with acute/urgent problems that need assessment within 72 hours can be made directly with C-IMRAC.
Hours of Operation	<ul style="list-style-type: none"> • Family physicians have access to internists at scheduled times daily.
Goals/Outcomes	<ul style="list-style-type: none"> • The goal of C-IMRAC is to provide coordinated care that prevents the need for emergency department visits.
Related Web Links	<ul style="list-style-type: none"> • St. Joseph's Healthcare, Hamilton - C-IMRAC • Community Internal Medicine Rapid Access Clinic - Contact • C-IMRAC Referral Form
Contacts	<ul style="list-style-type: none"> • St. Joseph's Healthcare 100 West 5th St, Hamilton, ON , L8N 3K7 Telephone: 905-522-1155 ext. 39847
Program Name	Chronic Obstructive Pulmonary Disease (COPD) Clinic
Jurisdiction	<ul style="list-style-type: none"> • Ontario
Hospital/Organization	<ul style="list-style-type: none"> • Cambridge Memorial Hospital (CMH)
Date Implemented	<ul style="list-style-type: none"> • 2007 - Present.
Program Description	<ul style="list-style-type: none"> • The COPD Clinic is an outpatient clinic that is a part of the CMH's Ambulatory Care Program. • The Clinic focuses on developing individualized management plans for patients with COPD who live in the community of Cambridge and North Dumfries. • The Division of Respiriology consults with patients to develop medication management programs that focus on exacerbation management.

	<ul style="list-style-type: none"> • Patients receive education and treatment plans that focus on their specific needs and abilities to help them manage their chronic illness with their primary care provider. • After patients visit the clinic, notes about the appointment are sent to the patient’s primary care provider (i.e. their family Doctor or Nurse Practitioner). • Patients are initially seen in the clinic and are scheduled to return, as needed.
<p>Program Components</p>	<ul style="list-style-type: none"> • Education/planning <ul style="list-style-type: none"> ○ At the COPD clinic, patients receive individualized management plans that focus on exacerbation management. ○ Patients receive education related to collaborative self-management and chronic disease, such as COPD pathophysiology, the mechanics of respiration, medications used for treating COPD, and strategies to promote healthy and active lifestyles. ○ The clinic also educates patients, and their caregivers, about medication management, the benefits of exercise, smoking cessation, nutrition, and preventing flare-ups and hospital readmissions. • Assessment and/or diagnosis <ul style="list-style-type: none"> ○ The COPD clinic assesses patient’s current level of physical health, respiratory and exacerbation history, medications, allergies, and functional level. • Ongoing monitoring/support <ul style="list-style-type: none"> ○ The clinic monitors patients, and reviews their referrals, annually, or as needed. • Exacerbation management <ul style="list-style-type: none"> ○ The clinic provides exacerbation management, as required.
<p>Service Users</p>	<ul style="list-style-type: none"> • Patients with COPD and their caregivers.
<p>Service Providers</p>	<ul style="list-style-type: none"> • Respiriologists. • Patient’s Primary care provider. • A Nurse Practitioner.
<p>Referral Method</p>	<ul style="list-style-type: none"> • Referrals from Physicians are required to access the COPD Clinic. • Other referral points include: <ul style="list-style-type: none"> ○ Respirologists, ○ hospitalists, ○ the emergency department, ○ family Physicians, ○ Nurse Practitioners, and ○ urgent care clinics.

Hours of Operation	<ul style="list-style-type: none"> The clinic is open every day, 24 hours a day.
Goals/Outcomes	<ul style="list-style-type: none"> The goal of the clinic is to help patients increase their function and quality of life by reducing COPD symptoms and hospitalizations.
Related Web Links	<ul style="list-style-type: none"> Cambridge Memorial Hospital - COPD Clinic Article - The Cambridge Hospital Clinic Works to give Patients their Breath Back
Contact	<ul style="list-style-type: none"> Call (519) 621-2333 ext. 1502 700 Coronation Blvd Cambridge, ON N1R 3G2 Office phone: 519-621-2333 Ext. 2345 Email: information@cmh.org
Program Name	Montreal Chest Institute Foundation
Jurisdiction	<ul style="list-style-type: none"> Montreal
Hospital/Organization	<ul style="list-style-type: none"> The Montreal Chest Institute (MCI), McGill University Health Centre's Glen Site
Date Implemented	<ul style="list-style-type: none"> In 2015, the MCI moved to the new Glen Site, however, it has existed since 1909.
Program Description	<ul style="list-style-type: none"> The MCI is a centre of clinical, research, and teaching in respiratory diseases. The MCI is in close proximity to other useful services that their patients can use, such as the Royal Victoria Hospital that contains a full gamut of specialists and conducts all necessary tests, including MRIs. There are several components that make up the MCI: <ul style="list-style-type: none"> inpatient Units with single-patient rooms, specialized respiratory clinics, a Rapid Investigation Clinic, a Rapid Access clinic, a pulmonary function laboratory, a 10-bed Respiratory Day Hospital, a Sleep Disorders Centre, and a Physiotherapist Centre
Program Components	<ul style="list-style-type: none"> Exacerbation management <ul style="list-style-type: none"> The Rapid Access Clinic is for patients with respiratory problems that require urgent investigation.

