

Post COVID Recovery – Physical Sequelae and Screening

Provincial COVID Rehabilitation Provider Education Sessions

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June 10, 2021

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Thank You

Andrea Pierce

Fern Lee

Heather Zygun

Kira Ellis

Margie Hass

Safieh Rajan

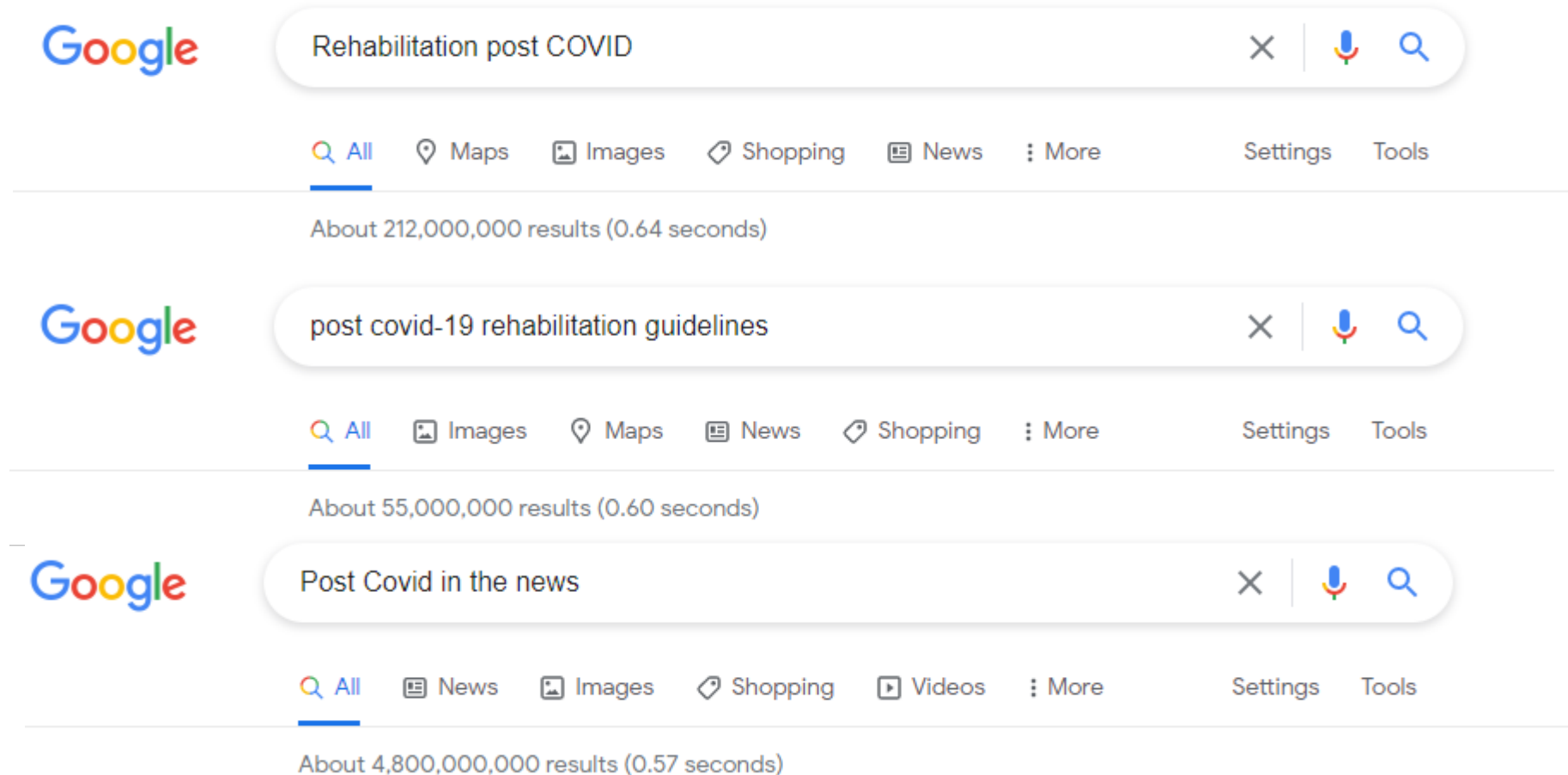
Sarah Arsenault

William Tung

Outline

- **Background Information**
- **Clinical presentation of COVID 19**
- **Key considerations in COVID-19 Rehabilitation**
- **Rehabilitation screening tools**
 - Screening Tool for Post-COVID Physical Sequelae

Background



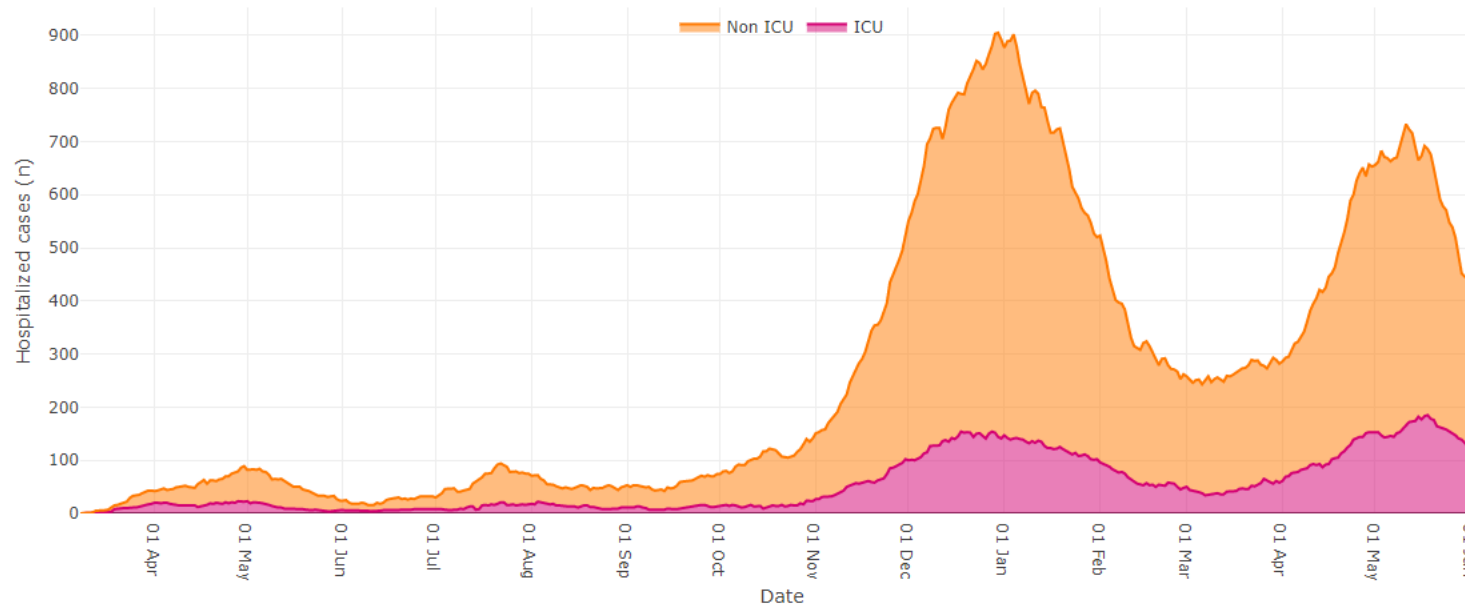
The image displays three sequential Google search results. Each result shows the Google logo, a search bar with a query, a search button, and a list of search filters. The first search is for 'Rehabilitation post COVID' with approximately 212,000,000 results. The second search is for 'post covid-19 rehabilitation guidelines' with approximately 55,000,000 results. The third search is for 'Post Covid in the news' with approximately 4,800,000,000 results.

