Neurosciences, Rehabilitation & Vision Strategic Clinical Network™

Post COVID-19 Rehabilitation Response Framework Summary Report

Alberta Health Services

Neurosciences, Rehabilitation & Vision SCN™

Taskforce Leads

Petra O'Connell – Post COVID-19 Rehabilitation Response Taskforce Co-Chair
Senior Provincial Director
Neurosciences, Rehabilitation & Vision Strategic Clinical Network® and
Diabetes, Obesity & Nutrition Strategic Clinical Network
Alberta Health Services

Isabel Henderson – Post COVID-19 Rehabilitation Response Taskforce Co-Chair
Executive Director
Special Projects, Clinical Operations
Alberta Health Services

Lindsay Steward - Post COVID-19 Rehabilitation Response Taskforce Co-Chair
Manager
Specialized Health Services & Program Manager
Connect MD, Edmonton North Primary Care Network

Chester Ho
Senior Medical Director
Neurosciences, Rehabilitation & Vision Strategic Clinical Network
Alberta Health Services

Acknowledgements

Working Group #1: Acute Care & Inpatient Rehabilitation

Co-Chairs

Lisa Froese
Site Director
Glenrose Rehabilitation Hospital, Administration, Alberta Health Services

Mareika Purdon
Clinical Quality Consultant – Patient Flow
Integrated Quality Management, Alberta Health Services

Working Group #2: Post Acute & Continuing Care

Co-Chairs

Cynthia Johnson
Project Manager
Continuing Care, Edmonton Zone, Alberta Health Services

Kimberly Nickoriuk
Director
Policy, Practice, Access and Case Management, Provincial Seniors Health and Continuing Care, Alberta Health Services

Working Group #3: Primary Care & Community Rehabilitation

Co-Chairs

Karen Hardy
Licensed Practical Nurse
Specialized Health Services, Edmonton North Primary Care Network

Laura Bernard
Senior Practice Consultant
Allied Health Professional Practice & Education, Alberta Health Services

Working Group #4: Patient & Provider Resources

Co-Chairs

Katie Churchill
Senior Consultant, Rehabilitation Advice Line
Alberta Health Services

Steven Siebold
Senior Practice Lead
Allied Health Practice & Education, People Health Professions and IT
Alberta Health Services

Working Group #5: Longitudinal Monitoring

Collen Norris
Scientific Director
Cardiovascular, Heart and Stroke Strategic Clinical Network
Alberta Health Services

Doug Woodhouse
Medical Director
Physician Learning Program

Strategic Clinical Network Supports

Alex Cooke
Senior Project Manager
Diabetes, Obesity & Nutrition
Strategic Clinical Network

Brooke Blythe
Clinical Practice Lead
Critical Care
Strategic Clinical Network

Glenda Moore
Senior Consultant
Neurosciences, Rehabilitation & Vision and
Diabetes, Obesity & Nutrition
Strategic Clinical Networks

Jacqueline Krysa
Post-Doctoral Fellow
Neurosciences, Rehabilitation & Vision
Strategic Clinical Network

Karen Brooks – Working Group Coordination
Senior Patient Engagement Consultant
Strategic Clinical Networks

Kiran Pohar Manhas
Assistant Scientific Director
Neurosciences, Rehabilitation & Vision
Strategic Clinical Network

Melanie Mainville
Clinical Practice Lead
Diabetes, Obesity & Nutrition
Strategic Clinical Network

Nicole McKenzie
Manager
Neurosciences, Rehabilitation & Vision
Strategic Clinical Network

Selvi Sinnadurai – Taskforce Coordination
Executive Director
Neurosciences, Rehabilitation & Vision
Strategic Clinical Network

Contents

Patient Letter - Excerpt

"I need to take a brief moment to ask for help. I do not know where else to turn. I was told I am suffering from 'Post COVID-19 Syndrome'. I didn't know this was a real thing until I wound up back in Emergency in January, needing help to breathe, and leaving health care workers in my small town hospital wondering if I was in the throws of a massive heart attack… My GP [general practitioner] does not know how to really help support my recovery, and only became aware of the Post COVID-19 Clinic in Edmonton when I mentioned it…

I have to wait 3-6 months to get in, which leaves me wondering: Will I stop breathing on my own in that period? Will I have a heart attack or stroke due to the out-of-control palpitations? Am I actually developing RA [rheumatoid arthritis]? Will the tissue inflammation leave more and more damage? Will I loose full mobility? When will my energy come back? Will I ever be able to go back to work? Will I ever get to compete in fitness again? Will I ever be able to showcase the figure skating duet I promised to do with my daughter when things go back to normal? Will I be able to hike mountains again? No one knows. ***Us 'long haulers' need help.***

I am a figure skating coach, a power skating coach, a fitness competitor, and a small business owner. I was extremely healthy. I am young. I should not be struggling like this, yet here I am... Though I am technically considered 'recovered' based on the numbers, I am here to tell you, that I, and countless others, are NOT recovered, and are seriously struggling.

[Post COVID-19 syndrome] may actually be a bigger risk to economic recovery than people catching COVID-19 itself. If the number of people unable to get back to work due to long-term complications of this virus continues to rise… the potential damage this could cause to people physically as well the damage it could cause economically, with further strain on health system added in the mix.

I know that people get hyper-focused on that number of 'recovered' patients, and use that to push back on government recommendations, and public safety protocols. I am wondering if… Alberta Health Services, have started to compile information about 'recovered' COVID-19 patients, and what the long-term effects are for us?"

- *38 year old Albertan athlete*

Executive Summary

The Provincial Post COVID-19 Rehabilitation Response Framework provides necessary pathways, tools, and supports that enable care providers to appropriately and systematically determine the level of functional impairment, and corresponding rehabilitation required, of patients with Post COVID-19 Syndrome.

The majority of persons with COVID-19 survive, but recent international data shows that about 25% of COVID-19 positive patients experience symptoms beyond the acute infection period (4 – 5 weeks after testing positive).[1] Approximately 10% of persons with COVID-19 go on to experience debilitating symptoms 12 weeks after COVID-19 diagnosis, which may last for many months.[1] These chronic symptoms fall under the definition of **Post COVID-19 Syndrome**.

In Alberta, as of March 28, 2021, over 146,000 persons have contracted COVID-19[1]. Of those, there have been:

- Over 9,000 hospitalizations (including 1,229 who required intensive care)
- 3,940 cases (residents) in Long Term Care and Designated Supportive Living facilities
- 1,983 total deaths[2]

The more frequent Post COVID-19 symptoms reported across studies included shortness of breath (dyspnea), fatigue, cough, headache, loss of smell (anosmia), cognitive impairment, loss of taste (ageusia), and muscle pain (myalgia) or joint pain. Less frequently noted was chronicity of sleep impairments, chest pain, tachycardia, gastrointestinal upset, muscle weakness and anxiety.[2]

Most Post COVID-19 patients with symptoms would benefit from rehabilitation services support in hospital and community settings. Based on international prevalence rates, it is conceivable that there could be over 36,500 Albertans who could benefit from rehabilitation services for five or six weeks after testing positive and over 14,600 persons likely require a much longer course of rehabilitation support. Currently, there are variations in rehabilitation services across the 5 AHS Zones, with no provincial coordination or planning. A coordinated approach to rehabilitation of these Post COVID-19 related sequelae along the continuum of care can address these complications effectively in the community, and potentially decrease emergency

[1] "COVID-19 in Alberta" (2021), Edmonton, AB: Alberta Health Services, Tableau dashboard
[2] Data on Home Care COVID-19 case numbers are currently unavailable

department visits with more appropriate care alternatives available in the community. This will result in a reduction in avoidable utilization of emergency and hospital services.

Ongoing rehabilitation can support maintenance of health status and may prevent unnecessary use of emergency and hospital services.[3] As the disabling effects resulting from COVID-19 will be complex and long lasting, it is expected that multidisciplinary rehabilitation follow-up will need to continue for an extended period after discharge from inpatient rehabilitation. A multidisciplinary intervention based on personalized assessment and treatment includes, but is not limited to, exercise training, education, and behavioral modification designed to improve the physical, cognitive, psychological and social Post COVID-19 Syndrome for patients and families will be required.

Key Messages:

- **Post COVID-19 Syndrome is a prevalent issue across Alberta and often results in chronic physical and psychological conditions**
- **Rehabilitation for patients with Post COVID-19 Syndrome is now being recognized as a necessary component of care required for individuals throughout the care continuum**
- **A coordinated and timely rehabilitation of persons with Post COVID-19 symptoms may address systems issues of emergency services utilization and hospital length of stay. This aligns with recommendations in the Alberta Health Services review conducted by Ernst and Young.**

This report summarizes the Implementation Framework & Toolkits for the Provincial Post COVID-19 Rehabilitation Strategy

In September 2020, the Post COVID-19 Rehabilitation Strategy Taskforce put forward 19 recommendations to support Post COVID-19 rehabilitation in Alberta. This Taskforce was co-led by the Neurosciences, Rehabilitation and Vision Strategic Clinical Network (NRV SCN®), AHS Operations, and Primary Care. The 19 Taskforce recommendations would collectively enable timely, appropriate rehabilitation for adult patients with Post COVID-19 across the care continuum. The makeup of the Taskforce and working groups represents a broad, multidisciplinary team of provincial representatives from all 5 AHS Zones, Covenant Health, acute care, primary care, continuing care, health professionals and service providers, allied health, Addictions and Mental Health Line, Health Link®, and patient and family advisors. Each Taskforce recommendation is relevant to one of four areas: screening (for rehabilitation needs), assessment to determine rehabilitation needs, discharge and transition planning, and understanding the long-term implications of Post COVID-19.