	<ul style="list-style-type: none"> ○ The Respiratory Day Hospital treats patients who require more than routine outpatient care, but who are not sufficiently ill enough to require admission to the hospital. It specializes in the emergency management of COPD. ● Assessment and/or diagnosis <ul style="list-style-type: none"> ○ The Pulmonary Function Laboratory diagnoses and assesses the severity of lung diseases. ● Access to services <ul style="list-style-type: none"> ○ The Physiotherapy Centre is available to patients with COPD. The centre teaches patients exercises that can improve their health and well-being. ● Education/planning <ul style="list-style-type: none"> ○ The MCI developed the Living Well with COPD program that educates patients with COPD about how to adopt healthy behaviours.
Service Users	<ul style="list-style-type: none"> ● The specialized respiratory clinics treat patients with asthma, tuberculosis, cystic fibrosis, bronchiectasis, pneumonia, and COPD. ● The Rapid Investigation Clinic treats patients that may have lung cancer. ● The Rapid Access Clinic treats patients with respiratory problems that require urgent investigation. ● The Pulmonary Function Laboratory diagnoses and assesses patients with lung diseases. ● The Respiratory Day Hospital treats patients with asthma, COPD, and lung disease and provides a one-stop location for patients who require complex outpatient investigation. It also offers a “drop-in” service for acutely ill respiratory patients. ● The Sleep Disorders Centre treats patients that have the following conditions: sleep apnea, narcolepsy, limb movement and behavioral disturbances during sleep, and some forms of insomnia ● The Physiotherapy Centre treats patients with COPD.
Service Providers	<ul style="list-style-type: none"> ● The respiratory acute care inpatient unit is staffed by: <ul style="list-style-type: none"> ○ Respiriologists, ○ family Physicians, ○ residents, ○ specialized Nurses, ○ Respiratory Therapists, ○ Physiotherapists, ○ a Dietician, ○ a Social Worker, and ○ other multidisciplinary team members. ● The Rapid Investigation Clinic is staffed by: <ul style="list-style-type: none"> ○ a Respirologist,

	<ul style="list-style-type: none"> ○ a Thoracic surgeon, and ○ a Nurse Clinician.
Referral Method	<ul style="list-style-type: none"> ● Not found.
Hours of Operation	<ul style="list-style-type: none"> ● The specialized respiratory clinics are held every weekday morning and afternoon. ● The Rapid Investigation Clinic closes at 5:30 p.m. to accommodate patients who cannot take time off work.
Goals/Outcomes	<ul style="list-style-type: none"> ● The goal of the MCI is to help patients breathe easier and achieve the highest quality of life possible.
Related Web Links	<ul style="list-style-type: none"> ● The Montreal Chest Institute Foundation
Contact	<ul style="list-style-type: none"> ● 1001 boul. Decarie D05.2502, Montreal, Quebec, Canada H4A 3J1 Tel.: 514-934-1934, ext. 35946 Fax: 514-843-1695
Program Name	Respiratory Health Clinics
Jurisdiction	<ul style="list-style-type: none"> ● New Brunswick
Hospital/Organization	<ul style="list-style-type: none"> ● Horizon Health Network and Vitalite Health Network
Date Implemented	<ul style="list-style-type: none"> ● The structure of the network, as it is today, has existed since 2016.
Program Description	<ul style="list-style-type: none"> ● Respiratory Clinics are distributed across the province of New Brunswick. ● The clinics contain Respiratory Therapists who work with patients to improve their respiratory health and their quality of life. ● Respiratory Health Clinics help patients who have chronic lung conditions and who have trouble breathing.
Program Components	<ul style="list-style-type: none"> ● Education/planning <ul style="list-style-type: none"> ○ The Respiratory Health Clinics provide patients with personalized action plans. ○ The clinics also provide patients with education about their illnesses, including: <ul style="list-style-type: none"> ▪ the factors that make symptoms worse, ▪ methods to control factors that make symptoms worse, ▪ how to use inhalers, ▪ how to cough up and clear the lungs, ▪ breathing re-education, and ▪ methods to stop smoking. ● Exacerbation management <ul style="list-style-type: none"> ○ Patients that experience worsening of their symptoms are provided with professional support.

	<ul style="list-style-type: none"> • Access to services <ul style="list-style-type: none"> ○ Patients receive access to individual or group programs and can be referred to other health professionals, if needed. • Ongoing monitoring/support <ul style="list-style-type: none"> ○ The clinics provide follow-up telephone calls after patients visit the emergency department or stay in the hospital because of a breathing problem.
Service Users	<ul style="list-style-type: none"> • Patients with a New Brunswick Medicare card. • Patients who have trouble breathing or a chronic lung condition such as asthma, COPD, emphysema, chronic bronchitis, and pulmonary fibrosis. • The Physiotherapy Centre treats patients with COPD.
Service Providers	<ul style="list-style-type: none"> • Respiratory Therapists.
Referral Method	<ul style="list-style-type: none"> • Patients do not need referrals; they can call the clinics to book an appointment.
Hours of Operation	<ul style="list-style-type: none"> • Not found.
Goals/Outcomes	<ul style="list-style-type: none"> • The outcomes reported by these clinics include: <ul style="list-style-type: none"> ○ improved quality of life; ○ decreased visits to the emergency department; and ○ decreased time spent in the hospital.
Related Web Links	<ul style="list-style-type: none"> • Vitalite Health Network - Respiratory Health Clinics
Contact	<ul style="list-style-type: none"> • Acadie-Bathurst: Bathurst: 5443234 or 1-888-642-4122 Caraquet: 726-22401 Lamèque: 344-3538 Tracadie-Sheila: 394-3090 • Beauséjour Moncton: 862-4542 or 869-3597 Sainte-Marie-de-Kent: 743-7855 • Northwest Edmundston: 739-2411 Grand Falls: 473-7686 Saint-Quentin: 235-7119 • Restigouche Campbellton: 789-5365