Search 1: Rehabilitation post COVID
About 212,000,000 results (0.64 seconds)

Search 2: post covid-19 rehabilitation guidelines
About 55,000,000 results (0.60 seconds)

Search 3: Post Covid in the news
About 4,800,000,000 results (0.57 seconds)

Background



9,414 Hospitalized

1,742 ICU

Figure 14: Number of current COVID-19 patients in hospital, ICU and non-ICU

Background

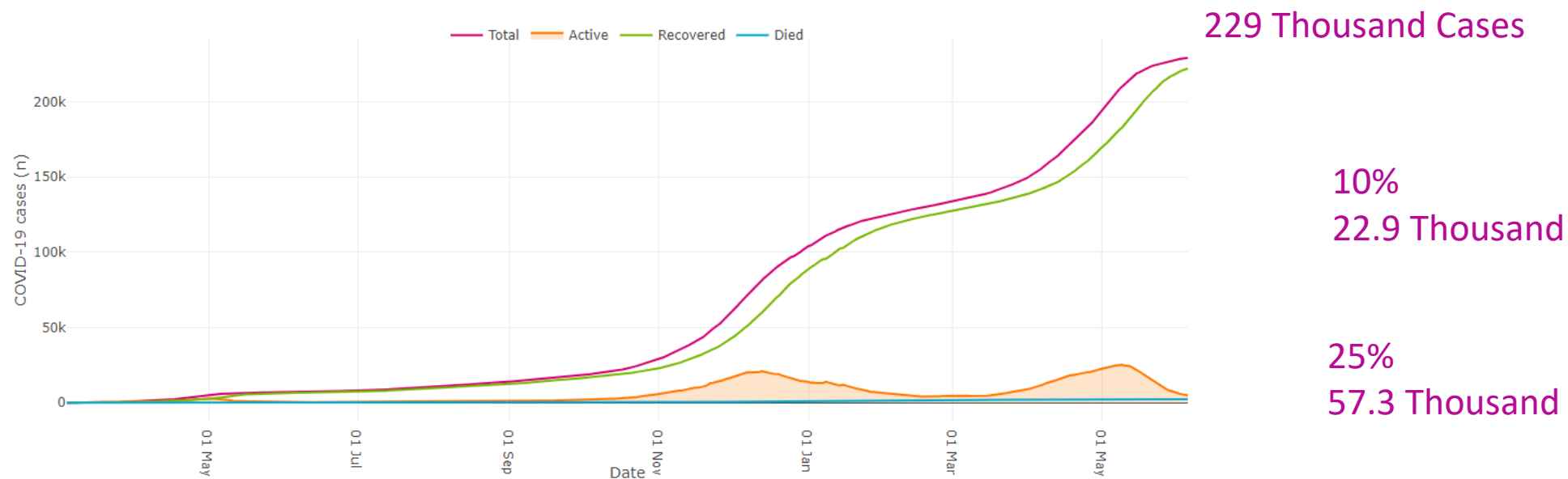


Figure 4: COVID-19 cases in Alberta by day and case status. Recovered is based on the assumption that a person is recovered 14 days after a particular date (see data notes tab), if they did not experience severe outcomes (hospitalized or deceased). Cases are under investigation and numbers may fluctuate as cases are resolved. Data included up to end of day June 05, 2021.

Background

- **Post COVID Rehabilitation Taskforce**
- **Post COVID Implementation Taskforce**
 - Rehabilitation screening tool - Post COVID Functional Status Scale (PCFS) and Symptom Checklist
 - Patient resource – Getting Healthy after COVID-19
 - Pathways – Acute and Inpatient, Post Acute and continuing Care, Primary care and Community rehabilitation

Background

Part 1: Post COVID Functional Status Scale (PCFS)

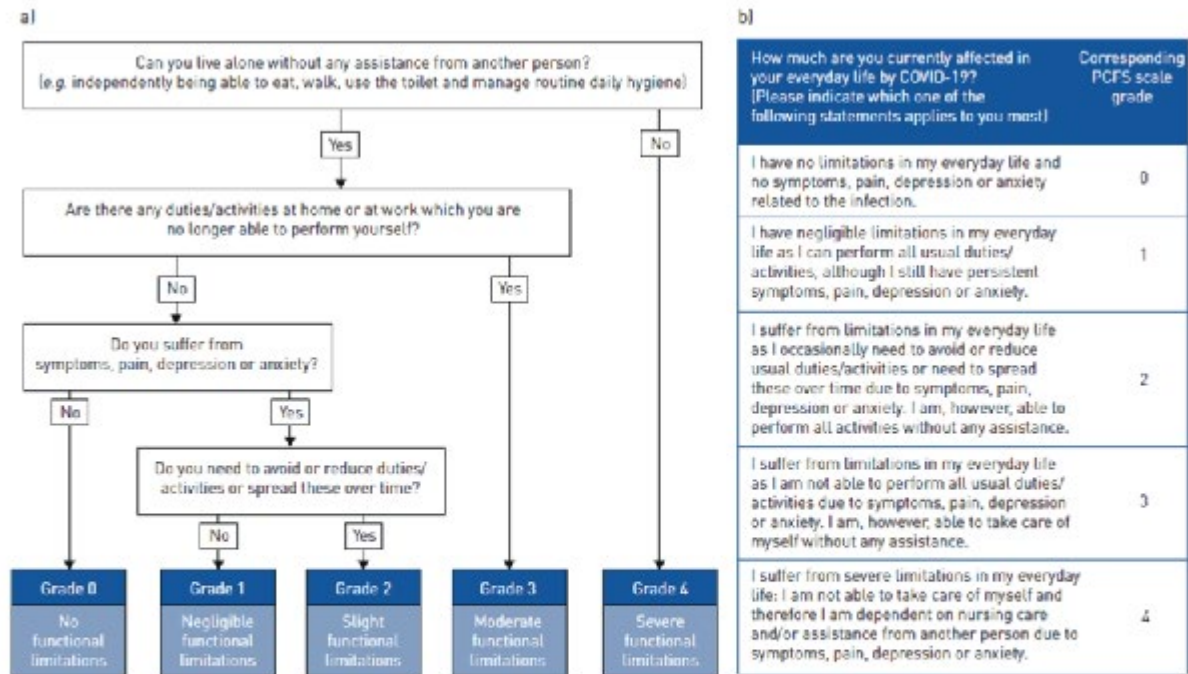


FIGURE 1 Patient self-report methods for the Post-COVID-19 Functional Status (PCFS) scale. a) Flowchart. b) Patient questionnaire. Instructions for use: 1) to assess recovery after the SARS-CoV-2 infection, this PCFS scale covers the entire range of functional limitations, including changes in lifestyle, sports and social activities; 2) assignment of a PCFS scale grade concerns the average situation of the past week (exception: when assessed at discharge, it concerns the situation of the day of discharge); 3) symptoms include (but are not limited to) dyspnoea, pain, fatigue, muscle weakness, memory loss, depression and anxiety; 4) in case two grades seem to be appropriate, always choose the highest grade with the most limitations; 5) measuring functional status before the infection is optional; 6) alternatively to this flowchart and patient questionnaire, an extensive structured interview is available. The full manual for patients and physicians or study personnel is available from <https://osf.io/ggpdv/> (free of charge).

Background

Part 2: Post COVID Symptom Checklist

Sample Script: The next part of the survey we will be discussing any symptoms you are currently experiencing as a result of COVID-19. The symptoms are divided into categories which will help us determine how to best direct your recovery. If you have no symptoms in a category, please indicate N/A and we will move on to the next section. If you are unsure, we will ask more detailed questions. For each question, please indicate if your symptoms are worse, the same or better than before your illness.