With approval from AHS Executive Leadership Team, the NRV SCN launched the **Post COVID-19 Rehabilitation Response Taskforce** in November 2020. This Taskforce was Co-Chaired by leaders from the NRV SCN, AHS Operations and Primary Care Networks. To address and implement these recommendations the Post COVID-19 Rehabilitation Response Taskforce involved the creation of five working groups that address specific areas of care:

1. Acute Care / Inpatient Rehabilitation
2. Post Acute / Continuing Care
3. Primary Care / Community Rehabilitation
4. Patient and Provider Resources
5. Longitudinal Monitoring & Tracking

Not all care areas addressed all recommendations, particularly given the evolving nature of the pandemic. The goal of each working group was to develop specific pathways (including tools, decision supports and resources) that can be used to identify and address rehabilitation needs and educational supports for patients regardless of where they access care. The summation of this work resulted in the Provincial Post COVID-19 Rehabilitation Response Framework.

Goals and Objectives:

The **Post COVID-19 Rehabilitation Response Framework** provides an integrated high-level pathway that includes the necessary pathways, tools, and supports to determine the level of

functional impairment and patient-specific rehabilitation needs across the care continuum: acute care/inpatient rehabilitation, primary care/ community rehabilitation, and continuing care. Different rehabilitation service levels are expected to be appropriate for Albertans Post COVID-19 – these span from population-level universal services, to targeted services aiming at groups of individuals, and personalized services directed towards individuals with more complex needs. These align with the Alberta Health Services (AHS) Rehabilitation Conceptual Framework's rehabilitation service levels (adapted from Charis Management Consulting Inc. 2008; Chairs Management Consulting Inc. 2007).[4–6] This framework will guide its users to stratify patients into the appropriate rehabilitation service levels according to their COVID-19-related functional impairment level, hence appropriate and standardized use of scarce rehabilitation resources.

The following report will describe the Post COVID-19 Rehabilitation Response Framework with particular focus on the tools and resources needed to support patient and providers across the 3 distinct care pathways. An important component of this Toolkit is a co-developed, Alberta-specific, patient resource based on a combination of best practice and guidance from patient and family advisors. This resource is intended to empower patients' own self-care and well-being. The framework also proposed considerations for implementation, potential challenges that teams may face during implementation of the pathway in their respective zones and possible mitigation strategies.

Guiding Principles:

The guiding principles underpinning the development of the framework, pathways and toolkits included integration, lack of duplication, patient-centred care, sustainability and leveraging existing resources. This work addresses system issues identified through the *Ernst & Young Report* related to avoidable admissions, acute length of stay/expected length of stay, alternate level of care and ambulatory care optimization.[6]

1.0 COVID-19 Rehabilitation Response Framework

1.1 Importance of Post COVID-19 Rehabilitation

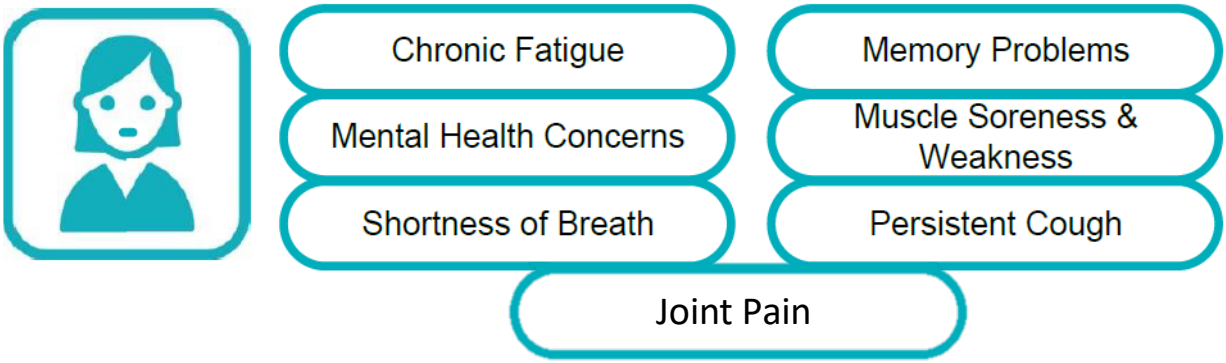
The majority of persons with COVID-19 survive, but recent international data shows that about 25% of COVID-19 positive patients experience symptoms beyond the acute COVID-19 infection period (4 – 5 weeks after testing positive).[1] Approximately 10% of persons with COVID-19 go on to experience debilitating symptoms 12 weeks after having COVID-19 and which may last for many months.[1] These chronic symptoms fall under **Post COVID-19 Syndrome**.

The more frequent Post COVID-19 symptoms reported across studies included shortness of breath (dyspnea), fatigue, cough, headache, loss of smell (anosmia), cognitive impairment, loss of taste (ageusia), and muscle pain (myalgia) or joint pain (Figure 1). Less frequently noted was chronicity of sleep impairments, chest pain, tachycardia, gastrointestinal upset, muscle weakness and anxiety.[2]

"It took about a month to get back to 100% but there was still lingering fatigue and weakness. I feel fine now but I find that when I work nights I only sleep for 4-5 hours when I used to sleep 6-7."

- Young Albertan Father and Shift Worker

Figure 1: Prevalent Post COVID-19 Chronic Symptoms



In Alberta, as of March 28, 2021, over 146,000 persons have contracted COVID-19, of whom 1,983 have died, and over 9,000 have been hospitalized including 1,229 who required intensive care. Emergency department visits and hospital readmission rates within 30 days of discharge from hospital are also indicative of chronic health care issues. Between March 2020 and January 2021, the percentage of previously hospitalized COVID-19 patients that visited the emergency department has varied monthly from 9 – 69% and hospital readmissions has varied monthly from

2% - 7%. Significant variations occurred across the zones. Based on international prevalence rates, it is conceivable that there could be over 36,500 Albertans who could benefit from rehabilitation services for five or six weeks after testing positive and over 14,600 persons likely require a much longer course of rehabilitation support.

Most Post COVID-19 sequelae would benefit from rehabilitation services support in hospital and community settings. Ongoing rehabilitation support will maintain health status and prevent unnecessary use of emergency and hospital services. Rehabilitation can potentially enhance both patient and health system outcomes including:

- Optimizing the health and functioning outcomes of patients[3]
- Facilitating early discharge[3]
- Reducing the risk of Emergency Department utilization and readmission[3]

Currently, there are variations in rehabilitation services across the Zones with no provincial coordination or planning.[4,5] Post COVID-19 rehabilitation needs could be better targeted and this patient population could be better served through a provincially coordinated rehabilitation approach that leverages existing resources, resulting in better outcomes with and decreased burden to the health system; as well as equitable and evidence-based rehabilitation services for Albertans, regardless of their geographical locations. A coordinated approach to rehabilitation of these Post COVID-19 related sequelae along the continuum of care can decrease avoidable utilization of emergency and hospital services by addressing these complications effectively in the community, and decrease actual length of stay in acute care hospitals by improving the functional independence of hospitalized patients and facilitating their coordinated discharge home.

Ongoing rehabilitation support will maintain health status and prevent unnecessary use of emergency and hospital services. Because the disabling effects resulting from COVID-19 will be complex and long lasting, it is expected that rehabilitation follow-up by multidisciplinary disciplines will need to continue for an extended period after discharge from inpatient rehabilitation. A multidisciplinary intervention based on personalized assessment and treatment for Post COVID-19 Syndrome is needed. It includes, but is not limited to, exercise training, education, and behavioral modification designed to improve the physical, cognitive, psychological and social aspects of Post COVID-19 Syndrome.

In September 2020, the Post COVID-19 Rehabilitation Strategy Taskforce put forward 19 recommendations to support Post COVID-19 rehabilitation in Alberta. Appendix A provides the

complete 19 Taskforce recommendations. This Taskforce was co-led by the Neurosciences Rehabilitation and Vision Strategic Clinical Network (NRV SCN®), Operations, and Primary Care. The 19 Taskforce recommendations would collectively enable timely, appropriate rehabilitation for adult patients with Post COVID-19 across the care continuum. The makeup of the Taskforce and working groups represents a broad, multidisciplinary team of provincial representatives from all 5 AHS Zones, Covenant Health, acute care, primary care, continuing care, health professionals and service providers, Allied Health, Addictions and Mental Health, Health Link®, and patient and family advisors. Each Taskforce recommendation is relevant to one of four areas: screening (for rehabilitation needs), assessment to determine rehabilitation needs, discharge and transition planning, and longitudinal follow-up. See Appendix A for the full list of recommendations.

