Post COVID-19 Recovery

Nutrition, Eating, Feeding & Swallowing

Provincial COVID Rehabilitation Provider Education Sessions

Ajay Mysore Narasimha MBA, R.SLP S-LP (C)
Christine Gregoire Gau, BSc OT, MRSc
Stephanie Krug, MAdEd, RD

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Land Acknowledgement

We acknowledge that we are gathered virtually today on the Territories of Treaty 6, Treaty 7, and Treaty 8 and Métis Regions 1, through 6.

These territories are home to many Indigenous Peoples, including the Blackfoot, Cree, Dene, Saulteaux, Ojibwe, Stoney Nakota Sioux, and Tsuut’ina peoples, the Métis Nations of Alberta and the 8 Métis Settlements.

We respect the Treaties that were made on these territories, we acknowledge the harms and mistakes of the past, and we dedicate ourselves to moving forward in partnership with Indigenous communities in a spirit of reconciliation and collaboration.
Acknowledgements

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Outline

1. Clinical presentation
   - Patient story
   - Common side-effects & symptoms

2. Screening & assessment tools

3. Key considerations for how to support your patient & their caregivers
Resource Access

Getting Healthy After COVID-19
AHS.ca/HealthyAfterCovid

On AHS Insite:
Guide to Clinical Feeding & Swallowing Assessment in Adults

Practice.Consultation@ahs.ca
Patient Story: Paul

• 50-year-old male
• Past medical history: HTN
• Presentation: Some chest discomfort, feeling short of breath, very mild sporadic cough.
  • AstraZeneca vaccine (Apr-2020)
  • Experienced worsening headaches accompanied by generalized pain and fevers
• COVID-19 +ive (18-May-2021)
• ICU stay: 42 days
  • Intubation and mechanical ventilation (18-May-2021)
  • Tracheostomy (16-Jun-2021)
  • Intake: NPO + NG tube feeds
Patient Story: Paul

- Received intensive rehabilitation with subsequent decannulation (26-Jun-2021)
  - VFSS completed (28-Jun-2021)
  - Oral nutrition (28-Jun-2021)
- Significant improvement with ADLs and mobility
- Complications: Bilateral frozen shoulders, sacral ulcer requiring debridement
- Discharge to home (5-Jul-2021)
  - Walker
  - Shower chair
Clinical Presentation of Post-COVID-19

Symptoms & side-effects

Malnutrition
Dysphagia
Movement
Respiration

Anosmia
Ageusia/Dysgeusia
Heartburn/GERD
Muscle wasting
Fat wasting

Weight loss
Weight gain
Malnutrition

Appetite changes
Dysphagia
Dysmotility
Vomiting
Nausea
Constipation
Diarrhea
Sarcopenia
Fatigue

7/13/2021
Post-COVID-19 Symptom Occurrence

COVID-19 Symptoms Persisting > 12 weeks

- Fever
- Diarrhea
- Nausea or vomiting
- Abdominal pain
- Sore throat
- Loss of appetite
- Palpitations
- Chest pain
- Cough
- Vertigo or dizziness
- Low mood
- Memory loss or confusion
- Loss of taste
- Worry anxiety
- Trouble sleeping
- Headache
- Loss of smell
- Difficulty concentrating
- Muscle ache
- Shortness of breath
- Weakness or tiredness

(Office for National Statistics (ons.gov.uk), 2021)

Dietetic Involvement Post-Discharge

- 29% RD post-discharge
- 71% No RD post-discharge

(The COVED Study, 2021)
Nutrition and EFS Screening Tools

CANADIAN NUTRITION SCREENING TOOL (CNST)

Identify patients who are at risk for malnutrition

Asks the patient the following questions:
- Yes/No

<table>
<thead>
<tr>
<th>Symptom</th>
<th>Score</th>
</tr>
</thead>
<tbody>
<tr>
<td>My swallowing problem has caused me to lose weight.</td>
<td>Score</td>
</tr>
<tr>
<td>My swallowing problem interferes with my ability to go out for meals.</td>
<td>Score</td>
</tr>
<tr>
<td>Swallowing liquids takes extra effort.</td>
<td>Score</td>
</tr>
<tr>
<td>Swallowing solids takes extra effort.</td>
<td>Score</td>
</tr>
<tr>
<td>Swallowing pills takes extra effort.</td>
<td>Score</td>
</tr>
</tbody>
</table>

Patients at nutrition risk need an assessment to confirm malnutrition.
Prevention, timely recognition and treatment of malnutrition should be standard care for patients with COVID-19

European Society for Clinical Nutrition and Metabolism (ESPEN)
**Post-COVID-19 Recovery: Nutrition**