Cardiorespiratory Symptoms?		Neurological Symptoms?	
	<input type="checkbox"/> Yes <input type="checkbox"/> N/A <input type="checkbox"/> Unsure		<input type="checkbox"/> Yes <input type="checkbox"/> N/A <input type="checkbox"/> Unsure
Shortness of breath at rest? <input type="checkbox"/> N/A	<input type="checkbox"/> Worse <input type="checkbox"/> Same <input type="checkbox"/> Better	Difficulty controlling the movement of your body? <input type="checkbox"/> N/A	<input type="checkbox"/> Worse <input type="checkbox"/> Same <input type="checkbox"/> Better
Shortness of breath with activity? <input type="checkbox"/> N/A	<input type="checkbox"/> Worse <input type="checkbox"/> Same <input type="checkbox"/> Better	Difficulty eating, drinking or swallowing (i.e. choking)? <input type="checkbox"/> N/A	<input type="checkbox"/> Worse <input type="checkbox"/> Same <input type="checkbox"/> Better
Lingering cough or noisy breathing? <input type="checkbox"/> N/A	<input type="checkbox"/> Worse <input type="checkbox"/> Same <input type="checkbox"/> Better	Difficulty controlling your: Bowels? <input type="checkbox"/> N/A	<input type="checkbox"/> Worse <input type="checkbox"/> Same <input type="checkbox"/> Better
Chest pain at rest? <input type="checkbox"/> N/A	<input type="checkbox"/> Worse <input type="checkbox"/> Same <input type="checkbox"/> Better	Bladder? <input type="checkbox"/> N/A	<input type="checkbox"/> Worse <input type="checkbox"/> Same <input type="checkbox"/> Better
Chest pain with activity? <input type="checkbox"/> N/A	<input type="checkbox"/> Worse <input type="checkbox"/> Same <input type="checkbox"/> Better	Issues with concentration, thinking or memory? <input type="checkbox"/> N/A	<input type="checkbox"/> Worse <input type="checkbox"/> Same <input type="checkbox"/> Better
Dizziness, fainting or loss of consciousness? <input type="checkbox"/> N/A	<input type="checkbox"/> Worse <input type="checkbox"/> Same <input type="checkbox"/> Better	Difficulty hearing? <input type="checkbox"/> N/A	<input type="checkbox"/> Worse <input type="checkbox"/> Same <input type="checkbox"/> Better
		Difficulty seeing? <input type="checkbox"/> N/A	<input type="checkbox"/> Worse <input type="checkbox"/> Same <input type="checkbox"/> Better

Background

Musculoskeletal Symptoms? <input type="checkbox"/> Yes <input type="checkbox"/> N/A <input type="checkbox"/> Unsure		Other Symptoms? <input type="checkbox"/> Yes <input type="checkbox"/> N/A <input type="checkbox"/> Unsure	
Generalized muscle weakness? <input type="checkbox"/> N/A	<input type="checkbox"/> Worse <input type="checkbox"/> Same <input type="checkbox"/> Better	Extreme fatigue/exhaustion? <input type="checkbox"/> N/A	<input type="checkbox"/> Worse <input type="checkbox"/> Same <input type="checkbox"/> Better
Muscle or joint pain? <input type="checkbox"/> N/A	<input type="checkbox"/> Worse <input type="checkbox"/> Same <input type="checkbox"/> Better	Worse after physical or mental activity?	<input type="checkbox"/> Yes <input type="checkbox"/> No
Difficulty walking? <input type="checkbox"/> N/A	<input type="checkbox"/> Worse <input type="checkbox"/> Same <input type="checkbox"/> Better	Have you lost your taste or sense of smell?	<input type="checkbox"/> Yes <input type="checkbox"/> No
Difficulty doing own washing & dressing? <input type="checkbox"/> N/A	<input type="checkbox"/> Worse <input type="checkbox"/> Same <input type="checkbox"/> Better	Have you been eating less than usual for more than 1 week?	<input type="checkbox"/> Yes <input type="checkbox"/> No
Difficulty doing your usual activities (i.e. leisure or work)? <input type="checkbox"/> N/A	<input type="checkbox"/> Worse <input type="checkbox"/> Same <input type="checkbox"/> Better	Have you lost or gained a significant amount of weight without trying?	<input type="checkbox"/> Yes <input type="checkbox"/> No <input type="checkbox"/> Lost <input type="checkbox"/> Gained
Mood Related Symptoms? <input type="checkbox"/> Yes <input type="checkbox"/> N/A <input type="checkbox"/> Unsure		Issues with pain or discomfort? <input type="checkbox"/> N/A	<input type="checkbox"/> Worse <input type="checkbox"/> Same <input type="checkbox"/> Better
Experiencing anxiety? <input type="checkbox"/> N/A	<input type="checkbox"/> Worse <input type="checkbox"/> Same <input type="checkbox"/> Better	Difficulty sleeping? <input type="checkbox"/> N/A	<input type="checkbox"/> Worse <input type="checkbox"/> Same <input type="checkbox"/> Better
Experiencing depression? <input type="checkbox"/> N/A	<input type="checkbox"/> Worse <input type="checkbox"/> Same <input type="checkbox"/> Better	Headaches? <input type="checkbox"/> N/A	<input type="checkbox"/> Worse <input type="checkbox"/> Same <input type="checkbox"/> Better

* Upon completion, providers should ask clients about additional symptoms that may have been missed.

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

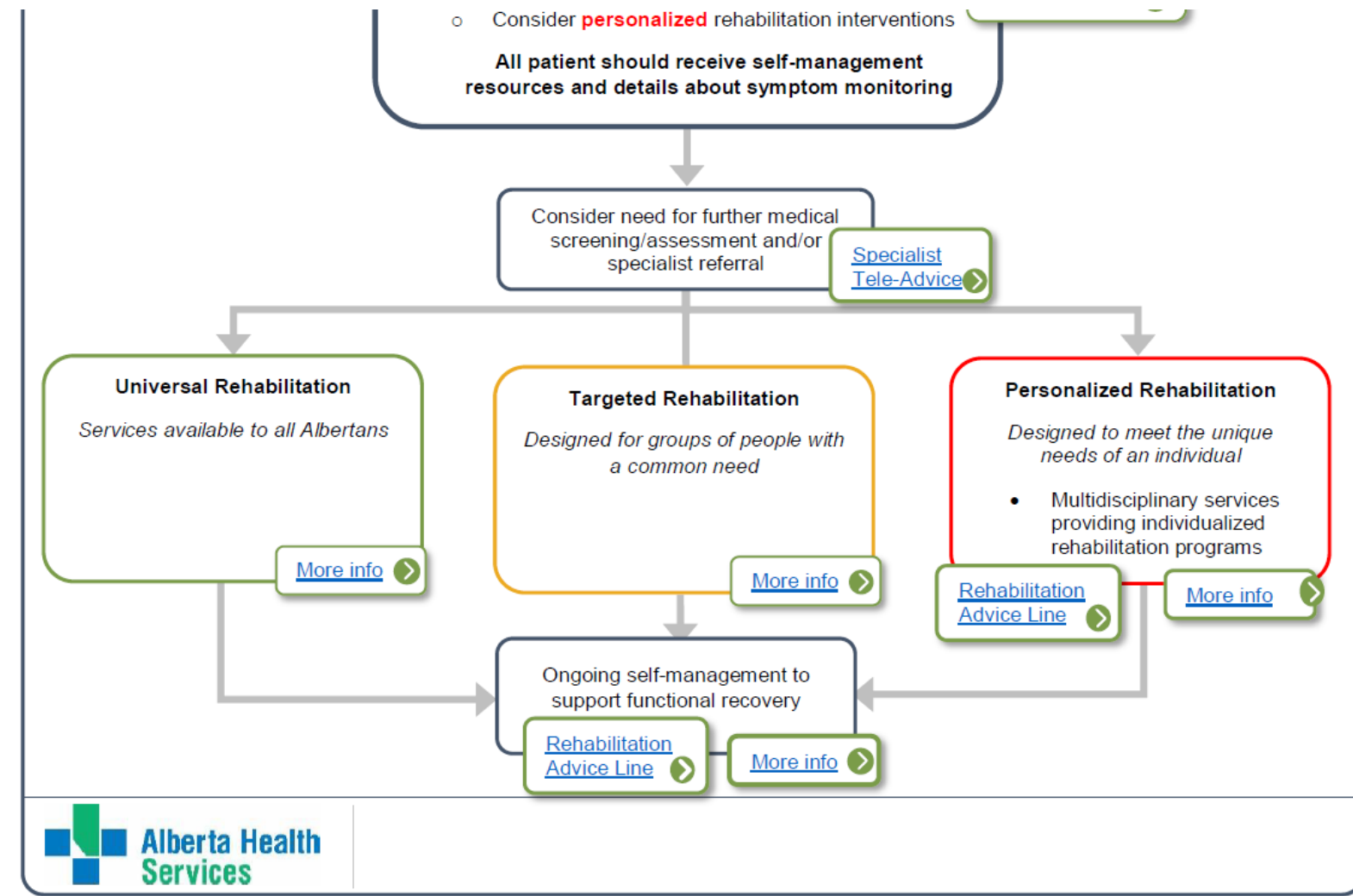
Severe functional impairment (Grade 3 to 4):