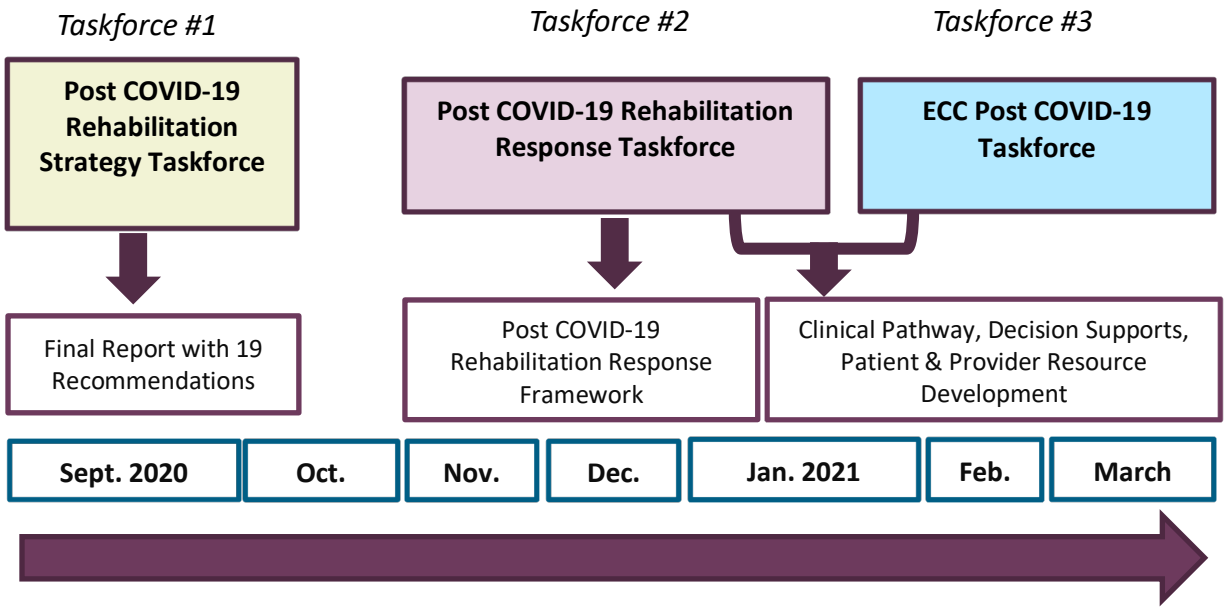
With approval from AHS Executive Leadership Team, the NRV SCN launched the **Post COVID-19 Rehabilitation Response Taskforce** in November 2020. This Taskforce was Co-Chaired by leaders from the NRV SCN, AHS Operations and Primary Care Networks. Figure 2 shows a timeline of the Taskforce groups involved in the development and implementation of these recommendations and pathways. To address and implement these recommendations the Post COVID-19 Rehabilitation Response Taskforce involved the creation of five working groups that address specific areas of care:

1. Acute Care/Inpatient Rehabilitation
2. Post-acute/Continuing Care
3. Primary Care/ Community Rehabilitation
4. Patients and Provider Resources
5. Long-Term Implications

Note: Not all care areas address all recommendations due to the evolving nature of the pandemic. Each working group developed specific pathways, including tools, supports and resources, necessary to identify and address rehabilitation needs and educational supports for patients regardless of where they access care. The summation of this work resulted in the Post COVID-19 Rehabilitation Response Framework (Figure 3).

Appendix B describes the Post COVID-19 Rehabilitation Response Taskforce and Working Groups membership and representation.

Figure 2: **Simplified Timeline of Taskforce Deliverables**



1.2 Purpose

The **Post COVID-19 Rehabilitation Response Framework** provides the necessary pathways, tools, and supports across the care continuum that enable care providers to systematically assess the level of functional impairment and determine the appropriate rehabilitation needs for patients experiencing Post COVID-19 Syndrome. These pathways were developed because rehabilitation needs of Albertans with COVID-19 were expected to be diverse and different from the rehabilitation conditions that were previously seen. Therefore, these unique rehabilitation needs were at risk of being unmet, potentially causing higher health system costs, poorer patient outcomes, and diminished patient experience.

1.3 Guiding Principles

The guiding principles underpinning the development of the framework, pathways and toolkits includes integration, lack of duplication, person-centred care, sustainability and leveraging existing resources. The framework also proposed considerations of implementation, potential challenges and mitigation strategies that teams may face during implementation of the pathway in their respective zones. This work addresses system issues identified through the *Ernst & Young*

Report related to avoidable admissions, acute length of stay/expected length of stay, alternate level of care and ambulatory care optimization.[6]

1.4 Scope

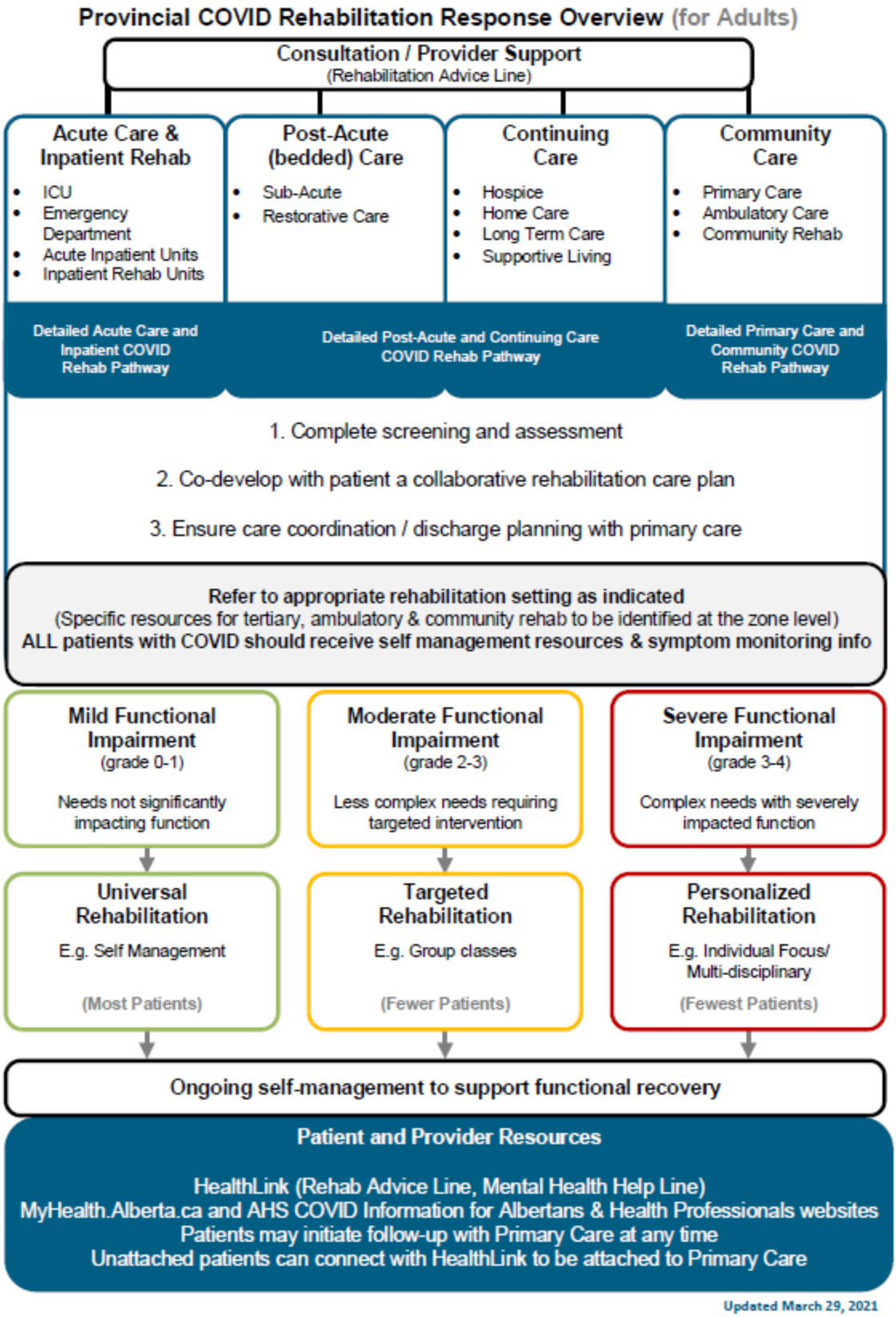
The Post COVID-19 Rehabilitation Response Framework is intended to address the general Alberta adult population (18 years or older) across the continuum of care. Each of the three pathways describes recommendations and considerations for implementation that are specific to defined areas of care. The Framework discusses considerations for care of special populations, including marginalized populations, which will be further elaborated in the upcoming AHS Emergency Coordination Centre (ECC) Post COVID-19 Taskforce (see Next Steps). Considerations specific to Post COVID-19 rehabilitation practice protocols, quality, or effectiveness are out of scope for this Framework.

The Provincial Post COVID-19 Rehabilitation Pathway shown below (Figure 3), provides a high-level summary of how to determine patient-specific rehabilitation needs across the three detailed care pathways across the care continuum: acute care/inpatient rehabilitation (Figure 4a; Appendix C), primary care/community rehabilitation (Figure 4b; Appendix D), and post-acute/continuing care (Figure 4c; Appendix E). Each pathway contains detailed information on:

- Standardized screening of Post COVID-19 19 symptoms using a checklist that was adopted from the United Kingdom National Health Service's "COVID-19 Yorkshire Rehabilitation Screening Tool" (C19 YRS) (Appendix F);
- Standardized assessment of functional impairments using the Post COVID-19 Rehabilitation Functional Screening and Assessment Tool; (PCFS)[7] (Appendix G)
- Rehabilitation Service Mapping Inventory Tool (Appendix H)
- Patient and Provider Resources (Appendices I & J respectively)

These tools and supports can be used by any community care provider (ex. nursing, allied health, physicians), anytime, and allow for local adaptation.