Program Name	Division of Respiriology, Department of Medicine, Patient Care
Jurisdiction	<ul style="list-style-type: none"> • Nova Scotia (NS), New Brunswick (NB) and Prince Edward Island (P.E.I.)
Hospital/Organization	<ul style="list-style-type: none"> • Dalhousie University
Date Implemented	<ul style="list-style-type: none"> • Not Found.
Program Description	<ul style="list-style-type: none"> • The Division of Respiriology provides specialized tertiary care for patients in NS, and consultative services for patients from NS, NB, and P.E.I. • The ambulatory and inpatient services offered include: <ul style="list-style-type: none"> ○ a Respiriology Clinic, ○ a Rapid Referral Clinic, ○ inpatient consultations and emergency, and ○ other services. • Division members in NS play a significant role on the Department of Medicine’s Medical Teaching Unit and the respiriology inpatient consult service at the QEII Health Sciences Centre. Additionally, they provide 24/7 emergency on-call coverage for their patients, devote time to undergraduate and postgraduate education, and are involved in clinical research activities. • They implement the INSPIRED COPD program. • Standard wait times for urgent, semi-urgent, and non-urgent respiriology cases is seven, 42, and 70 days, respectively.
Program Components	<ul style="list-style-type: none"> • Exacerbation management <ul style="list-style-type: none"> ○ The Rapid Referral Clinic is for urgent outpatient consultations and treats patients with unstable asthma or COPD. • Access to services <ul style="list-style-type: none"> ○ This department contains other services that their patients can use, including: <ul style="list-style-type: none"> ▪ a Pulmonary Rehabilitation Program, ▪ an Adult Cystic Fibrosis Program, ▪ a Sleep Disorders Clinic and Laboratory, ▪ Bronchoscopy and Interventional Respiriology, ▪ a Pulmonary Arterial Hypertension Program, ▪ lung transplantation, and ▪ a Pulmonary Function Laboratory.
Service Users	<ul style="list-style-type: none"> • Patients experiencing any respiratory issue, whether it be urgent, semi-urgent or non-urgent. <ul style="list-style-type: none"> ○ Urgent criteria include: <ul style="list-style-type: none"> ▪ suspicion of cancer, Pneumocystis Pneumonia, or Tuberculosis, ▪ initiation of home oxygen,

	<ul style="list-style-type: none"> ▪ unstable asthma or COPD, ▪ recurrent Emergency Room visits because of respiratory symptoms; and ▪ hemoptysis. ○ Semi-urgent criteria include: <ul style="list-style-type: none"> ▪ severe asthma or COPD, ▪ interstitial lung disease that has not yet been diagnosed, ▪ pulmonary hypertension; and ▪ progressive neuromuscular disease. ○ Non-urgent criteria include: <ul style="list-style-type: none"> ▪ Stable asthma or COPD, ▪ a long-standing cough, and ▪ pulmonary rehabilitation.
Service Providers	<ul style="list-style-type: none"> • Respiriologists, living in Halifax, Saint John, Moncton, and Charlottetown, that have a broad range of clinical expertise and research interests.
Referral Method	<ul style="list-style-type: none"> • Referral process for physicians with urgent cases: <ul style="list-style-type: none"> ○ Fax referrals marked as “URGENT,” and/or phone the “Respiriologists on Call,” with patient’s recent chest x-ray and spirometry results. • Referral process for physicians with semi-urgent and non-urgent cases: <ul style="list-style-type: none"> ○ Fax or mail referrals with patient’s recent chest x-ray and spirometry results, consultation reports, and bloodwork/investigations.
Hours of Operation	<ul style="list-style-type: none"> • Division members provide 24-hour, seven-day emergency on-call coverage for patients in Nova Scotia.
Goals/Outcome	<ul style="list-style-type: none"> • The primary goal of this division is to relieve patient’s symptoms and improve their quality of life.
Related Web links	<ul style="list-style-type: none"> • Dalhousie University - Division of Respiriology • Respirology - Triage Criteria and Referral Process for Physicians • Disvision of Respiriology - Division Head Message
Contact	<ul style="list-style-type: none"> • Division of Respiriology, Department of Medicine Dalhousie University & Nova Scotia Health Authority QEII - Halifax Infirmary Site, Suite 4449 Halifax Infirmary Building 1796 Summer Street Halifax, NS B3H 3A7 902-473-6611 Respiriology division head/service chief: Dr. Paul Hernandez, paul.hernandez@nshealth.ca Respiriology team lead: Heidi Blois, heidi.blois@nshealth.ca