- 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](#) >



Background

- **ECC Taskforce**

- Develop zone pathways that reflect local services
- Track patient data and provide clinical system supports
- Identify required resources
- Leverage technology/virtual solutions
- Communications

Clinician Resources

- **Rehabilitation Screening tool – Physical Sequelae**
- **Rehabilitation Prioritization considerations**
- **Treatment considerations**

Post-COVID



Chronic Fatigue

Mental Health Concerns

Shortness of Breath

Memory Problems

Muscle Soreness &
Weakness

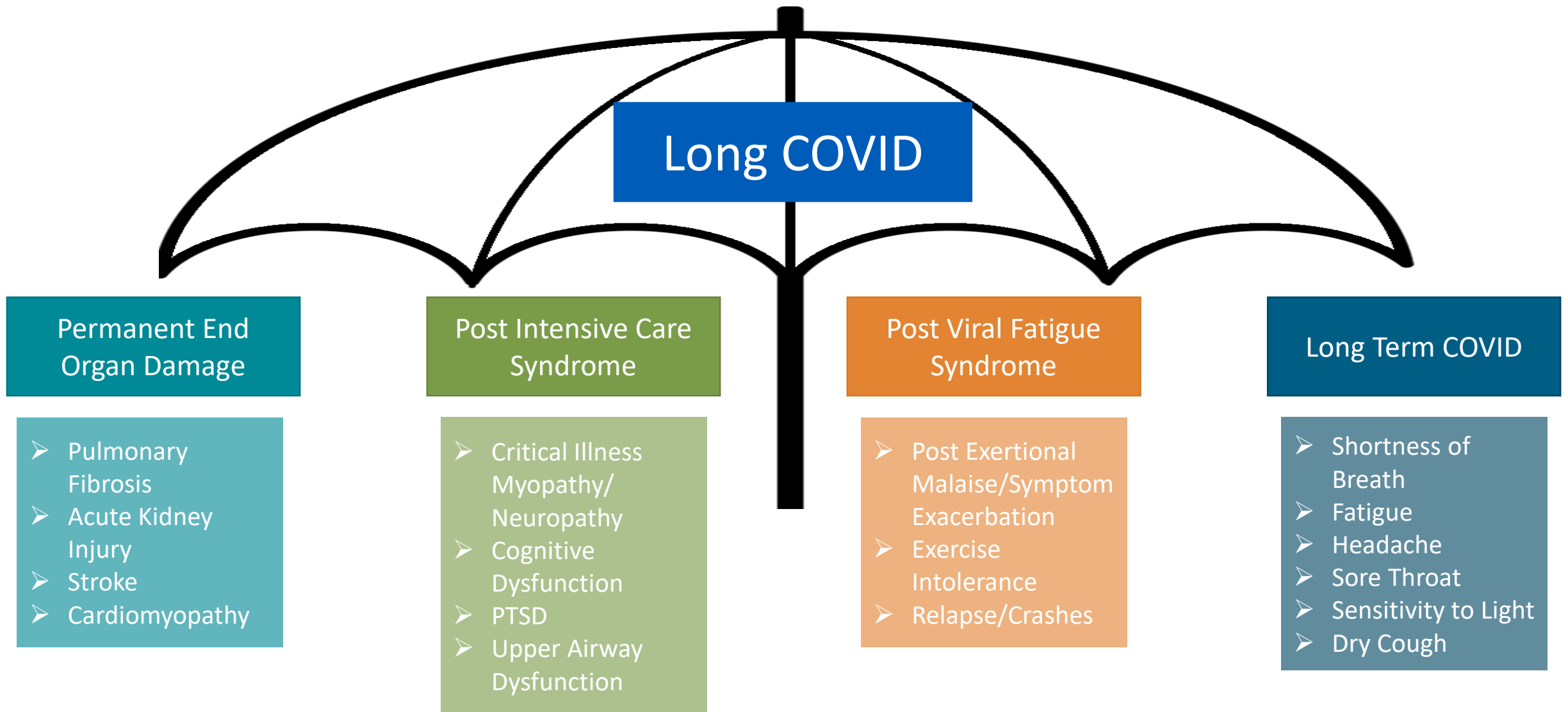
Persistent Cough

Joint Pain

Clinical presentation of COVID 19

New considerations that impact clinical decision making:

1. Post-Exertional Symptom Exacerbation
2. Cardiac Impairment
3. Significant Dyspnea
4. Exertional Oxygen Desaturation
5. Dysautonomia and Orthostatic Intolerances



Post-Exertional Symptom Exacerbation

Triggering or worsening of symptoms following physiological stress and/or cognitive activity (Mateo, 2020)

Survey response to “worsening or relapse of symptoms after physical or mental activity during COVID-19 recovery” – **89.1%** (Davis, 2021)

Symptom exacerbation typically occurs 12 to 48 hours after activity and can last for days or even weeks

Rehab Implications

PEM/PESE Onset:

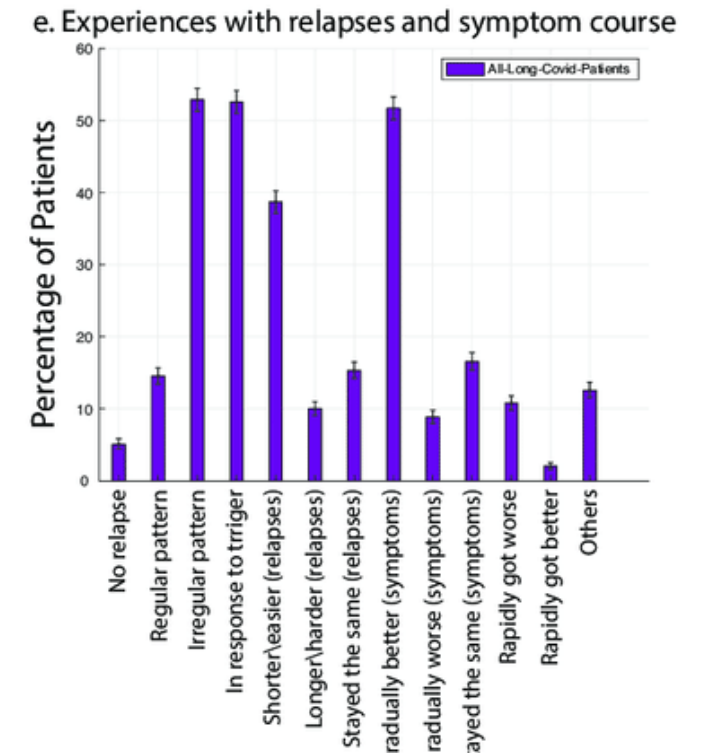
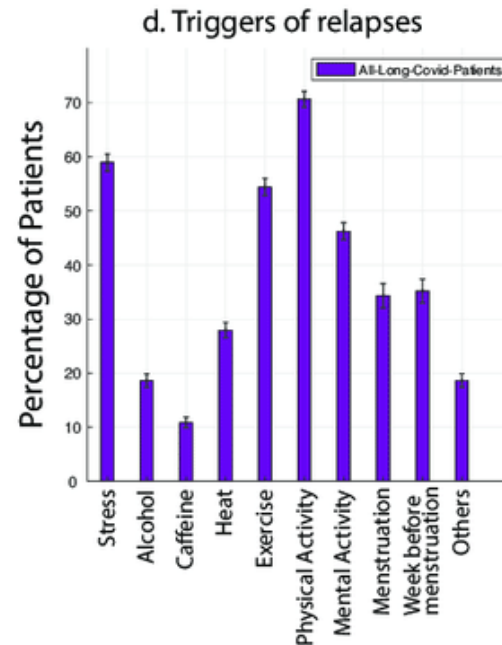
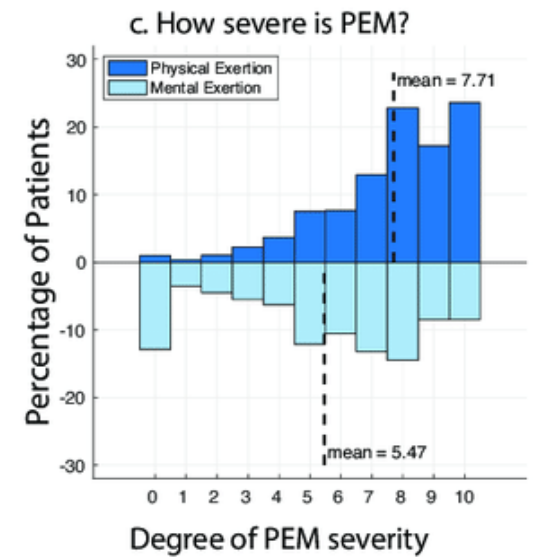
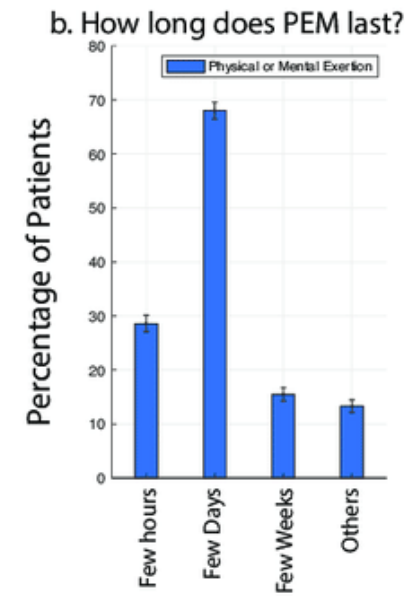
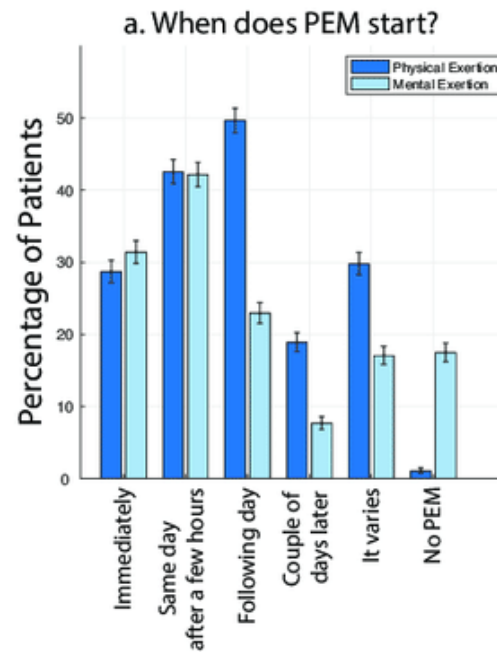
- Same day/ following day

PEM/PESE Triggers:

- Exercise
- Physical activity
- Mental activity

PEM/PESE Relapses:

- Irregular pattern
- In response to triggers
- Gradually improve with time



MEA Statement: Graded Exercise Therapy is not a safe and effective treatment for ME/CFS or Long Covid

March 12, 2021

1.11.16 Do not offer people with ME/CFS:

- any therapy based on physical activity or exercise as a treatment or cure for ME/CFS
- generalised physical activity or exercise programmes – this includes programmes developed for healthy people or people with other illnesses
- **any programme based on fixed incremental increases in physical activity or exercise, for example graded exercise therapy**
- structured activity or exercise programmes that are based on deconditioning as the cause of ME/CFS

Cardiac Impairment

Rate of cardiac injury is substantial **> 20%** (Fu, 2021)

Mild cardiac impairment in individuals with long COVID **32%** (Dennis, 2020)

Cardiac Impairments:

- Myocarditis
- Pericarditis
- Arrhythmias
- Thromboembolic disease
- Heart Failure

Cardiac Impairment

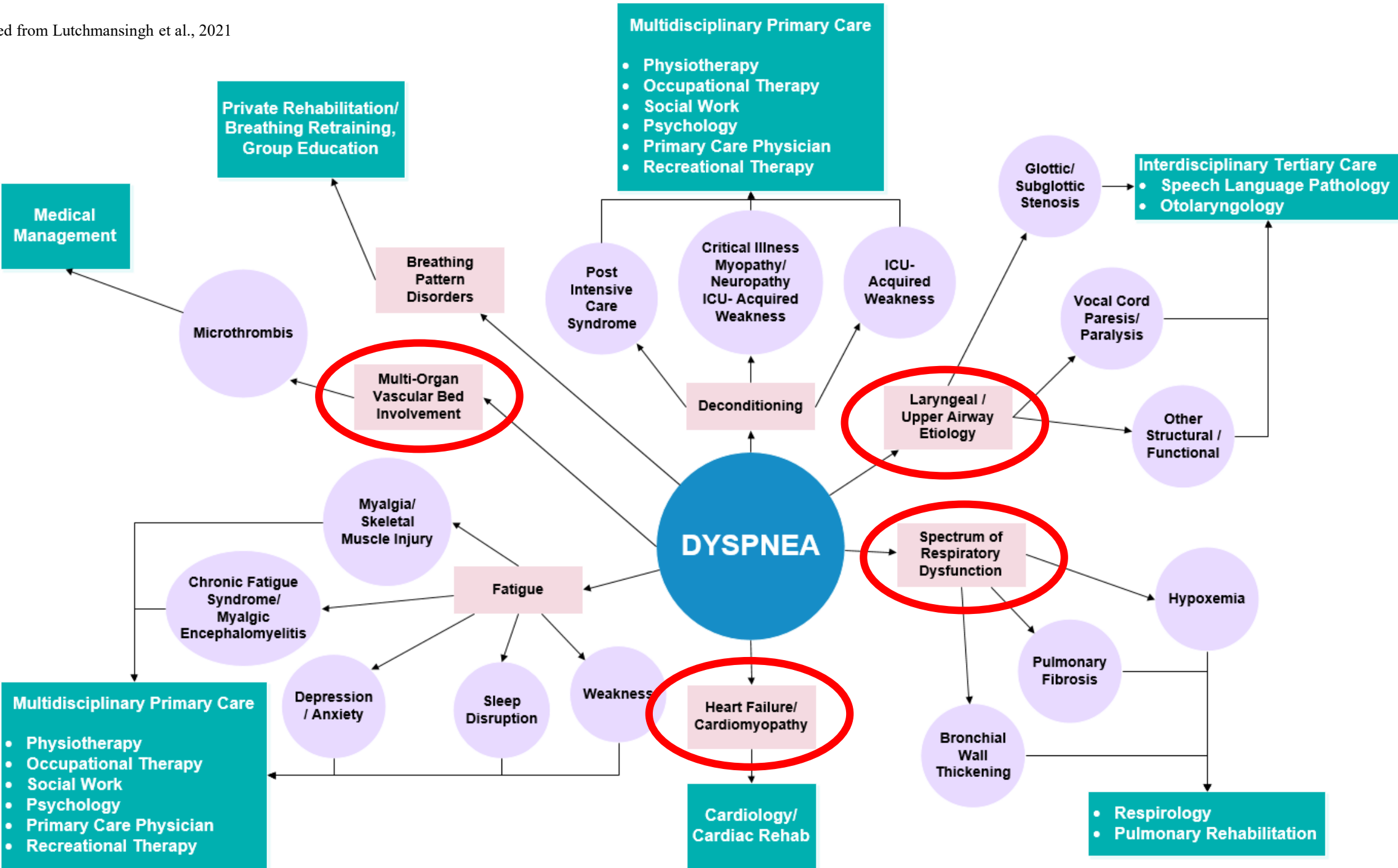
Cardiac Symptoms & Possible **Red Flags**:

- Palpitations
- Inappropriate tachycardia
- Chest pain
- Marked reduction in fitness
- Disproportionate breathlessness

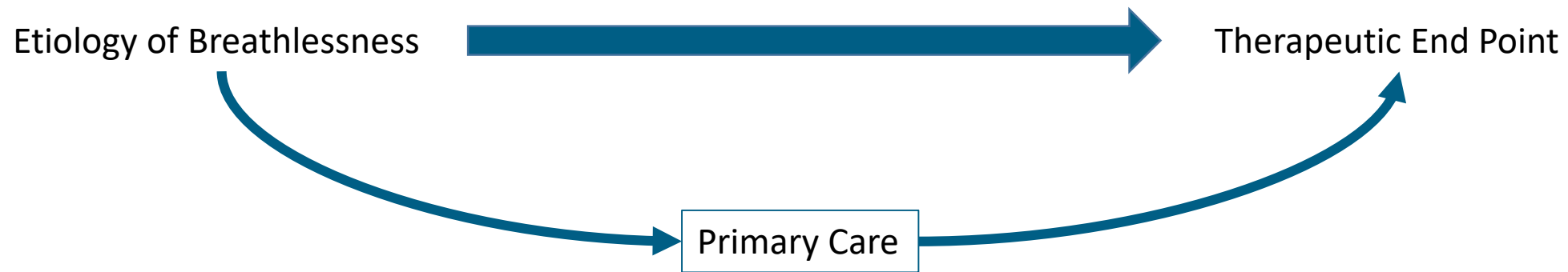
* Consider referral back to primary care provider or cardiologist if required.

Significant Dyspnea

Long term respiratory symptoms are present
in up **to 29%** of COVID-19 survivors (Huang, 2021)



Significant Dyspnea



Example:

Respiratory Disease



Pulmonary Rehabilitation

Upper Airway Dysfunction



Pulmonary Rehabilitation

Exertional Oxygen Desaturation

Desaturation >4% 1-month post-discharge- **32%** (Greenhalgh, 2020)

Etiology of desaturation: ?

- Pulmonary fibrosis
- Thromboembolic disease
- RBC dysfunction?

Exertional Oxygen Desaturation

Rehab Implications:

- Cannot train a hypoxic or hypoxemic patient
- Hypothesized etiologies need to be addressed or cleared in primary care
- Quantifying exertional desaturation:
 - During mild exertion, **a fall in oxygen saturation of $\geq 5\%$ or below 90% for patients without known lung pathology** (88% with known lung pathology) is considered abnormal (ATS/ACCP 2003, Dempsey & Wagner 1985, Bota & Rowe 1995).

Dysautonomia and Orthostatic Intolerances

Dysautonomia

Range of clinical conditions characterized by dysfunction in the autonomic nervous system (Rocha et al, 2021)

Post COVID patients may experience (Raj et al, 2021):

- Orthostatic Intolerance
- Postural Orthostatic Tachycardia Syndrome (POTS)

Dysautonomia and Orthostatic Intolerances

Orthostatic Intolerance (Brignole, 2007)

- Movement into an upright position results in symptomatic arterial hypotension
- ANS fails to respond to the challenges imposed by upright positioning

Postural Orthostatic Tachycardia Syndrome (POTS) (Rocha et al, 2021)

- Sustained increase in HR ≥ 30 bpm or ≥ 120 bpm, in the first 10 minutes of being in an upright position, without classical orthostatic hypotension
- Other symptoms include dizziness, weakness, presyncope and heart palpitations

Dysautonomia and Orthostatic Intolerances

Note:

Many symptoms of orthostatic hypotension and POTS are difficult to differentiate from cardiac conditions. As a result, it is important to assess heart rate parameters and orthostatic hypotension if these conditions are suspected.

Screening Tool for Post-COVID Physical Sequelae

IMPAIRMENT	SCREENING QUESTIONS (check or circle the appropriate answer based on client's response)	OUTCOME																		
Post Exertional Symptom Exacerbation (PESE)	DePaul Symptom Questionnaire Post Exertional Malaise subscale (DSQ-PEM): <i>"For each symptom below, please circle one number for frequency and one number for severity" (complete left to right)</i>	Positive for PESE • Activity and/or exercise must be titrated <u>below</u> the level that symptoms are exacerbated. • Typical graded exercise (i.e. overload principal) may be detrimental • Proceed with pacing and energy conservation Negative for PESE • Proceed with graded exercise. • PESE can occur at any time. Continue to monitor symptoms and re-screen as appropriate																		
	<table border="1"> <thead> <tr> <th>Symptoms</th> <th>Frequency: Throughout the <u>past 6 months</u>, how often have you had this symptom? For each symptom listed below, circle a number: 0 = none of the time 1 = a little of the time 2 = about half the time 3 = most of the time 4 = all of the time</th> <th>Severity: Throughout the <u>past 6 months</u>, how much has this symptom bothered you? For each symptom listed below, circle a number: 0 = symptom not present 1 = mild 2 = moderate 3 = severe 4 = very severe</th> </tr> </thead> <tbody> <tr> <td>1. Dead, heavy feeling after starting to exercise</td> <td>0 1 2 3 4</td> <td>0 1 2 3 4</td> </tr> <tr> <td>2. Next day soreness or fatigue after non-strenuous, everyday activities</td> <td>0 1 2 3 4</td> <td>0 1 2 3 4</td> </tr> <tr> <td>3. Mentally tired after the slightest effort</td> <td>0 1 2 3 4</td> <td>0 1 2 3 4</td> </tr> <tr> <td>4. Minimum exercise makes you physically tired</td> <td>0 1 2 3 4</td> <td>0 1 2 3 4</td> </tr> <tr> <td>5. Physically drained or sick after mild activity</td> <td>0 1 2 3 4</td> <td>0 1 2 3 4</td> </tr> </tbody> </table>		Symptoms	Frequency: Throughout the <u>past 6 months</u> , how often have you had this symptom? For each symptom listed below, circle a number: 0 = none of the time 1 = a little of the time 2 = about half the time 3 = most of the time 4 = all of the time	Severity: Throughout the <u>past 6 months</u> , how much has this symptom bothered you? For each symptom listed below, circle a number: 0 = symptom not present 1 = mild 2 = moderate 3 = severe 4 = very severe	1. Dead, heavy feeling after starting to exercise	0 1 2 3 4	0 1 2 3 4	2. Next day soreness or fatigue after non-strenuous, everyday activities	0 1 2 3 4	0 1 2 3 4	3. Mentally tired after the slightest effort	0 1 2 3 4	0 1 2 3 4	4. Minimum exercise makes you physically tired	0 1 2 3 4	0 1 2 3 4	5. Physically drained or sick after mild activity	0 1 2 3 4	0 1 2 3 4
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	DSQ-PEM Scoring • Items 1-5: A frequency and severity score of ≥ "2,2" on any item 1-5 is indicative of PESE • If positive for PESE, question 6-10 can be used to help guide intervention																			
	Optional Questions (if positive for PESE): <i>"For each question below, choose the answer which best describes your PESE symptoms."</i>																			
6. If you were to become exhausted after actively participating in extracurricular activities, sports, or outings with friends, would you recover within an hour or two after the activity ended? <input type="checkbox"/> Yes <input type="checkbox"/> No																				
7. Do you experience a worsening of your <u>fatigue/energy related illness</u> after engaging in minimal physical effort? <input type="checkbox"/> Yes <input type="checkbox"/> No																				
8. Do you experience a worsening of your <u>fatigue/energy related illness</u> after engaging in mental effort? <input type="checkbox"/> Yes <input type="checkbox"/> No																				
9. If you feel worse after activities, how long does this last? ≤1h 2-3h 4-10h 11-13h 14-23h ≥24h																				
10. If you do not exercise, is it because exercise makes your symptoms worse? <input type="checkbox"/> Yes <input type="checkbox"/> No																				
Cardiac Symptoms	"Since your symptoms of COVID-19" 1)...can you feel your heart racing with simple activities? <input type="checkbox"/> Yes <input type="checkbox"/> No 2)...are you experiencing palpitations? <input type="checkbox"/> Yes <input type="checkbox"/> No 3)...do you have chest pain at rest? <input type="checkbox"/> Yes <input type="checkbox"/> No 4)...do you have chest pain with activity? <input type="checkbox"/> Yes <input type="checkbox"/> No	If "Yes" to <u>any</u> of the 4 questions, consider referral back to primary care physician or specialist for further cardiac investigation.																		