Figure 3: **The Provincial Post COVID-19 Rehabilitation Response Overview**


Provincial COVID Rehabilitation Response Overview (for Adults)
Consultation / Provider Support
(Rehabilitation Advice Line)
Acute Care & Inpatient Rehab
ICU
Emergency Department
Acute Inpatient Units
Inpatient Rehab Units
Post-Acute (bedded) Care
Sub-Acute
Restorative Care
Continuing Care
Hospice
Home Care
Long Term Care
Supportive Living
Community Care
Primary Care
Ambulatory Care
Community Rehab
Detailed Acute Care and Inpatient COVID Rehab Pathway
Detailed Post-Acute and Continuing Care COVID Rehab Pathway
Detailed Primary Care and Community COVID Rehab Pathway
1. Complete screening and assessment
2. Co-develop with patient a collaborative rehabilitation care plan
3. Ensure care coordination / discharge planning with primary care
Refer to appropriate rehabilitation setting as indicated
(Specific resources for tertiary, ambulatory & community rehab to be identified at the zone level)
ALL patients with COVID should receive self management resources & symptom monitoring info
Mild Functional Impairment
(grade 0-1)
Needs not significantly impacting function
Moderate Functional Impairment
(grade 2-3)
Less complex needs requiring targeted intervention
Severe Functional Impairment
(grade 3-4)
Complex needs with severely impacted function
Universal Rehabilitation
E.g. Self Management
(Most Patients)
Targeted Rehabilitation
E.g. Group classes
(Fewer Patients)
Personalized Rehabilitation
E.g. Individual Focus/ Multi-disciplinary
(Fewest Patients)
Ongoing self-management to support functional recovery
Patient and Provider Resources
HealthLink (Rehab Advice Line, Mental Health Help Line)
MyHealth.Alberta.ca and AHS COVID Information for Albertans & Health Professionals websites
Patients may initiate follow-up with Primary Care at any time
Unattached patients can connect with HealthLink to be attached to Primary Care
Updated March 29, 2021

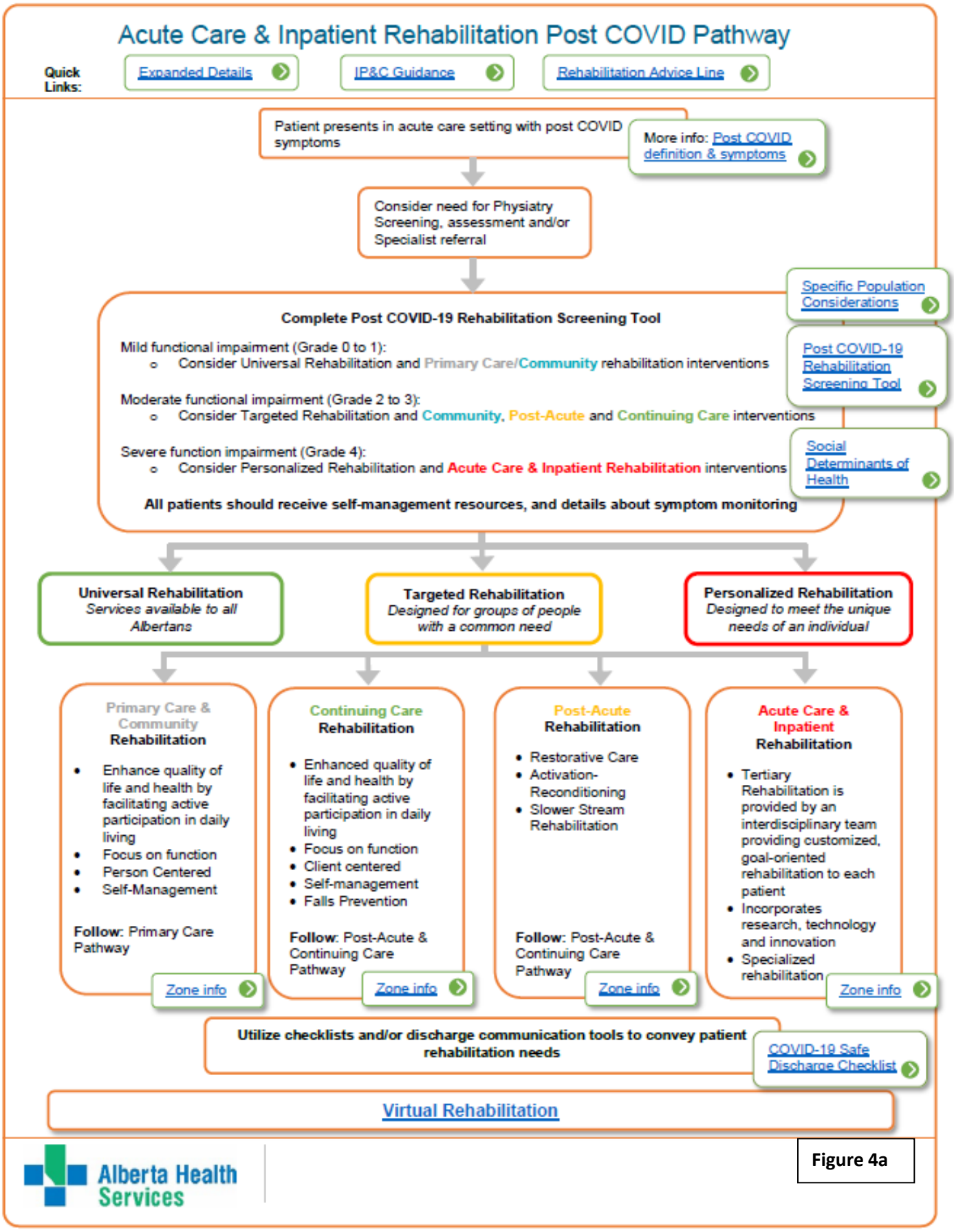

Acute Care & Inpatient Rehabilitation Post COVID Pathway
Quick Links:
Expanded Details
IP&C Guidance
Rehabilitation Advice Line
Patient presents in acute care setting with post COVID symptoms
More info: Post COVID definition & symptoms
Consider need for Physiatry Screening, assessment and/or Specialist referral
Specific Population Considerations
Complete Post COVID-19 Rehabilitation Screening Tool
Mild functional impairment (Grade 0 to 1):
Consider Universal Rehabilitation and Primary Care/Community rehabilitation interventions
Post COVID-19 Rehabilitation Screening Tool
Moderate functional impairment (Grade 2 to 3):
Consider Targeted Rehabilitation and Community, Post-Acute and Continuing Care interventions
Severe function impairment (Grade 4):
Consider Personalized Rehabilitation and Acute Care & Inpatient Rehabilitation interventions
Social Determinants of Health
All patients should receive self-management resources, and details about symptom monitoring
Universal Rehabilitation
Services available to all Albertans
Targeted Rehabilitation
Designed for groups of people with a common need
Personalized Rehabilitation
Designed to meet the unique needs of an individual
Primary Care & Community Rehabilitation
Enhance quality of life and health by facilitating active participation in daily living
Focus on function
Person Centered
Self-Management
Follow: Primary Care Pathway
Zone info
Continuing Care Rehabilitation
Enhanced quality of life and health by facilitating active participation in daily living
Focus on function
Client centered
Self-management
Falls Prevention
Follow: Post-Acute & Continuing Care Pathway
Zone info
Post-Acute Rehabilitation
Restorative Care
Activation-Reconditioning
Slower Stream Rehabilitation
Follow: Post-Acute & Continuing Care Pathway
Zone info
Acute Care & Inpatient Rehabilitation
Tertiary Rehabilitation is provided by an interdisciplinary team providing customized, goal-oriented rehabilitation to each patient
Incorporates research, technology and innovation
Specialized rehabilitation
Zone info
Utilize checklists and/or discharge communication tools to convey patient rehabilitation needs
COVID-19 Safe Discharge Checklist
Virtual Rehabilitation
Alberta Health Services

