

# **COVID-19 Case Study**

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# Case Study

Mr. R. is a 60 year old male

- Diagnosed with COVID-19 on 4/7/20
  - Initial symptoms included cold-like symptoms, anosmia, ageusia, and myalgia
  - Not hospitalized but slept for 3 days
  - Began to feel minimal improvement after 3 months
  - Exertion worsens symptoms
  - Pulmonary Function Test in October 2020 demonstrated normal spirometry
  - Chest CT in October 2020 only noted a small pulmonary nodule
  - Saw pulmonologist 1/5/21 and was prescribed Albuterol and Flovent
  - PASC symptoms of brain fog, anosmia, persistent cough, lethargy/fatigue, shortness of breath, tinnitus, and migraines persist
  - He reports feeling 20% of himself pre-COVID
  - Initiated care with PT on 4/14/21 (1 year after initial diagnosis of COVID-19)
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# Medical History

**Past Medical History:** L inguinal hernia, L RTC tear, GSW to L elbow, hypothyroid, gout, ED, obesity

**Past Surgical History:** L inguinal hernia repair, R 2nd toe ORIF, L bunionectomy, L knee meniscectomy

**Tobacco History:** Never smoker

Denies marijuana use; drinks beer only when watching sporting events

**Medications:** Allopurinol, Levothyroxine, Advair, Flovent

**Vaccinations:** Influenza and COVID-19 (Moderna)

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# Social History

**Home:** Lives with his wife and 3 adult children

**Occupation:** Police officer for Boston PD

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**Physical Therapy Evaluation (4/14/21)**  
**PT Re-Evaluation (8/18/21)**

	<b>PT visit #1</b>	<b>PT visit #5</b>
<b>10 Minute Standing Test</b>	positive	not tested
<b>Short Physical Performance Battery (SPPB)</b>	12/12	12/12
<b>6MWT</b>	1650 ft (79% predicted)	1660 ft (79% predicted)
<b>Duke Activity Status Index (DASI)</b>	34.95/58.2 (7.04 METs)	28.7/58.2 (6.27 METs)
<b>mMRC Dyspnea Scale</b>	3/4 (moderate-severe)	2/4 (moderate)
<b>Fatigue Severity Scale (FSS)</b>	60/63	54/63

# Occupational Therapy Evaluation

## Test Of Everyday Attention:

- Deficits with focused, selective and shifting attention, working memory, processing speed.
- Re-tested 4 months later, improvements in all subtests (initially in 1-5th); remaining in around the 30th percentile

## Rivermead Behavioral Memory Test: 8th percentile overall

- Deficits in verbal and prospective memory
  - Re-tested 4 months later, 30th percentile overall
  - Remaining deficits in verbal memory
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# Executive Functioning/ Return to Work Assessment

#	Demonstrated ability	competative	environmental accomodation	Personal accomodation	Personal assistance	unabl e	Not evaluated
1	Ability to understand instructions	x					
2	Ability to apply instructions	x					
3	Ability to organize workspace resources			x			
4	Ability to utilize organization and cues			x			
5	Ability to ignore unnecessary parts				x		
6	Ability to avoid errors			x			
7	Ability to identify errors	x					
8	Ability to correct errors	x					
9	Ability to shift from one task to another			x			
10	Ability to determine activity completion			x			
		x4	x3	x2	x1	<b>Sum</b>	<b>avg 2.6</b>

Instructional preference (manual vs model)

Demand level of task completed L

14 min total

Employment rating 2.6 Personnel accomodation: Even with accommodations, cueing and guidance from workers or supervisors is necessary. With these accommodations, modifications, cueing and guidance, would be able to work at a speed and with productivity and an error rate equal to other workers performing similar tasks.

Voicemail score 13/25

# Return to Work?

- Period of enforced rest from the onset has the best prognosis<sup>1</sup>
- Most common symptoms after 6 months: fatigue, tiredness, cognitive dysfunction<sup>2</sup>
- 45% of long-covid respondents required a reduced work schedule<sup>2</sup>
- Prognosis is poor if patient has been on sick leave > 2 years<sup>1</sup>
- Older age with worse employment outcomes<sup>2</sup>
- Most patients who RTW, work part-time or in a physically less demanding job<sup>1</sup>
- Those who RTW should not be forced to do more than they can to prevent relapse<sup>1</sup>

<sup>1</sup> Diagnostics (Basel). 2019 Dec;9(4):124

<sup>2</sup> <https://doi.org/10.1101/2020.12.24.20248802>

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# *Post-Acute COVID-19 Syndrome & Return to Work*

## **Additional resources...**

Thank you for attending the webinar. Here are some additional summary resources discussed during the Q & A.

# ACOEM General Return-to-Work Recommendations

- Prioritize primary prevention over secondary prevention - it is even better to avoid illness/ injury through wellness, health promotion and workplace safety
- Adopt a secondary prevention approach designed to prevent work disability
- Learn about the worker's job and job tasks
- Avoid removing a patient from work entirely when possible and write clear work accommodations
- Differentiate between symptom-based concerns and those based on demonstrable tissue pathology
- Actively collaborate with all stakeholders and support problem-solving across diverse perspectives
- Be alert to iatrogenic effects such as medicalization of nonmedical issues, a focus on symptom relief instead of functional restoration, unnecessary delays in treatment and management, etc.
- Apply a biopsychosocial model
- Appreciate underlying attitudes, beliefs, and expectations (ABEs) of all stakeholders
- Acknowledge affected worker's psychological factors, ranging from normal reactions to maladaptive reactions, and work to preserve patient self-reliance

# Return to Work and PACS

- Until universally established constellation of symptoms identified and recognized, return to work will be on a case-by-case basis
- Will be dependent on pre-COVID baseline functional status as well as severity of acute COVID illness and comorbid conditions
- Will take multi-disciplinary approach
- Must encourage proper positive mental and physical framework for return to work:
  - Gradual increase in activity level intensity and duration as tolerated; begin at low intensity and duration with increasing intensity over time
  - Must consistently address psychological aspect of chronic disease
- Must remain engaged with supervisors and employers to determine opportunities for tele-work as needed and/or accommodations within the workplace

# Chronic illness coping

## Promote “Psychological Flexibility”

- Core principle in Acceptance & Commitment Therapy, an empirically supported approach to psychotherapy with good data on its utility in chronic illness (McCracken, 2011)
- “Psychological Flexibility” is a person’s ability to be aware of their current thoughts, emotions, and sensations, free of judgment and effort to escape, avoid, control, or extinguish unpleasant feelings
- Keeping patients in the present and minimizing catastrophizing is important
- Focus on functionality, not “right or wrong” or “correct or incorrect”
- Encourage a focus on usefulness in the moment

## Existing behavioral health approaches to managing chronic illness may be helpful, such as:

- Behavioral Interventions
- Cognitive Behavioral Therapy approaches
- Mindfulness techniques
- Supportive psychotherapy