IMPAIRMENT	SCREENING QUESTIONS	OUTCOME												
Significant Dyspnea	Adapted MRC Breathlessness Scale <i>(Complete top to bottom, if "yes" to any question proceed to the next grade.)</i> <table border="1"> <thead> <tr> <th>Grade</th> <th>Degree of breathlessness related to activities</th> </tr> </thead> <tbody> <tr> <td>0</td> <td>Are you ever troubled by breathlessness during non-strenuous activity?</td> </tr> <tr> <td>1</td> <td>Are you short of breath when hurrying on level ground or walking up a slight hill?</td> </tr> <tr> <td>2</td> <td>Do you have to walk slower than most people on level ground or do you have to stop after 15 minutes of walking at your own pace?</td> </tr> <tr> <td>3</td> <td>Do you have to stop for breath after walking about 100 yards or after a few minutes on level ground?</td> </tr> <tr> <td>4</td> <td>Are you too breathless to leave the house, or breathless when undressing?</td> </tr> </tbody> </table>	Grade	Degree of breathlessness related to activities	0	Are you ever troubled by breathlessness during non-strenuous activity?	1	Are you short of breath when hurrying on level ground or walking up a slight hill?	2	Do you have to walk slower than most people on level ground or do you have to stop after 15 minutes of walking at your own pace?	3	Do you have to stop for breath after walking about 100 yards or after a few minutes on level ground?	4	Are you too breathless to leave the house, or breathless when undressing?	Score of 4: Refer back to primary care physician for further investigation (i.e. PFT, chest x-ray, etc.). Score of ≤ 3: Proceed with assessment for exertional oxygen desaturation.
Grade	Degree of breathlessness related to activities													
0	Are you ever troubled by breathlessness during non-strenuous activity?													
1	Are you short of breath when hurrying on level ground or walking up a slight hill?													
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Exertional Oxygen Desaturation	To assess for exertional oxygen desaturation, the PT involved should complete one of the following tests: <ul style="list-style-type: none"> 1 Minute Sit to Stand Test 2 Minute Step Test 6 Minute Walk Test (6MWT) Note: Oxygen saturation (SpO2) should be monitored throughout test and for at least 1 minute post. Exertional Oxygen Desaturation = SpO2 drops ≥5% <u>or</u> below 90% for patients without known lung pathology (88% for those with known lung pathology).	Positive Screen Refer to primary care physician for further investigation. If medically cleared continue with pacing. Negative Screen Exertional oxygen desaturation can occur at any time. Continue to monitor symptoms and re-screen as appropriate.												
Dysautonomia	"Since your symptoms of COVID-19" 1)...do you feel lightheaded after you change position? <input type="checkbox"/> Yes <input type="checkbox"/> No 2)...do you feel unwell when sitting upright or standing? <input type="checkbox"/> Yes <input type="checkbox"/> No If "Yes" to <u>either</u> question, complete the Active Stand Test to screen for orthostatic hypotension (OH) or postural orthostatic tachycardia syndrome (POTS). During the Active Stand Test, blood pressure (BP) and heart rate (HR) should be measured after 5 minutes in supine, the immediately upon standing and at 2, 5 and 10 minutes. <ul style="list-style-type: none"> Orthostatic hypotension (OH) = A fall in systolic blood pressure (SBP) of >20mm Hg or diastolic blood pressure (DBP) > 10 mm Hg from baseline. Postural orthostatic tachycardia syndrome (POTS) = Sustained elevation of HR ≥ 30 bpm from baseline or ≥ 120 bpm, in the first 10 minutes of being in an upright position. 	If patient screens positive for OH, provide education and proceed with symptom titrated activity and exercise. If patient screens positive for POTS, refer back to primary care physician for further investigation.												

Colter, J., Holtzman, C., Dudun, C., & Jason, L. A. (2018). A brief questionnaire to assess post-exertional malaise. *Diagnostics*, 8(3): 66. [10.3390/diagnostics8030066](https://doi.org/10.3390/diagnostics8030066). Adapted with permission.

Medical Research Council. 1959 MRC Breathlessness Scale. 1959. Available from: <https://mrc.ukri.org/documents/doc/1959-mrc-breathlessness-scale/>. Used with the permission of the Medical Research Council. Adapted with permission.

IMPAIRMENT	SCREENING QUESTIONS (check or circle the appropriate answer based on client's response)			OUTCOME
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	4. Minimum exercise makes you physically tired	0 1 2 3 4	0 1 2 3 4	
	5. Physically drained or sick after mild activity	0 1 2 3 4	0 1 2 3 4	
	DSQ-PEM Scoring <ul style="list-style-type: none"> Items 1–5: A frequency and severity score of \geq "2,2" on any item 1–5 is indicative of PESE If positive for PESE, question 6-10 can be used to help guide intervention 			

Optional Questions (if positive for PESE):

"For each question below, choose the answer which best describes your PESE symptoms."

6. If you were to become exhausted after actively participating in extracurricular activities, sports, or outings with friends, would you recover within an hour or two after the activity ended?	<input type="checkbox"/> Yes <input type="checkbox"/> No
7. Do you experience a worsening of your fatigue/energy related illness after engaging in minimal physical effort?	<input type="checkbox"/> Yes <input type="checkbox"/> No
8. Do you experience a worsening of your fatigue/energy related illness after engaging in mental effort?	<input type="checkbox"/> Yes <input type="checkbox"/> No
9. If you feel worse after activities, how long does this last?	<div>≤1h 2-3h 4-10h</div> <div>11-13h 14-23h ≥24h</div>
10. If you do not exercise, is it because exercise makes your symptoms worse?	<input type="checkbox"/> Yes <input type="checkbox"/> No