Figure 4a

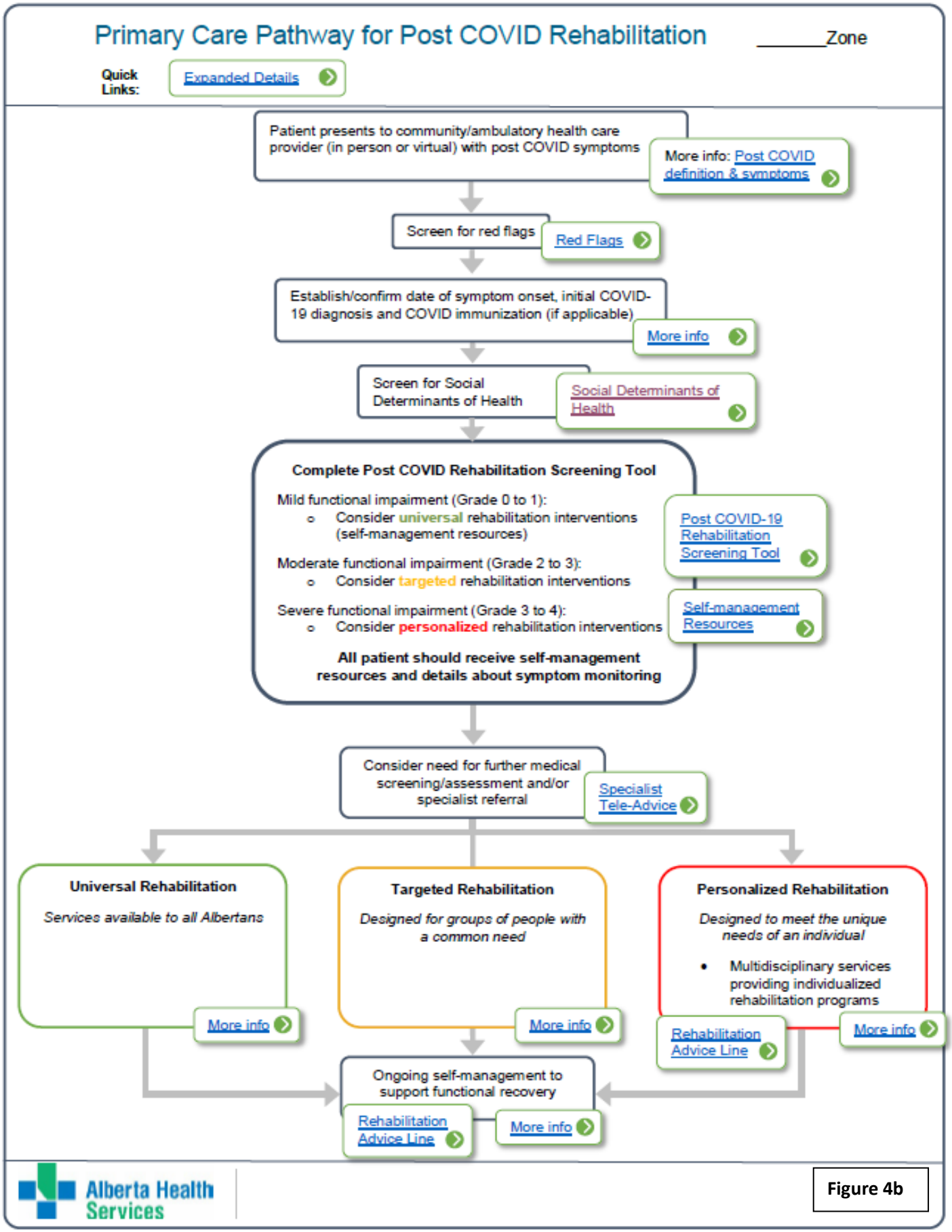

Primary Care Pathway for Post COVID Rehabilitation
_____Zone
Quick Links:
Expanded Details
Patient presents to community/ambulatory health care provider (in person or virtual) with post COVID symptoms
More info: Post COVID definition & symptoms
Screen for red flags
Red Flags
Establish/confirm date of symptom onset, initial COVID-19 diagnosis and COVID immunization (if applicable)
More info
Screen for Social Determinants of Health
Social Determinants of Health
Complete Post COVID Rehabilitation Screening Tool
Mild functional impairment (Grade 0 to 1):
Consider universal rehabilitation interventions (self-management resources)
Moderate functional impairment (Grade 2 to 3):
Consider targeted rehabilitation interventions
Severe functional impairment (Grade 3 to 4):
Consider personalized rehabilitation interventions
All patient should receive self-management resources and details about symptom monitoring
Post COVID-19 Rehabilitation Screening Tool
Self-management Resources
Consider need for further medical screening/assessment and/or specialist referral
Specialist Tele-Advice
Universal Rehabilitation
Services available to all Albertans
More info
Targeted Rehabilitation
Designed for groups of people with a common need
More info
Personalized Rehabilitation
Designed to meet the unique needs of an individual
Multidisciplinary services providing individualized rehabilitation programs
Rehabilitation Advice Line
More info
Ongoing self-management to support functional recovery
Rehabilitation Advice Line
More info
Alberta Health Services

Figure 4b

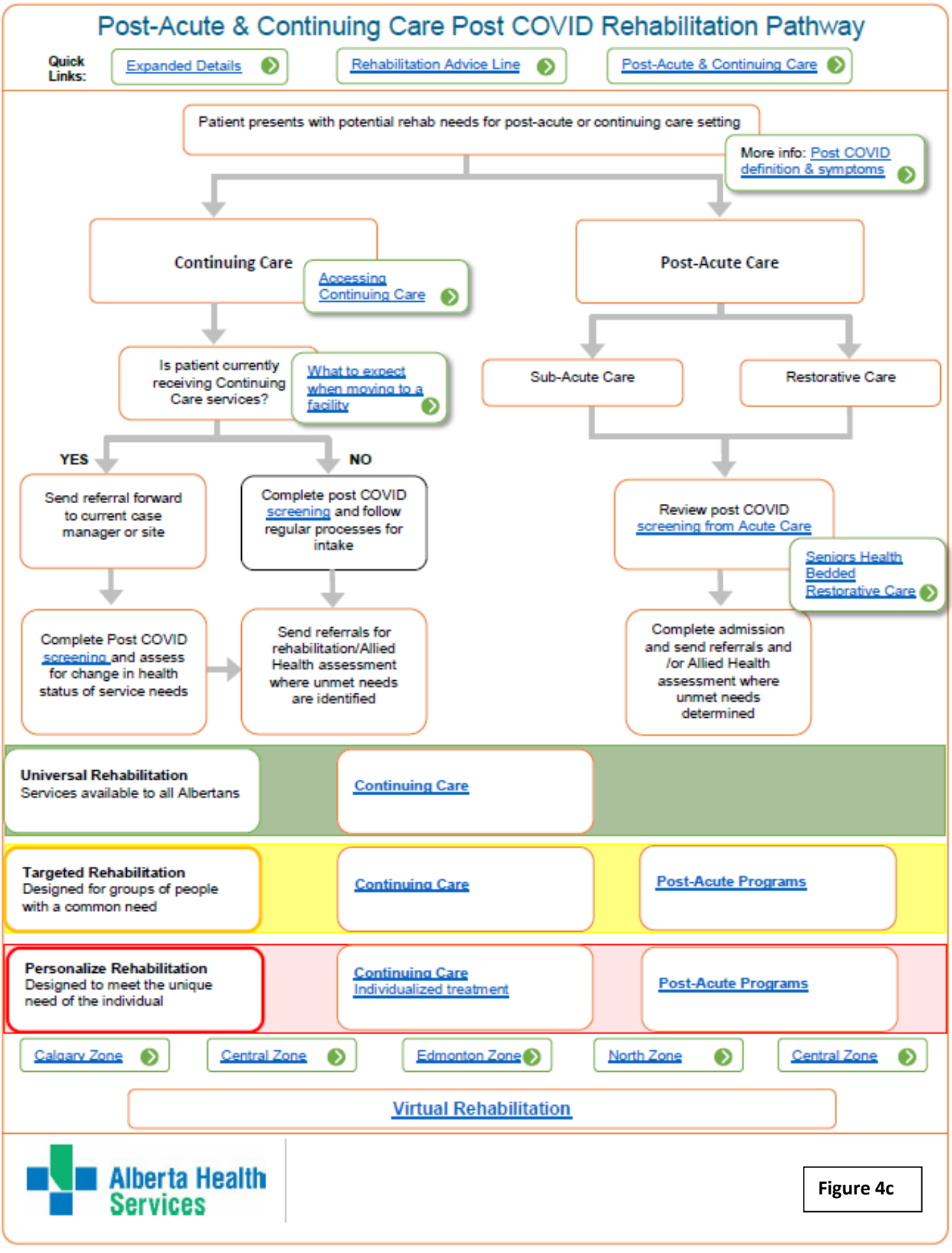

Post-Acute & Continuing Care Post COVID Rehabilitation Pathway
Quick Links:
Expanded Details
Rehabilitation Advice Line
Post-Acute & Continuing Care
Patient presents with potential rehab needs for post-acute or continuing care setting
More info: Post COVID definition & symptoms
Continuing Care
Accessing Continuing Care
Post-Acute Care
Is patient currently receiving Continuing Care services?
What to expect when moving to a facility
Sub-Acute Care
Restorative Care
YES
NO
Send referral forward to current case manager or site
Complete post COVID screening and follow regular processes for intake
Review post COVID screening from Acute Care
Seniors Health Bedded Restorative Care
Complete Post COVID screening and assess for change in health status of service needs
Send referrals for rehabilitation/Allied Health assessment where unmet needs are identified
Complete admission and send referrals and /or Allied Health assessment where unmet needs determined
Universal Rehabilitation
Services available to all Albertans
Continuing Care
Targeted Rehabilitation
Designed for groups of people with a common need
Continuing Care
Post-Acute Programs
Personalize Rehabilitation
Designed to meet the unique need of the individual
Continuing Care
Individualized treatment
Post-Acute Programs
Calgary Zone
Central Zone
Edmonton Zone
North Zone
Central Zone
Virtual Rehabilitation
Alberta Health Services

Figure 4c

The provincial pathway and specific care area pathways are guided by four areas of focus addressed in the 19 Taskforce recommendations: screening, assessment of rehabilitation needs, discharge & transition planning, and longitudinal follow-up.

1.5 Screening and Assessment for Rehabilitation Needs

The purpose of the screening facets of the pathway is to introduce screening questions and tools that trigger focused discussion and assessment of functional impairment and appropriate rehabilitation service level. The working groups identified a core list of screening assessments and tools that can be used to support decision making for each pathway. All tools are based on high quality information and pre-existing resources from organizations such as the World Health Organization[8,9], the National Health Service[10], and Alberta Health Services (AHS).[4,11,12]

The **Post COVID-19 Rehabilitation Functional Screening and Assessment Tool (PCFS)** is recommended to determine the level of functional impairment in acute/in-patient and community care[3]. This tool is used to "assess the full range of functional limitations to capture the heterogeneity of Post COVID-19 outcomes".[7] The PCFS is an ordinal scale that ranks patients into categories, which allow providers to assess patient-relevant functional limitations and determine appropriate rehabilitation needs.[7] Below we describe the rankings and recommended level of rehabilitation care. For more details on the PCFS tool please see Appendix G.

Grade 0-1 - Mild Functional Impairment: Indicates an absence of any symptoms or negligible functional limitation as well as patients with persistent pain, depression or anxiety that does not limit activity.[7]

If the PCFS indicates mild functional impairment (Grade 0-1), recommend **universal rehabilitation** service level.[7]

Universal Rehabilitation is targeted to the general population or population subgroups distributed throughout the province. Universal rehabilitation is focused on promotion and prevention interventions, providing universal services, and addressing system level and policy issues (e.g., self-management resources).[8] The vast majority of the Alberta Post COVID-19 population (>95%) will require universal rehabilitation services.

[3] Continuing care uses a similar, but abbreviated approach to screening and assessment (see Appendix E for more information)

Grade 2-3 – Moderate Functional Impairment: Indicates a reduction in ability to perform certain activities or symptoms of pain or anxiety that reduce functional activities.[7]

If the PCFS indicates moderate functional impairment (Grade 2-3), recommend **targeted rehabilitation** service level.[7]

Targeted Rehabilitation is directed to the needs of a group of individuals with common needs or issues (e.g., a community senior's group, service provider group). Recipients may be patients/caregivers as well as care providers. This service level does **not** require consent, or an assessment to participate. Targeted rehabilitation services are intended to enhance group capacity by creating supportive and structured environments for improvement and can include activities such as coaching or consultation (e.g., group experience programs).[8]

Grade 3-4 - Severe Functional Impairment: Indicates an inability to perform certain activities and/or severe functional limitations that result in assistance to perform activities of daily living.[7]

If the PCFS indicates severe functional impairment (Grade 3-4), recommend **personalized rehabilitation** service level.[7]

Personalized Rehabilitation: Multidisciplinary services specific to individuals with delays, and disorders, injuries, illness and diseases. Personalized rehabilitation is provided to individual clients and may include assessments, interventions, education, coaching, case management, and clinical service activity. This service level **requires** consent and includes documentation in a health record. The goals of personalized rehabilitation include: minimizing impairment, maximizing activity, maximizing participation, and primary and secondary rehabilitation.[8] Personalized rehabilitation services will be required by relatively few individuals compared to universal or targeted services.