Data Extraction – United Kingdom

Program Name	COPD Respiratory HOT Clinic
Jurisdiction	<ul style="list-style-type: none"> • United Kingdom
Hospital/Organization	<ul style="list-style-type: none"> • National Health Service (NHS) East Suffolk and North Essex
Date Implemented	<ul style="list-style-type: none"> • 2019 - Present.
Program Description	<ul style="list-style-type: none"> • Prior to the implementation of the Respiratory HOT clinic, patients with COPD in Ipswich and East Suffolk that felt unwell with an exacerbation of their condition would most likely visit their General Practitioner or the emergency department; this clinic provides an alternative to these options. • The Respiratory HOT clinic is equipped with specialist COPD practitioners that treat patients with exacerbations to help them avoid unnecessary hospital admissions. • When patients arrive, a specialist respiratory practitioner performs assessments and investigations. A respiratory physician reviews complex cases, as needed. Following assessment, patients are discharged with a clinical management plan and ongoing support from the COPD respiratory team at home (where appropriate). Patient’s General Practitioners are informed of the visits within 24 hours.
Program Components	<ul style="list-style-type: none"> • Exacerbation management <ul style="list-style-type: none"> ○ The clinic treats patients that are experiencing exacerbation symptoms. ○ Patients that risk attending the Accident and emergency department, because their condition has suddenly worsened, can be seen by a Respiratory Specialist Practitioner on the same or next day. • Care team <ul style="list-style-type: none"> ○ The COPD respiratory team at the clinic provides COPD patients with rapid reviews and support, when they need it. • Assessment and/or diagnosis <ul style="list-style-type: none"> ○ The clinic performs necessary assessments and investigations, such as blood tests, arterial blood gas tests, ECGs, and chest X-rays. • Education/planning <ul style="list-style-type: none"> ○ Patients receive a clinical management plan. • Ongoing monitoring/support <ul style="list-style-type: none"> ○ After patients are discharged, they receive ongoing support from the COPD Respiratory team.

<p>Service Users</p>	<ul style="list-style-type: none"> • Inclusion criteria for patients include: <ul style="list-style-type: none"> ○ a diagnosis of COPD, and ○ exacerbation symptoms that threaten admission to the hospital. • Exclusion criteria for patients include: <ul style="list-style-type: none"> ○ no diagnosis of COPD, ○ unable to cope at home, ○ suspected lung cancer or tuberculosis, ○ respiratory problems that are not a primary concern (e.g. cardiac breathlessness), ○ hemodynamically unstable, ○ significant comorbidity (e.g. acute left ventricle failure (LVF)/congestive cardiac failure (CCF) or pneumonia with a CURB score >2), ○ recent ECG changes, and ○ an arterial pH level <7.35 and arterial PaO2 <7kPa.
<p>Service Providers</p>	<p>Service providers include:</p> <ul style="list-style-type: none"> • a Respiratory Consultant, • a specialist services Manager and Band 8 Respiratory Physiotherapist/Practitioner, • a specialist Respiratory Physiotherapist, and • a Community COPD Team. <ul style="list-style-type: none"> ○ The Community COPD contains five Respiratory Nurse Specialists and one Specialist Respiratory Physiotherapist.
<p>Referral Method</p>	<ul style="list-style-type: none"> • All patients are seen by appointment only. • General Practitioners, Community Matrons, other healthcare professionals, and staff within the hospital working in the Accident and Emergency unit or the Medical Admissions Unit are encouraged to refer appropriate patients (i.e. any patient with an exacerbation of COPD that is threatening admission and meet the referral criteria). • Patients who have been specifically identified and who meet certain criteria can self-refer into the service.
<p>Hours of Operation</p>	<ul style="list-style-type: none"> • Monday, Wednesday, and Friday, 10 a.m. - 3 p.m.
<p>Goals/Outcomes</p>	<p>The goals of this clinic are:</p> <ul style="list-style-type: none"> • to help patients with COPD exacerbations avoid unnecessary General Practice attendances and emergency department visits; • to reduce avoidable hospital admissions by at least 20-30%; and • to provide specialist assessment and follow-up care from the community COPD team, with emphasis on caring for patients at home.
<p>Related Web links</p>	<ul style="list-style-type: none"> • COPD Respiratory HOT Clinic

	<ul style="list-style-type: none"> • Press Release: New Clinic to Improve Respiratory Care • Quick Guide: Planning for Increased Seasonal Demand in Respiratory Illness
Contact	<ul style="list-style-type: none"> • Primary Care Unit, Ipswich Hospital, Health Road, IP4 5PD Phone number: +44 1473 712233
Program Name	Respiratory Action Network for the Benefit of Wolverhampton (RAINBOW) group
Jurisdiction	<ul style="list-style-type: none"> • United Kingdom
Hospital/Organization	<ul style="list-style-type: none"> • The Royal Wolverhampton NHS Trust
Date Implemented	<ul style="list-style-type: none"> • Not found.
Program Description	<ul style="list-style-type: none"> • The RAINBOW group oversees the integration of community, acute trust, and palliative care services for patients with COPD. • The program includes: <ul style="list-style-type: none"> ○ a chronic respiratory multidisciplinary team; ○ respiratory HOT clinics that act as a single point of access for patients with any respiratory problem; ○ respiratory in-reach into the Acute Medical Unit (AMU) that is equipped with a Respiratory Consultant and a specialist Respiratory Nurse; ○ community clinics that aim to build relationships between specialists, General Practitioners and practice Nurses; ○ Health Lung days with the Clinical Commissioning Group (CCG); ○ RAINBOW bi-yearly newsletters that are distributed to increase communication between physicians and General Practitioners; and ○ staged General Practitioner educational events. • The RAINBOW group is currently working with the psychology team to find ways to increase healthcare professional’s confidence in identifying anxiety or depression in respiratory patients.
Program Components	<ul style="list-style-type: none"> • Care team <ul style="list-style-type: none"> ○ The chronic respiratory multidisciplinary team meets every two weeks to discuss their patients, who have respiratory conditions. • Exacerbation management <ul style="list-style-type: none"> ○ Respiratory HOT clinics treat patients with any respiratory problem who are experiencing a worsening of their symptoms. ○ The aim of these clinics is to help patients avoid hospital admission. • Education/planning