<table>
<thead>
<tr>
<th>Topic</th>
<th>Description</th>
</tr>
</thead>
</table>
| **Macronutrients & hydration** | • Optimize calories, protein  
• Encourage hydration  
• Side-effects = challenges |
| **Mental & emotional health** | • Eating disorders & disordered eating  
• Low interest in eating  
• Worsening nutrition intake |
| **Micronutrients, probiotics, & functional foods** | • Correct lab values  
• Foods vs. supplements |
| **Unintentional weight gain** | • Change in eating patterns, stress, mental burden, reduced physical activity |
Post-COVID-19 Recovery: Nutrition

Practical strategies for Post-COVID-19 fatigue:

• Eat 6 smaller meals
• Use adaptive tools
• Try finger foods
• Modify textures
• Keep oral nutrition supplements or shelf-stable snacks in common areas at home
• Reheat ready-made foods
• Use meal or food delivery programs

Validate their experience

AHS.ca/Nutrition
Clinical Presentation – Red Flags

• Unintentional weight loss
• Dehydration
• Dyspnea
• Oxygen desaturation
• Pneumonia
• Fatigue
• With food or fluid consumption:
  • Cough
  • Voice changes
Post-COVID-19 Recovery: Dysphagia

COVID-19 related pathophysiology

- Stroke
- Encephalitis

- Critical-Illness PNP
  - Guillain-Barré-Syndrome

- Skeletal muscle injury

Architecture of the swallowing network

- Cortex
- Afferents
- Brainstem swallowing centers
- Cranial nerves V, VII, IX, X, XII, Spinal nerves C1-C3
- Swallowing musculature
- Sensory receptors within the oropharynx, larynx and oesophagus

Eating, Feeding and Swallowing Standardized Service (Adults)
Post-COVID-19 Recovery: Dysphagia

- Swallowing-breathing incoordination
- Visual attention
- Executive function
- Posture
- Mobility
- Oral Commencement
- Endotracheal vs tracheostomy

DECONDITIONING

EMOTIONAL HEALTH

HIGH FLOW NASAL CANNULA

COGNITIVE STATUS

POST INTENSIVE CARE SYNDROME (PICS)

PHYSICAL ABILITIES

On AHS Insite:

Eating, Feeding and Swallowing Standardized Service (Adults)

COMPLICATIONS
- Sedation
- Delirium
- High volume expectoration
Post-COVID-19 Recovery: Dysphagia

Instrumental Assessments: VFSS

• Clients recovering from severe COVID-19 and long stay in the ICU
  • Higher incidence of swallowing disorder and silent aspiration

FEES: fewer studies
  • AGMP (Aerosol Generating Medical Procedure)

SA Swallowing Services, PLLC. (2021). FEES 2021: Instrumental Dysphagia Assessment

On AHS Insite:
Eating, Feeding and Swallowing Standardized Service (Adults)

Lee, Lee, Yoo, & Shin, 2017
Post-COVID-19 Recovery: SLP

Dysphonia

• Prevalence of Dysphonia: 70% of patients admitted with COVID-19 (Archer et.al, 2021)

• Patients with dysphonia and intubated >5 days have increased risk for laryngeal injury and voice impairment (Archer et.al, 2021)

• Risk factors: Prolonged intubation and prone-positioning

Laryngeal complications

- Unilateral vocal fold immobility
- Posterior glottic stenosis
- Subglottic stenosis
Post-COVID-19 Recovery: OT
Posture and Positioning

Figure 1. Recommended safe positioning in a standard or modified wheelchair as well as in an armchair. Client in an upright position as close to 90° as possible, feet on leg rests. Pillows or bolsters can be used to help obtain an upright position (Szpiech, 2014).

Figure 2. Recommended safe positioning in bed with head of bed anywhere between 75° and 90°. Use pillows and bolsters to prevent sliding in bed while maintaining an upright position (Szpiech, 2014).

Images from: Self feeding with the Adult Population: Back to Basics AOTA August 2020

Images retrieved from https://www2.hse.ie/conditions/covid19/symptoms/breathlessness/
Post-COVID-19 Recovery: OT

Cognition

- ‘Brain fog’ can last for months after the initial infection.
- Clinically significant cognitive impairment can range
- From 59% to 65% of hospitalized individuals with COVID (Miskowiak, 2021)

Psychosocial and cultural impact

- Anxiety – Breathlessness cycle

Post-COVID-19 Recovery: OT

Energy conservation

• Patient logging and monitoring
  • Modified Borg
  • Pulse oximeters
    • Practicalities and cautions (Greenlaugh et al 2021)
Post-COVID-19 Recovery: OT
Adaptive Equipment
Post-COVID-19 Recovery: OT

• Screening, assessment, and diagnostic assessments are widely available.