1.6 Discharge & Transitions

Following screening and assessment, a **Post COVID-19 Rehabilitation Discharge Checklist** is advised to guide discharge of patients from acute care. Discharge recommendations should include referrals to community rehabilitation or ambulatory clinics as well as medical and rehabilitation call lines, as needed. Discharge criteria must consider special or marginalized populations which may have unique needs (e.g. pediatrics, Indigenous populations, elderly patients, incarcerated populations, isolate and rural populations) and consider the social determinants of health (SDoH) (e.g., poverty, social isolation). Mental health issues should be considered in collaboration with Addictions and Mental Health, and referrals appropriate to addiction and mental health services should be made (e.g. the Mental Health Advice Line). Patients should be made aware, at discharge from acute care and through primary care, of education and self-management resources that offer direct access to rehabilitation professions and nursing, who can answer questions and link to resources in a timely fashion.

2.0 Post COVID-19 Rehabilitation Strategy Taskforce Recommendations

Table 1 provides a summary of the 19 Taskforce recommendations, which lists the relevant care pathways and recommended tools and resources. The full version of these recommendations is found in Appendix A. More detailed descriptions of tools and resources can be found in Appendices (C-J).

Table 1: Post COVID-19 Rehabilitation Strategy Taskforce Recommendations

Screening for Rehabilitation Needs

Recommendation	Relevant Pathway(s)	Recommended Tools and Resources
1. Hospitalized patients with COVID-19 will be screened for potential rehabilitation needs at each transition of care.	• Acute Care/ Inpatient Rehabilitation	• C19 YRS • PCFS • AHS COVID-19 Safe Discharge Checklist • My Discharge Checklist
2. Patients receiving services in post-acute and those living in the community with COVID-19 symptoms will be screened for potential rehabilitation needs, as required.	• Post-acute • Continuing Care • Primary Care/Community Rehabilitation	• Recommended Screening Tool for COVID-19 Patients • C19 YRS • PCFS • Health Link®/Rehabilitation Advice Line (RAL), Mental Health Advice Line

		• Screen for Social Determinants of Health

Assessment to Determine Rehabilitation Needs

Recommendation	Relevant Pathway(s)	Recommended Tools and Resources
3. Functional rehabilitation assessments of identified issues should be completed at every level of care.	• Acute Care/ Inpatient Rehabilitation • Post-acute • Continuing Care • Primary Care/Community Rehabilitation	• C19 YRS • PCFS • Appropriate Comprehensive Assessment tool (post-acute and continuing care)
4. Rehabilitation self-management strategies and resources must be supported across the care continuum.	• Acute Care/ Inpatient Rehabilitation • Post-acute/Continuing Care • Primary Care/Community Rehabilitation	• Post COVID-19 Patient self-management resources (MyHealth.Alberta.ca)
5. Priority assessments are required for patients in ICU who (a) require extended mechanical ventilation, sedation and/or prolonged bedrest; (b) are over 65 years of age; or (c) with chronic co-morbidities.	• Acute Care/ Inpatient Rehabilitation	• C19 YRS • PCFS
6. Screening results in direct rehabilitation assessments in acute care.	• Acute Care/ Inpatient Rehabilitation	• C19 YRS • PCFS • Saint Louis University Mental Status Exam • 6-minute Walk Test • Timed Up and Go Test • TOR-BSST © or Royal Brisbane swallowing screen • Hospital Anxiety and Depression Screen • AHS Cognitive Screening Resources
7. Where patients have multiple diagnoses including COVID-19, the diagnosis with the most impairments should determine the inpatient rehabilitation trajectory.	• Acute Care/ Inpatient Rehabilitation	• C19 YRS • PCFS
8. Patients living in facility-based continuing care should follow similar recommendations to those living in the community, but providers will customize based on patient needs and goals of care, as well as resources.	• Post-acute • Continuing Care	• Post COVID-19 patient self-management resources (MyHealth.Alberta.ca)
9. All patients should have access to educational resources on anticipated symptoms, exercises, and self-management.	• Post-acute • Continuing Care • Primary Care/Community Rehabilitation	• "How to Support Your Recovery and Rehabilitation After COVID-19" (MyHealth.Alberta.ca) • AHS COVID-19 Safe Discharge Checklist • My Discharge Checklist

10. Appropriate rehabilitation programming for patients will vary based on patient functioning and goals, as well as resource availability. Existing pathways will direct patients to community rehabilitation or home care based on eligibility and needs.	• Post-acute • Continuing Care • Primary Care/Community Rehabilitation	• Appropriate Comprehensive Assessment tool (post-acute and continuing care) • C19 YRS • PCFS • Post COVID-19 patient self-management resources (MyHealth.Alberta.ca)
11. Primary care providers are the lead care providers of, and can share resources with, patients who are directing their own recovery.	• Primary Care/Community Rehabilitation	• Post COVID-19 patient self-management resources (MyHealth.Alberta.ca) • Provider Post COVID-19 resources are currently under development

Discharge & Transition Planning

Recommendation	Relevant Pathway(s)	Recommended Tools and Resources
12. There is a process to track and support patients with rehabilitation needs Post COVID-19 that includes discharge documents, data monitoring, patient/family involvement, appropriate triage processes, education, evaluation strategies and communication strategies.	• Post-acute • Continuing Care	• Post COVID-19 patient self-management resources (MyHealth.Alberta.ca) • Existing Discharge and Transition processes
13. A central intake or transition and discharge coordinator should be embedded within existing services to identify rehabilitation needs in the community and support patients in wayfinding and transition.	• Post-acute • Continuing Care • Primary Care/Community Rehabilitation	• Transition Services, Discharge Planning, Continuing Care Access (central intake) and case management model meet this recommendation for post-acute and continuing care) • Upcoming implementation and pilot testing will determine appropriate pathways for central intake and transitions relevant to the specific resources and supports in each Zone
14. Patient education resources and support packages should be compiled at transition to community.	• Post-acute • Continuing Care	• Post COVID-19 patient self-management resources (MyHealth.Alberta.ca)

Long-Term Implications

Recommendation	Relevant Pathway(s)	Recommended Tools and Resources
15. AHS Communications should be engaged to raise public awareness and to develop and implement the communication strategies.	• Acute Care/ Inpatient Rehabilitation • Post-acute • Continuing Care • Primary Care/Community Rehabilitation	• Engaged 1-2 members of AHS communications team • On-going development and implementation of communication strategies

16. Recommend a repeated-measures, longitudinal follow-up of all patients with COVID-19 at 3, 6, and 12 months post hospital-discharge or post-diagnosis for further rehabilitation assessment and management.	• Long-Term Implications Primary Care/Community Rehabilitation • Continuing Care	• Recommended Screening Tool for COVID-19 Patients to be completed at 3, 6, and 12 month intervals (continuing care only)
17. Recommend two needs-assessment tools to understand long-term implications.	• Long-Term Implications	• *ISARIC* COVID-19 Long COVID-19 Survey (includes quality of life assessment EQ-5D-5L)
18. Virtual telehealth services will follow-up directly with patients to identify unmet rehabilitation needs. Clinicians will use Primary Care Referral Letters to engage primary care clinicians to follow-up and determine appropriate clinical rehabilitation steps.	• Long-Term Implications	• Outcomes being explored through an Alberta Health funded retrospective *ISARIC* COVID-19 long term follow-up survey
19. The physicians learning program will undertake the analysis of longitudinal data for quality improvement and program planning purposes.	• Long-Term Implications	• Quality improvement opportunities will be explored from Alberta Health funded

3.0 Considerations for Implementation

Each pathway poses challenges and implementation considerations. Potential challenges and mitigation strategies pertaining to the implementation of recommendations are identified in Table 2. Follow-up actions and recommendations for implementation are based on current processes and evidence and build from existing clinical pathways (especially Primary Health care (e.g., H2H2H)). As processes change (e.g. changes in Electronic Medical Record or operational design) and as new evidence emerges, the actions and recommendations in this report for screening, assessment and treatment, discharge, transfer and longitudinal follow up should be reviewed.

Table 2: Considerations for Implementation and Mitigation Strategies

Implementation Considerations	Mitigation Strategies
Addressing Provider Needs and Awareness of Tools and Resources	

• Develop a communication strategy to raise awareness and share new information, as it becomes available
• Screening tools will need to be built into the existing clinical information systems and forms.
• Create a central location for provider resources to serve as a one-stop-shop for clinical information.
• Some services may not be available in all areas. Staff may be re-deployed and working in alternative care areas.
• Staff may be at increased risk of burn out, moral distress, compassion fatigue, and other psychological and psychosocial impacts because of caring for patients during COVID-19.
• Educational resources for clinicians will require development and implementation.
	• **Dissemination plans to Primary Care sites across the zones are under consideration.**
	  ○ The Primary Care Communications team will determine the best tactics to disseminate the resources throughout the zones.
	  ○ Develop a communication strategy to raise awareness and share new information, as it becomes available.
	• **Leverage existing services to reduce provider burden**
	  ○ Identify documentation processes that can leverage Connect Care and other electronic health records where possible.
	  ○ Develop options and methods for patient self-assessment, where possible, to decrease staff workload.
	• **Implementation, Access, and Education**
	  ○ Identify zone sponsors to assist in the build out of zone-specific content necessary for pathway implementation.
	  ○ Co-develop an implementation plan for primary care providers and community rehabilitation staff including any necessary training.
	  ○ Create a central location for provider resources to serve as a one-stop-shop for clinical information.
	  ○ Co-develop an implementation plan for care providers including any necessary training regarding pathways, screening tools and Post COVID-19 self-management resources for patient, and where to direct patients based on their rehabilitation needs.