	<ul style="list-style-type: none"> ○ A specialist Respiratory Nurse at the AMU coordinates the early discharge of their patients, and provides patients with “discharge bundles.” ○ The community clinics, held at different General Practitioner Practices across Wolverhampton, provide education sessions for General Practitioners, specialists, and practice nurses about spirometry testing. These sessions also include discussions about specific patient-cases. ○ The Health Lung Days increase public awareness about respiratory symptoms and disease management. ● Assessment and/or diagnosis <ul style="list-style-type: none"> ○ A Respiratory Consultant at the AMU assesses patients with acute respiratory problems. They conduct reviews, provide a specialist opinion, facilitate discharge, and provide evidence-based management.
Service Users	<ul style="list-style-type: none"> ● Patients with respiratory problems, including asthma, pneumonia and COPD.
Service Providers	<ul style="list-style-type: none"> ● HOT clinic appointments are supported by the respiratory physician of the week ● Core RAINBOW group members include: <ul style="list-style-type: none"> ○ a Consultant respiratory physician, ○ a group manager from the acute trust, ○ a CCG manager, ○ a lung function manager, ○ a home oxygen service lead, ○ a Physiotherapist, ○ a pharmacy lead, ○ a Nursing manager from acute trust and community services; and ○ a General Practitioner with specialist interest in respiratory.
Referral Method	<ul style="list-style-type: none"> ● Referrals come from General Practitioners, the emergency department, and the AMU.
Hours of Operation	<ul style="list-style-type: none"> ● Respiratory HOT clinics: <ul style="list-style-type: none"> ○ The clinics provide two appointments daily. ● Respiratory in-reach into the AMU: <ul style="list-style-type: none"> ○ A Respiratory Consultant and a specialist Respiratory Nurse review respiratory patients who are on the AMU every day from 9 - 11:45 a.m. ● Community clinics: <ul style="list-style-type: none"> ○ The community clinics are offered once a month.
Goals/Outcomes	<ul style="list-style-type: none"> ● The goals of the RAINBOW group are: <ul style="list-style-type: none"> ○ to ensure timely and accurate diagnosis of COPD, ○ to integrate existing respiratory services, ○ to improve the management of patients with COPD, ○ to improve the end-of-life experience for patients with COPD, and

	<ul style="list-style-type: none"> ○ to enhance communication across different healthcare sectors to adopt best practices and develop innovative solutions. ● The outcomes of the RAINBOW group that have been reported thus far include: <ul style="list-style-type: none"> ○ The length of stay for patients that were admitted with an exacerbation of COPD reduced from a mean of 7.7 days in 2011 to 6.2 days in 2014. ○ The average activity of the HOT clinics increased from an average of 30% usage in 2012 to an average of 65% usage in the first 5 months of 2014. ○ From July 2014 to the end of June 2015, 359 patients visited the HOT clinics. Within the same year, the hospital admission rate of patients who visited the clinics was 5-9%, whereas the hospital admission rate of similar respiratory patients who had not visited the HOT clinics was around 19%. Therefore, the HOT clinics appear to have decreased hospital admission rates. ○ After being reviewed in a HOT clinic, a sample of patients reported that they felt able to manage their own health, confident in making decisions about their care, and supported by health and social care.
<p>Related Web links</p>	<ul style="list-style-type: none"> ● Integrated Respiratory Action Network for Patients with COPD ● Integrated Respiratory Action Network Group for Patients with COPD - Description
<p>Contact</p>	<ul style="list-style-type: none"> ● Royal College of Physicians 11 St Andrews Place Regent's Park London NW1 4LE Tel: +44(0)20 3075 1 585 Email: rcplondon.ac.uk www.rcplondon.ac.uk ● Email address: helen.ward22@nhs.net (lead clinician for integrated respiratory disease care and the acute trust (Royal Wolverhampton Hospitals NHS Trust) and the chair of the RAINBOW group)
<p>Program Name</p>	<p>Croydon Respiratory Team Services</p>
<p>Jurisdiction</p>	<ul style="list-style-type: none"> ● United Kingdom
<p>Hospital/Organization</p>	<ul style="list-style-type: none"> ● NHS Croydon Health Services
<p>Date Implemented</p>	<ul style="list-style-type: none"> ● Not found.
<p>Program Description</p>	<ul style="list-style-type: none"> ● The Croydon Respiratory Team (CRT) Services treat patients with COPD who live in Croydon. ● The services incorporate: <ul style="list-style-type: none"> ○ a multidisciplinary CRT, ○ a Pulmonary Rehabilitation Program (PRP), ○ a rapid access HOT clinic, and