• Two examples of PROMS to evaluate the patient’s perception of health and quality of life are presented.

• Consideration of how impairment impacts activity, participation, and wellbeing.

• Incorporates caregiver, family perspectives. Reflects change across points of care.
  - Australia Therapy Outcome Measures / AusTOMS

• Consideration of outcomes important to patients.
  - Swallowing Quality of Life questionnaire / SWAL-QOL
  - 10 domains
  - Scored 0-100 (extremely impaired to no impairment)
Nutrition, Eating, Feeding & Swallowing: Key Messages
Patient Education Workshops

Helping You Feel Better after COVID-19

AHLP Calgary Zone
• Open to all Albertans

For more details or to register:
• Visit ahs.ca/ahlp → Calgary Zone → Online Registration
• Call 403-943-2584 (long distance charges may apply)
## Community Referrals

### Registered Dietitian
- [AHS.ca/Nutrition](#)
- [AHS.ca/NutritionResources](#)
- [Albertareferraldirectory.ca](#)

  **If patients have ?’s or for self-referrals**
  - Health Link 811 (ask to talk to a dietitian)
  - [AHS.ca/NutritionWorkshops](#)
  - Alberta Healthy Living Program

### Speech-Language Pathologist
- [Albertareferraldirectory.ca](#)

  **If patients have ?’s or for self-referrals**
  - Family Physician
  - Health Link 811

### Occupational Therapist
- [Albertareferraldirectory.ca](#)

  **If patients have ?’s or for self-referrals**
  - For Albertans, Rehabilitation Advice Line 1-833-379-0563
Questions?

Practice.Consultation@ahs.ca

SLP

Ajay Mysore Narasimha
MBA, SLP, SLP- (C)

Speech Language Pathologist
Medicine Hat Regional Hospital

OT

Christine Gregoire Gau,
BSc OT, MRSc

Occupational Therapist
Camrose Community Rehabilitation
Covenant Health
St. Mary's Hospital, Camrose

RD

Stephanie Krug, MAdEd, RD

Registered Dietitian
Provincial Practice Lead
Nutrition Education Resources
For More Information

• Allied Health Practice and Education Hub
  • COVID-19 Resources:
    • Nutrition for Recovery and Rehabilitation
    • Rehabilitation (OT, PT, SLP, RecT, TA, Aud)
  • Practice.consultation@ahs.ca

• Post COVID Provider Resource Webpage (AHS external)
  COVID-19 Recovery & Rehabilitation After COVID-19: Resources for Health Professionals

• College of Professional Association EFS Guidelines and Standards of Practice
  • Alberta College of Speech-Language Pathologist and Audiologists: Guidelines and protocols
  • Alberta College of Occupational Therapists: Position statement
  • Canadian Association of Occupational Therapists: Position statement
  • College of Dietitians of Alberta: Dysphagia competencies
Rehabilitation Advice Line

Rehabilitation advice can help you recover from injury, orthopedic surgery, COVID-19 or manage a neurological condition.

A healthcare professional on the line can provide you with:

• Activities and exercises to help with physical concerns
• Strategies to manage day-to-day activities affected by these concerns
• Rehabilitation services open for in-person or virtual visits
• Community organizations available for support

1-833-379-0563
9 a.m. to 5 p.m. Mon-Fri
Mental Health Help Line

24 hour, 7 day a week confidential service that provides support, information, and referrals to Albertans experiencing mental health concerns.

The line is staffed by a multidisciplinary team comprised of nurses, psychiatric nurses, social workers, occupational therapists, and psychologists.

- Confidential, anonymous service
- Information about mental health programs and services

1-877-303-2642
Additional Webinars

Recordings are available: COVID-19 Recovery & Rehabilitation After COVID-19: Resources for Health Professionals | AHS (Staff can also access here - Practice Wise Archives | Insite)

- June 10 – Physical Sequelae and Screening
- 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

Upcoming:
- July 20 – Re-engagement in the Community
Resources

- MyHealth AB: After COVID-19
- AHS.ca/HealthyAfterCovid
- AHS.ca/Nutrition
- AHS.ca/NutritionResources
- AHS.ca/NutritionWorkshops
- Allied Health Sharepoint: Feeding and Swallowing Learning Resources Basic to Advanced
- Health Professions Strategy & Practice (https://insite.albertahealthservices.ca/hpsp/Page7857.aspx)

- SLP Learning Resources for Foundational Competency in Dysphagia (https://insite.albertahealthservices.ca/Main/assets/tms/ahc/tms-ahc-feedswallow-resource.pdf)
References