Addressing Patient, Family, and Caregiver Needs for Education and Self-Management Resources	

• Acceptability of self-management and educational resources.
• Access to self-management and educational resources.
	• **Acceptability of self-management resources**
	  ○ Patient and family advisors will examine tools for acceptability.
	• **Appropriate access to self-management resources**
	  ○ Make provisions to provide access, for patients, to interdisciplinary team or services at sites that may not include disciplines.

	○ Existing educational resources can support patients and their families, such as Health Link®, Rehabilitation Advice Line (RAL) and MyHealth.Alberta.ca.ca. ○ Embed and update patient educational resources and self-management materials on MyHealth.Alberta.ca.
Addressing the Social Determinants of Health (SDoH)	
• Consider the SDoH and barriers for care.	• Further discussion and planning is required for populations with diverse considerations affected by COVID-19, and those communities should be included in such discussion and planning. ○ Consider opportunities to build key partnerships within the local community to meet the needs of those experiencing SDoH challenges. • Identify safety net flags at the time of discharge or transition in care that include SDoH considerations such as social isolation, financial insecurity, and access. • MyHealth.Alberta.ca staff will examine tools for literacy level.
Addressing the Needs of Marginalized Populations	
• Access for, and consider the unique implementation needs of marginalized populations.	• Further discussion and planning is required for populations with diverse considerations affected by COVID-19, and those communities should be included in such discussion and planning. • There is recognition that a number of vulnerable/marginalized populations may have limited access to this resource. ○ The working group has developed a list of community organizations who may be able to provide access to or insight on how outreach to these populations can be facilitated. ○ Once the patient self-management resource is ready and available to the public, engagement with these groups will begin. ○ Feedback from this process may also inform revisions of the resource and dissemination plan.
Rehabilitation Services are Supported Throughout the Care Continuum	
• Support tailored or customized approaches in different care settings, across the care continuum. • Some sites may have limited access to specialized equipment.	• The **Rehabilitation Service Mapping Inventory Tool** was developed to help Zone Operations map local services to facilitate pathway implementation at the local level (Appendix H). • Make provisions to provide access, for patients, to interdisciplinary team or services at sites that may not include disciplines. • Develop an inventory of zone resources and determine equipment needs and supplies. ○ Provincial and/or zone collaboration of rehabilitation services and knowledge to support a coordinated and integrated, system approach to service delivery. • Consider how virtual rehabilitation could support service availability. ○ Leverage Virtual Care guidance for Allied Health professionals with aim to maximize virtual opportunities. ○ Health Professions Strategy and Practice (HPSP) has developed guidance for allied health professionals in providing virtual care.

Triage and Incorporate Rehabilitation Needs in Existing Pathways	
• Develop appropriate transition and referral criteria and processes where needed. • Provide appropriate patient, family and care giver resources and supports.	• Leverage existing discharge and transition checklists and consider embedding rehabilitation content into these checklists • Leverage existing patient navigator teams, transition coordinators, discharge coordinators and bed coordinators. • Leverage principles of rehabilitation transitions (e.g. communication, preparedness, continuity of care, customized care plans). • Support a broad approach to triage and care planning options (e.g. defining patient need, and prioritization criteria, and explore group and individual rehabilitation, and virtual and in-person options). • At any time, if a patient has completed their formal care with a rehabilitation program, a transition summary should be provided to the Primary Care Provider. • Care coordination through their most responsible, trusted provider who can share resources and work as a partner to support their recovery from a whole-person perspective.
Implementation of Post COVID-19 Rehabilitation Services	
• Recognition that existing/previous rehabilitation criteria may not work for this special population. Rehabilitation clinicians need to take this into account when determining the eligibility of rehabilitation for this population. • Existing rehabilitation structures and processes may not fully address the needs of this special population. • Consider the gaps in rehabilitation structures and processes by zone. • As processes change (e.g. changes in Electronic Medical Record or operational design) and as new evidence emerges, the actions and recommendations in this report for screening, assessment, treatment, discharge, transfer and longitudinal follow up should be reviewed. • Consider whose perspectives will inform process evaluation for quality improvement.	• Co-develop an implementation and training plan to ensure care providers are familiar with Post COVID-19 rehabilitation criteria. • Identify zone sponsors to assist in the build out of zone-specific content necessary for pathway implementation. • The **Rehabilitation Service Mapping Inventory Tool** was developed to help Zone Operations map local services to facilitate pathway implementation at the local level (Appendix H). • Identify zone sponsors and patient advisors to assist in the build out of zone-specific content necessary for pathway implementation. • Identify baseline best practice information and update the pathway regularly as new evidence emerges. o Increase the level of expertise specific to Post COVID-19 due to it being a complex and emergent disease. o As new information about COVID-19 and its longitudinal impacts on health and wellness are known, recognition and assessment of Post COVID-19 symptoms should become part of the diagnostic toolkit for all clinicians.
Healthcare System Capacity	
• Consider differences in Zone capacity or availability for rehabilitation services (i.e. waitlists, staff redeployment). • Demand may exceed current resources (staffing/capacity) and may result in challenges with timely access to services. • Competing provincial priorities (i.e. No additional rehabilitation resources, bed spaces reserved for post-surgical patients). How might rehabilitation services for COVID-19 patients be prioritized in relation to other rehabilitation patients? • Rehabilitation staffing requirements – the deployment of rehabilitation staff for vaccination / COVID-19 testing / contact tracing or other related	• Support tailored or customized approaches in different care settings, across the care continuum (e.g., virtual health guidance for Allied Health professionals, adherence to Infection Prevention and Control precautions in implementation of rehabilitation and treatment processes). • Support a broad approach to triage and care planning options (e.g. defining patient need, and prioritization criteria, and explore group and individual rehabilitation, and virtual and in-person options). • Consider partnership opportunities to address community rehabilitation capacity issues (e.g., partnerships with university rehabilitation programs (i.e. Faculty of Rehabilitation Medicine, University of Alberta) to provide student-led education and

mandates may have severe impacts on rehabilitation service capacity.	exercise programs, collaborate with Alberta Healthy Living Program, virtual care, RAL). • Collaborate with rehabilitation program managers to update Alberta Referral Directory profiles and inclusion criteria for Post COVID-19 patients. • Facilitate attachment to a primary care provider and medical home, if needed. Patient attachment to a primary care provider is crucial to this process. • Find out about access to, and criteria for, admission to appropriate rehabilitation programs to avoid delays and disruption in service.

3.1 Specific Patient Population Considerations

Implementation at the local Zone level calls for attention to the following:

- **Priority Populations –** Patients in critical care that require extended mechanical ventilation; sedation and/or prolonged bedrest; are over 65 years of age; or have chronic co-morbidities should be considered priority patients.
- **Pediatrics** – The pediatric population was considered out of scope for this work. However, discussion was initiated with the Maternal Newborn Child & Youth Strategic Clinical Network to follow up on recommendations from the Final Report for the pediatric population. In continuing care, the separation of this population from the workflow could result in challenges and gaps in care especially for children with complex needs (including children with complex airway needs)
- **Elderly Patients and Young Adults Transitioning Back to Facility** –Both elderly patients transitioning back to facility and young adults with disabilities may experience risk in transitions to facility (including group home or other congregate care settings) and therefore, would have similar considerations and risks.
- **Indigenous Populations** – First Nations and Metis individuals may experience limitations and service gaps in accessing appropriate care. There is limited access to home care and facility living through the First Nations and Inuit Health Branch (FNIHB). There are several service models in the province for home care including contracts with Alberta Health Services to provide home care services in some northern First Nations' communities. Care providers should become familiar with and understand the requirements and limitations to accessing care services for Indigenous populations.
- **Isolated and Rural Populations** (often referred to as rural and remote populations in continuing care) – Care service delivery ("basket of services") is not same in all areas of the province. Consideration should be given to the scope of clinician required for interventions and follow-up, frequency of care provision and distance to access treatment and supplies for

individuals requiring care services who live in rural and remote areas. Clinicians should reach out to their local primary care, home care office, transitions services or discharge planner to discuss possible modifications to care and treatment plans, including self-management and virtual care options, when care services are required.

4.0 Resources for Patients and Providers

4.1 Patient Resources

An important component of the Post COVID-19 Rehabilitation Response Taskforce mandate was to identify existing resources and co-develop an Alberta-specific patient resource based on a combination of best practice and guidance from patient and family advisors. This resource is intended to empower patients' own self-care and well-being. The self-management resource was adapted from the World Health Organization's document: "Support for Rehabilitation Self-Management after COVID-19 Related Illness".[7] This resource has been embedded into each care pathway. These resources are housed on MyHealth.Alberta.ca with crosslinks to the Alberta Health Services: "COVID-19 Information for Albertans webpage".[8] This resource will be translated into other languages in the coming months and will undergo regular revisions as per a pre-determined schedule. A complete list of COVID-19 related patient resources can be found in Appendix I.