<p>Program Components</p>	<ul style="list-style-type: none"> ○ Home Oxygen Service and Review (HOSR). ● Care team <ul style="list-style-type: none"> ○ The CRT is a multi-disciplinary team that works with COPD patients to improve their outcomes. ● Ongoing monitoring/support <ul style="list-style-type: none"> ○ The CRT provides home visits to patients who are housebound, and support to patients after they are discharged. ● Access to services <ul style="list-style-type: none"> ○ Patients receive access to the six-week PRP, which consists of education talks and exercises. The exercises are tailored to individual ability levels. At the end of six weeks, the program helps graduates plan exercises to incorporate into their daily lives, and are provided with a Home Exercise Program. The PRP is accessible to a variety of community locations around the borough. ● Education/planning <ul style="list-style-type: none"> ○ The PRP provides COPD patients with education about how to manage their condition. ● Exacerbation management <ul style="list-style-type: none"> ○ The HOT clinic is a rapid access clinic that treats patients who risk attending the accident and emergency department because their condition has suddenly worsened. Patient’s General Practitioners are informed of the visit within 24 hours. ● Assessment and/or diagnosis <ul style="list-style-type: none"> ○ The specialist Respiratory Practitioner within the HOT Clinic conducts the appropriate investigations of patients, while the Respiratory Physician reviews complex cases.
<p>Service Users</p>	<ul style="list-style-type: none"> ● <u>CRT:</u> <ul style="list-style-type: none"> ○ The CRT provides care to patients with COPD. ● <u>PRP</u> <ul style="list-style-type: none"> ○ The PRP is for patients with limiting symptoms that are caused by chronic lung disease. ● <u>HOT Clinic</u> <ul style="list-style-type: none"> ○ The inclusion criteria for the HOT Clinic include: <ul style="list-style-type: none"> ▪ patients with a diagnosis of COPD, and ▪ patients who have symptoms that are threatening admission. ○ The exclusion criteria for the HOT Clinic include: <ul style="list-style-type: none"> ▪ patients who are suspected of having lung cancer or Tuberculosis, ▪ patients with a respiratory problem that is not a primary concern (e.g. cardiac breathlessness), ▪ patients who are hemodynamically unstable, and ▪ patients with established, or new, onset confusion.

	<ul style="list-style-type: none"> • <u>HOSR</u> <ul style="list-style-type: none"> ○ HOSR is available to adults in Croydon who have a prescription for oxygen (HOOF), regardless of their diagnoses (excluding palliative patients).
Service Providers	<ul style="list-style-type: none"> • <u>The CRT consists of:</u> <ul style="list-style-type: none"> ○ Nurses, ○ Physiotherapists, ○ Health Care Assistants, ○ Administrators, and ○ Doctors. • <u>The PRP consists of:</u> <ul style="list-style-type: none"> ○ a team of specialist Respiratory Physiotherapists. • <u>The HOT Clinic consist of:</u> <ul style="list-style-type: none"> ○ a specialist Respiratory Practitioner, and ○ a Respiratory Physician. • <u>HOSR</u> <ul style="list-style-type: none"> ○ The CRT runs the HOSR.
Referral Method	<ul style="list-style-type: none"> • <u>Referral method for the HOT clinic:</u> <ul style="list-style-type: none"> ○ Physicians can email referral forms to the CRT Services with the patient’s telephone number and a brief summary of the patient’s medical history and recent medications. ○ Patients who are already under the care of the CRT can self-refer to the clinic. ○ Once the clinic receives a referral, they contact the patient to set up an appointment on the same or next day. • <u>Referral method for the HOSR:</u> <ul style="list-style-type: none"> ○ Physicians can email CRT referral forms with a brief summary to ch-tr.crt@nhs.net. ○ The patient’s General Practitioner is informed about the outcome of the appointment.
Hours of Operation	<ul style="list-style-type: none"> • <u>The PRP:</u> <ul style="list-style-type: none"> ○ is six weeks in duration, ○ contains 12 sessions, and ○ provides weekly education talks. • <u>The HOT Clinic:</u> <ul style="list-style-type: none"> ○ The clinic is open from Monday to Friday (we could not find the hours of operation).
Goals/Outcomes	<ul style="list-style-type: none"> • <u>CRT</u> <ul style="list-style-type: none"> ○ The aim of the CRT is to improve outcomes for COPD patients in Croydon.

	<ul style="list-style-type: none"> • <u>PRP</u> <ul style="list-style-type: none"> ○ The benefits of the PRP for patients include: <ul style="list-style-type: none"> ▪ reduced breathlessness during daily activities, ▪ increased walking distance, ▪ increased control of symptoms, ▪ decreased hospital admissions, ▪ increased muscle strength and fitness levels, and ▪ improved knowledge of their condition and how to help themselves. • <u>HOT Clinic</u> <ul style="list-style-type: none"> ○ The goal of the rapid access clinic is to help patients with COPD avoid hospital admissions.
Related Web links	<ul style="list-style-type: none"> • NHS Croydon Health Services - Respiratory Team
Contact	<p><u>CRT, HOT clinic & HOSR</u></p> <ul style="list-style-type: none"> • Croydon Respiratory Team Croydon University Hospital 530 London Road, Croydon, CR7 7YE Tel: 020 8401 3963 Email: ch-tr.crt@nhs.net <p><u>PRP</u></p> <ul style="list-style-type: none"> • Croydon Pulmonary Rehabilitation Service Broad Green Centre 1-13 Lodge Road, Croydon Health Services CR0 2PD Tel: 020 8274 6495 Email: ch-tr.crt@nhs.net

Data Extraction – Australia

Program Name	Western Sydney Integrated Care Program (WSICP)
Jurisdiction	<ul style="list-style-type: none"> • Australia
Hospital/Organization	<ul style="list-style-type: none"> • New South Wales Healthcare System
Date Implemented	<ul style="list-style-type: none"> • 2014 – 2017