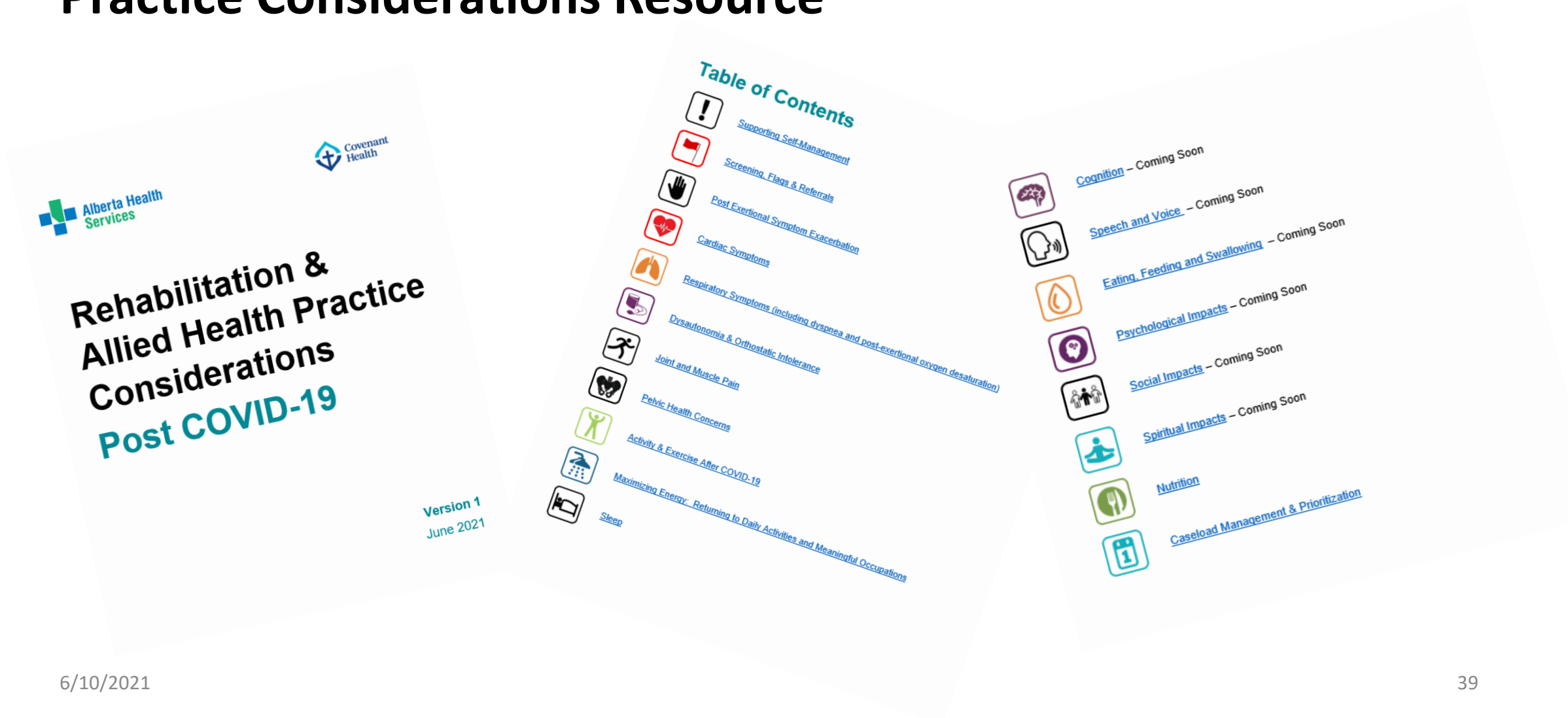
<p>Cardiac Symptoms</p> <p>*Consider recent medical clearance, baseline status and/or pre-existing conditions when determining if patient requires further medical investigation.</p>	<p><u>“Since your symptoms of COVID-19”...</u></p> <p>1)...can you feel your heart racing with simple activities? <input type="checkbox"/> Yes <input type="checkbox"/> No</p> <p>2)...are you experiencing palpitations?” <input type="checkbox"/> Yes <input type="checkbox"/> No</p> <p>3)...do you have chest pain at rest?” <input type="checkbox"/> Yes <input type="checkbox"/> No</p> <p>4)...do you have chest pain with activity?” <input type="checkbox"/> Yes <input type="checkbox"/> No</p>	<p>If “Yes” to <u>any</u> of the 4 questions, consider referral back to primary care physician or specialist for further cardiac investigation.</p>
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Significant Dyspnea *Consider recent medical clearance, baseline status and/or pre-existing conditions when determining if patient requires further medical investigation.	Adapted MRC Breathlessness Scale (Complete top to bottom, if “yes” to any question proceed to the next grade.)		Score of 4: Refer back to primary care physician for further investigation (i.e. PFT, chest x-ray, etc.). Score of ≤ 3: Proceed with assessment for exertional oxygen desaturation.
	Grade	Degree of breathlessness related to activities	
	0	<i>Are you ever troubled by breathlessness during non-strenuous activity?</i>	
	1	<i>Are you short of breath when hurrying on level ground or walking up a slight hill?</i>	
	2	<i>Do you have to walk slower than most people on level ground or do you have to stop after 15 minutes of walking at your own pace?</i>	
	3	<i>Do you have to stop for breath after walking about 100 yards or after a few minutes on level ground?</i>	
	4	<i>Are you too breathless to leave the house, or breathless when undressing?</i>	

<p>Exertional Oxygen Desaturation</p> <p>*Consider recent medical clearance, baseline status and/or pre-existing conditions when determining if patient requires further medical investigation.</p>	<p>To assess for exertional oxygen desaturation, the PT involved should complete one of the following tests:</p> <ul style="list-style-type: none"> • 1 Minute Sit to Stand Test • 2 Minute Step Test • 6 Minute Walk Test (6MWT) <p>Note: Oxygen saturation (SpO₂) should be monitored throughout test and for at least 1 minute post.</p> <p>Exertional Oxygen Desaturation = SpO₂ drops $\geq 5\%$ <u>or</u> below 90% for patients without known lung pathology (88% for those with known lung pathology).</p>	<p><u>Positive Screen</u></p> <p>Refer to primary care physician for further investigation. If medically cleared continue with pacing.</p> <p><u>Negative Screen</u></p> <p>Exertional oxygen desaturation can occur at any time. Continue to monitor symptoms and re-screen as appropriate.</p>
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<p>Dysautonomia</p> <p>*Consider recent medical clearance, baseline status and/or pre-existing conditions when determining if patient requires further medical investigation.</p>	<p><i>“Since your symptoms of COVID-19”...</i></p> <p>1)...do you feel lightheaded after you change position? <input type="checkbox"/> Yes <input type="checkbox"/> No</p> <p>2)...do you feel unwell when sitting upright or standing? <input type="checkbox"/> Yes <input type="checkbox"/> No</p> <p>If “Yes” to <u>either</u> question, complete the Active Stand Test to screen for orthostatic hypotension (OH) or postural orthostatic tachycardia syndrome (POTS).</p> <p>During the Active Stand Test, blood pressure (BP) and heart rate (HR) should be measured after 5 minutes in supine, the immediately upon standing and at 2, 5 and 10 minutes.</p> <ul style="list-style-type: none"> • Orthostatic hypotension (OH) = A fall in systolic blood pressure (SBP) of >20mm Hg or diastolic blood pressure (DBP) > 10 mm Hg from baseline. • Postural orthostatic tachycardia syndrome (POTS) = Sustained elevation of HR \geq 30 bpm from baseline or \geq 120 bpm, in the first 10 minutes of being in an upright position. 	<p>If patient screens positive for OH, provide education and proceed with symptom titrated activity and exercise.</p> <p>If patient screens positive for POTS, refer back to primary care physician for further investigation.</p>
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Practice Considerations Resource



For more information:

- Post COVID Provider Resource Webpage (AHS external)
 - [COVID-19 Recovery & Rehabilitation After COVID-19: Resources for Health Professionals | Alberta Health Services](#)
- Allied Health Practice and Education Hub
 - [Post-COVID Clinician Resources - All Documents \(ahsnet.ca\)](#)
- Practice.consultation@ahs.ca

Additional Webinars:

- **June 15** – Maximizing Energy and Returning to Daily Activities and Meaningful Occupations
- **June 22** – Resuming Activity & Exercise
- **June 29** – Psychological, Spiritual and Social Considerations Important in Post-COVID Care
- **July 6** – Neurocognitive Sequelae, Functional Cognition and Cognitive Communication
- **July 13** – Nutrition, Eating, Feeding and Swallowing
- **July 20** – Re-engagement in the Community

Questions?

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