4.2 Considerations for Provider Resources

AHS requires an enterprise-wide approach to develop and maintain Post COVID-19 rehabilitation provider resources. Presently, there are limited provider resources available to support Post COVID-19 rehabilitation and recovery. Health care provider education resources will be required to meet the rehabilitation needs of patients and families after COVID-19. These will be further developed and implemented into care pathways by the on-going Emergency Coordination Centre (ECC) Post COVID Taskforce. A catalogue of identified provider resources can be found in Appendix J. This list is not exhaustive as the types of Post COVID-19 rehabilitation support needed continue to evolve.

4.3 Communication and Dissemination

Leadership from the ECC Post COVID Taskforce has been socializing the pathways and framework to various teams across the province and information will be broadly disseminated to health care providers and Albertans for the purposes of awareness and support for both patients and providers to manage Post COVID-19 symptoms in a timely, effective and coordinated manner.

4.4 Rehabilitation Advice Line & Mental Health Advice Line

The pandemic catalyzed the rapid adoption of telehealth practices as a means to ensure the continuity of safe care , that patients receive appropriate advice, and that patients can navigate

to the right services to address their needs.[9] Health Link®/Rehabilitation Advice Line (RAL) and the Mental Health Help Line are telehealth resources for patients with COVID-19 as well as their care providers in the community (e.g. primary care, community rehabilitation) or in the continuing care settings (e.g. long-term care or supportive living clinicians).

4.41 Rehabilitation Advice Line (RAL)

The RAL was introduced in May, 2020 to provide self-management and wayfinding telehealth advice for Albertans with a musculoskeletal concern, neurological condition, or Post COVID-19 rehabilitation needs.[13] The RAL is a telephone advice line that seeks to eliminate geographical inequities in access and provide much-needed advice to address rehabilitation issues of Albertans during the pandemic and beyond. The RAL operates five days a week from 9am–5pm and callers looking for assistance outside those hours are directed to available support via Health Link®. It provides wayfinding and self-management advice to Albertans with physical conditions related to musculoskeletal or neurological conditions or Post COVID-19 recovery needs. Callers receive self-management advice over the phone and may be provided, via email, exercises, education and strategies or to a provincial health information website run by Alberta Health Services for additional tips and resources. Callers can also be linked to appropriate community service organizations to further support their care. Those requiring follow-up receive a call-back from the appropriate healthcare professional to provide the necessary intervention or linkage to existing Alberta Health Services programs or private community services as required. Recent trends have shown increased call volumes for the RAL, which has prompted a formal request for additional supports manning the line.

4.42 Mental Health Help Line

The Alberta Health Services Mental Health Help Line is a free, Alberta wide service, open 24 hours a day, 7 days a week. It is a confidential service that provides support, information, and referrals to Albertans that are experiencing mental health concerns. The Mental Health Help Line is operated by a multidisciplinary team of nurses, psychiatric nurses, social workers, occupational therapists, and psychologists.[14]

5.0 Understanding Long-Term Implications

The long-term implications of COVID-19 on the rehabilitation needs of the Albertan population are unknown at this time. The Post COVID-19 Rehabilitation Strategy Taskforce developed

specific recommendations to support understanding the long-term implications of people who have had COVID-19 for quality improvement and program planning purposes. Unfortunately, the current data capture system in Alberta does not support real time capture and transmission of data pertaining to COVID-19 patient symptoms or patient reported outcomes/experiences over time.

Therefore, the Post COVID-19 Rehabilitation Response Taskforce collaborated with Alberta Health (AH) to design a provincial, retrospective, survey to explore the association between testing positive for COVID-19 and the reporting of long-term physical, mental health and psychosocial health outcomes. AH has confirmed funding and sponsorship to complete this study in 2021.

In the proposed study, an internationally developed and validated self-assessment patient tool will be used: the ISARIC COVID-19 long term follow-up survey[4], which asks about symptomatology across most bodily systems (e.g. neurological, respiratory), quality of life (EQ-5D-5L), as well as additional questions related to function, occupation, and demographics. The patient self-report data will be complemented with administrative health system data to clarify health service utilization, socioeconomic status, and vital statistics. Recruitment will target all persons who tested positive for COVID-19 between March and December 2020, as well as a cohort who tested negative. This will allow greater insight into the trajectory of COVID-19 in the long-term.

The study findings will inform the type, duration, and severity of physical and psychological outcomes for those who have experienced a COVID-19 infection in Alberta. The study outcomes will lead to the development of targeted strategies that use rehabilitation resources to prevent chronic consequences; and, inform clinical management, interventional studies, rehabilitation, and health management to reduce overall morbidity and improve long-term outcomes of COVID-19. It is anticipated that the study findings will be used to inform future health service delivery and government policy around Post COVID-19 care.

6.0 Next Steps

The Post COVID-19 Rehabilitation Response Framework is ready for customization and implementation at the Zone level. This will include developing an effective communication strategy

[4] https://isaric.org/wp-content/uploads/2020/12/Tier-1-Initial-Follow_up_survey.pdf

to increase patient and provider awareness through AHS, Covenant Health, Primary Care and a public service announcement.

The Emergency Coordination Centre (ECC) Post COVID-19 Taskforce will provide overall strategic coordination of the Post COVID-19 Rehabilitation pathways across all Zones. The Edmonton zone has begun to pilot the toolkit in acute care and these findings will further inform the ECC Post COVID-19 Rehabilitation Taskforce to support all Zones with implementation, including:

- Developing Zone specific resources as needed
- Modifying tools, pathways and toolkits as needed
- Tailoring provider educational resources to each care pathway
- Building screening tools into existing platforms (e.g. Connect Care) and
- Developing referral criteria for community rehabilitation programs

This work will inform the proposal for the Rehabilitation Advice Line to advance tele-rehabilitation services across Alberta.

Understanding the long-term implications of Post COVID-19 Syndrome will require further discussion including developing strategies to leverage data being collected from other sources to help care providers understand patient outcomes as well as including the perspectives of marginalized groups in discussion. The long-term monitoring working group will re-convene on completion of the provincial survey to develop a data-informed strategy to disseminate findings while also engaging with these community organizations to bring the perspectives and feedback of marginalized groups to the planning table. The Physician Learning Program has offered to review these findings and form a potential collaboration to provide 'Audit and Feedback' of AH survey data to clinicians, and to support clinicians' efforts to improve patient care. Continuing education opportunities (e.g. University of Calgary's COVID-19 Corner Seminar Series) may be leveraged to share key results and learnings from the survey. Expected deliverables may include oral presentations, peer-reviewed publications, written briefs, and social media content.

The NRV SCN is currently preparing a submission for a national Canadian Institutes of Health Research (CIHR) Operating Grant to support the implementation and evaluation of this Framework (due April 15, 2021). This proposed study will be to determine if the Post COVID-19 Rehabilitation Response Framework promotes equitable, effective Post COVID-19 rehabilitation screening and referrals in hospital and in the community in AHS' North Zones; and, will clarify the potential barriers and facilitators to the Framework's widespread implementation across all AHS Zones. This proposed evaluation will determine the effectiveness of the Framework at reducing

30-day hospital re-admission and emergency department visits (for previously hospitalized COVID-19 patients) and the impact of the pathways on patient flow metrics, patient perception of care, and acceptability and appropriateness of the recommended tools and pathways for providers. The proposal will examine implementation issues including site readiness, barriers and enablers, as well as the timeliness and appropriateness of program referral.

References

1. WHO/Europe | Coronavirus disease (COVID-19) outbreak - New policy brief calls on decision-makers to support patients as 1 in 10 report symptoms of “long COVID-19”. https://www.euro.who.int/en/health-topics/health-emergencies/coronavirus-COVID-19/news/news/2021/2/new-policy-brief-calls-on-decision-makers-to-support-patients-as-1-in-10-report-symptoms-of-long-COVID-19.
2. Prevention, C. for D. C. and. Late Sequelae of COVID-19. https://www.cdc.gov/coronavirus/2019-ncov/hcp/clinical-care/late-sequelae.html (2020).
3. PAHO-WHO. Rehabilitation considerations during the outbreak COVID-19. *Paho-Who* 1–22 (2020).
4. Barker-Davies, R. M. *et al.* The Stanford Hall consensus statement for Post COVID-19 rehabilitation. *Br. J. Sports Med.* 54, 949–959 (2020).
5. Alberta Health Services. *Post COVID-19 Rehabilitation Strategies Briefing Note*. (2020).
6. Ernst & Young. *Alberta Health Services Performance Review Final Report*. (2019).
7. Klok, F. A. *et al.* The Post COVID-19 functional status scale: A tool to measure functional status over time after COVID-19. *European Respiratory Journal* vol. 56 (2020).
8. Alberta Health Services. Rehabilitation Conceptual Framework . http://rehabcarealliance.ca/uploads/File/knowledgeexchange/Alberta_Health_Services-Rehabilitation-Conceptual-Framework.pdf (2012).
9. Primary Health Care, Alberta Health Services. *Home to Hospital to Home Transitions Guideline*. (2020).
10. Support for Rehabilitation: Self-Management after COVID-19 Related Illness. https://www.who.int/publications/m/item/support-for-rehabilitation-self-management-after-COVID-19-related-illness.
11. COVID-19 Information for Albertans | Alberta Health Services. https://www.albertahealthservices.ca/topics/Page16944.aspx.
12. Wosik, J. *et al.* Telehealth transformation: COVID-19 and the rise of virtual care. *Journal of the American Medical Informatics Association* vol. 27 957–962 (2020).
13. Alberta Wide - Rehabilitation Advice Line | Alberta Health Services. https://www.albertahealthservices.ca/findhealth/Service.aspx?id=1080775&serviceAtFacilityID=1126573.
14. Alberta Wide - Mental Health Help Line | Alberta Health Services. https://www.albertahealthservices.ca/findhealth/Service.aspx?id=6810&serviceAtFacilityID=1047134.

Appendices

Contents

* Please note that all appendices are located at:
https://www.albertahealthservices.ca/topics/Page16947.aspx