<p>Program Description</p>	<ul style="list-style-type: none"> • The WSICP was designed to assist patients with chronic conditions, their family, and health care providers in managing patient’s care. • The program applied a proactive process of enrolled, planned, and monitored care, designed and delivered through an informed and engaged network of patients, carers, and health professionals. • The WSICP brought together a range of existing initiatives, programs, and services to provide coordinated care across the primary, community, and specialist settings. • The focus of the WSICP was on improving the health care journey of people with chronic conditions. • The WSICP was based around the Patient-Centered Medical Home (PCMH) model, which emphasizes ongoing relationships between patients and their General Practitioner as well as comprehensive, coordinated, and accessible primary care. It supports care that takes place within the community. • Elements of the WSICP include: <ul style="list-style-type: none"> ○ an integrated care team that were assigned to selected patients; ○ care facilitators, who supported General Practitioners and Clinicians in identifying, enrolling, managing, and monitoring patients; ○ a telephone service (GP support line), which allowed General Practitioners to communicate with specialist hospital services; and ○ Specialist teams that provided Rapid Access and Stabilization Services (RASS).
<p>Program Components</p>	<ul style="list-style-type: none"> • Education/planning <ul style="list-style-type: none"> ○ Care facilitators provided education to patients. ○ Patients received care plans that were maintained by their healthcare team. ○ The GP support line was used by General Practitioners to receive advice about managing their patients. The specialist on the line could provide a referral to the appropriate specialty, or advise them to send patients to the RASS or the emergency department. • Exacerbation management <ul style="list-style-type: none"> ○ The RASS were specialty services that reduced waiting times for patients, helped patients avoid unnecessary hospital admissions and emergency department visits, reduced readmission rates, and provided a less complex avenue of care. These services, provided by rapid response teams, helped patients transition from the hospital to their community as quickly as possible. <ul style="list-style-type: none"> ▪ The Rapid Access Clinics treated patients with an acute deterioration of their chronic condition and provided an alternative to visiting the emergency department. At these clinics, patients received an immediate specialist review. This process helped to avoid or expedite hospital admission. ▪ Stabilization Clinics helped patients after they were released from the hospital.

	<ul style="list-style-type: none"> • Care team <ul style="list-style-type: none"> ○ Selected patients were provided with an integrated care team that consisted of a primary care team, a care facilitator, a specialist team, and community-based healthcare providers. ○ The teams regularly monitored and managed patient’s health in accordance with their care plans. ○ The patient’s care plans were shared among the team, using an online repository. ○ The goal of the care team was to prevent acute or chronic deterioration of patient’s conditions. • Ongoing monitoring/support <ul style="list-style-type: none"> ○ Care facilitators and primary care teams regularly monitored their patient’s health, in accordance with their care plans. <ul style="list-style-type: none"> ▪ Regular reviews were enabled by online repositories (e.g., HealthPathways and LinkedEHR) that contained patient’s care plans and information. ○ The Stabilization Clinics provided support to patients after they were released from the hospital. • Access to services <ul style="list-style-type: none"> ○ The program brought together a range of existing initiatives, programs, and services for patients to use. ○ Patients received referrals to health coaching, self-management strategies, and community and other specialist services from their care facilitator, their General Practitioner, and other specialists.
Service Users	<ul style="list-style-type: none"> • The WSICP treated patients with one or more of the following long term chronic conditions: <ul style="list-style-type: none"> ○ congestive cardiac failure, ○ coronary artery disease, ○ COPD, ○ and diabetes.
Service Providers	<ul style="list-style-type: none"> • Services were provided by: <ul style="list-style-type: none"> ○ care facilitators (Registered Nurses located within the community), ○ a General Practitioner, ○ a primary care team, ○ a Specialist team, and ○ community health care providers.

Referral Method	<ul style="list-style-type: none"> To receive an Integrated Care Team, patients were enrolled through primary care, community, or hospital specialist teams, depending on the point of first contact. After patients received a care team, they were registered in a central database.
Hours of Operation	<ul style="list-style-type: none"> Not found.
Goals/Outcomes	<ul style="list-style-type: none"> The goals of the WSICP were: <ul style="list-style-type: none"> to improve the management and health of people with chronic conditions in the community; to reduce unnecessary emergency department visits; to minimize preventable hospital admissions; to shorten the length of stay in the hospital; to improve communication and connectivity between health care providers in primary care, community, and hospital settings; to provide better access to community-based services; to enhance the patient experience; to reduce healthcare costs; and to provide better support for health professionals. A midterm report was produced a few years after the WSICP was implemented. The outcomes are as follows: <ul style="list-style-type: none"> 186 GPs were trained; the rate of enrolment in the program increased; RASS delivered services on more than 3000 occasions and many patients avoided hospital admission as a result, thus decreasing the length of stay in the hospital; admissions to cardiology for chest pain decreased; feedback from patients and providers about the program was positive; communication of information between care providers and the hospitalist specialist teams improved; and General Practitioners, care facilitators, and allied health in the community, were able to access patient’s shared care plans.
Related Web links	<ul style="list-style-type: none"> The Commonwealth Fund - Western Sydney Integrated Care Program (WSICP) Western Sydney Integrated Care Program - PowerPoint Integrated Care Demonstrator - Midterm Report Integrating Health Care in Australia: A Qualitative Evaluation
Contact	<ul style="list-style-type: none"> Western Sydney Integrated Care Program Level 3, Administration and Education Building, Blacktown Hospital Telephone (02) 9881 7770 Facsimile (02) 9881 7606

	<p>Email wslhd-integratedcareexecutive@health.nsw.gov.au www.betterhealthtogether.com.au</p> <ul style="list-style-type: none"> Western Sydney Primary Health Network PO Box 5, Blacktown Post Shop NSW 2148 Telephone (02) 8811 7100 Facsimile (02) 9622 3448 www.wentwest.com.au
Program Name	Integrated Respiratory Access Project
Jurisdiction	<ul style="list-style-type: none"> Australia
Hospital/Organization	<ul style="list-style-type: none"> Queensland Government, Metro South Health
Date Implemented	<ul style="list-style-type: none"> 2016 – 2018
Program Description	<ul style="list-style-type: none"> The Integrated Respiratory Access Project began because of an increase in referrals to integrated respiratory services. Thus, this initiative sought to expand the existing Integrated Respiratory Services model by increasing the number of clinics and coordinating service provision. The initiative included: <ul style="list-style-type: none"> Rapid Access Clinics that provided reviews of patients for early discharge, direct referrals for acute patients, and urgent assessment of patients with deteriorating symptoms; an outpatient category 3 clinic that attended to patients who have waited longer than 365 days for care; the expansion of the existing post-discharge home visiting services; and a respiratory nurse and scientist that treated patients in the Medical Assessment and Planning Unit (MAPU).
Program Components	<ul style="list-style-type: none"> Exacerbation management <ul style="list-style-type: none"> The project included an expansion of post-discharge home visiting services that escalated care for deteriorating patients. Rapid Access Clinics provided prompt assessment of patients who required urgent review, but did not require acute care. Ongoing monitoring/support <ul style="list-style-type: none"> The Respiratory Nurse and scientist within the MAPU provided patients with support after they were discharged, when necessary. Assessment and/or diagnosis <ul style="list-style-type: none"> The respiratory Nurse and scientist provided spirometry tests to confirm previously undiagnosed respiratory diseases, and prescribed medications to patients that attended the MAPU.

	<ul style="list-style-type: none"> • Education/planning <ul style="list-style-type: none"> ○ Patients who attended the MAPU received education about their disease prior to discharge.
Service Users	<ul style="list-style-type: none"> • The project treated patients who were diagnosed with one of the following diseases: <ul style="list-style-type: none"> ○ COPD, ○ asthma, ○ bronchiectasis, ○ pulmonary fibrosis, ○ lung cancer, ○ pulmonary hypertension, and ○ sleep disorders. • The project also treated patients who were prescribed home oxygen.
Service Providers	<ul style="list-style-type: none"> • General Practitioners • A Respiratory nurse • A Scientist
Referral Method	<ul style="list-style-type: none"> • Not found.
Hours of Operation	<ul style="list-style-type: none"> • The Rapid Access Clinics were open twice-weekly
Goals/Outcomes	<ul style="list-style-type: none"> • The Goals of the project were: <ul style="list-style-type: none"> ○ to reduce avoidable emergency department visits; ○ to alleviate General Practitioner and patient concern; ○ to promote a better sense of health and independence; and ○ to bring awareness to available resources that help manage chronic respiratory lung conditions. • An outcome evaluation was conducted and measures were obtained before and after the project was implemented. The results are as follows: <ul style="list-style-type: none"> ○ the number of long-wait category 1 and 2 patients reduced; ○ the number of long-wait category 3 patients remained the same; ○ patient’s level of satisfaction with their care remained the same; ○ patients reported the same measure of health-related quality of life; ○ the 28-day readmission rate decreased for patients with COPD; ○ the 28-day readmission rate remained stable for patients with respiratory infections; ○ the average length of stay in the hospital decreased for patients with respiratory infections; ○ the average length of stay in the hospital slightly increased for patients with COPD; and ○ the number of home service visits doubled.
Related Web links	<ul style="list-style-type: none"> • Integrated Respiratory Access Initiative - Model of Care

	<ul style="list-style-type: none"> • Integrated Respiratory Access Project
Contact	<ul style="list-style-type: none"> • Dr. Khoa Tran Director of Respiratory Medicine Khoa.Tran@health.qld.gov.au (07) 3299 9180

References

1. Your Health System in Newfoundland and Labrador - CIHI [Internet]. [cited 2020 Dec 2]. Available from: <https://yourhealthsystem.cihi.ca/hsp/indepth?lang=en#/theme/C10151/2/N4IgKgFgpgtlDCAXATgGxALIAYwPatQEMAHAZygBNNQAGGgRkxQFcoAaEOgJieVY7oBmXv040ALCKgBfWUA>
2. Canada PHA of. Asthma and Chronic Obstructive Pulmonary Disease (COPD) in Canada, 2018 [Internet]. aem. 2018 [cited 2020 Dec 2]. Available from: <https://www.canada.ca/en/public-health/services/publications/diseases-conditions/asthma-chronic-obstructive-pulmonary-disease-canada-2018.html#a2>
3. CDC - Basics About COPD - Chronic Obstructive Pulmonary Disease (COPD) [Internet]. 2019 [cited 2020 Dec 2]. Available from: <https://www.cdc.gov/copd/basics-about.html>
4. Lareau S, Moseson E, Slatore CG. Exacerbation of COPD. *Am J Respir Crit Care Med*. 2018 Nov 30;198(11):P21–2.