COVID-19 - Guidelines for Nutritional Management of Patients, Residents and Clients

Purpose:
Given the rapidly evolving COVID-19 situation, creative and innovative solutions are needed to allow for safe and effective inpatient/resident/client care, enhanced nutrition and facilitation of patient flow (acute care).

Clinical Nutrition often deploys staff across several patient care areas. In some cases, multiple staff cover the same patient care area in order to support emerging care priorities and discharges (acute care). This model creates a modifiable increased risk of exposure for staff and patients/residents/clients.

Goals:

Safe and effective nutrition care
  b. Provide guidelines for nutritional management of COVID-19 patients
  c. Decrease risk of workforce disruption for Clinical Nutrition due to COVID-19 exposure and preventative isolation protocols
  d. Complete nutrition assessment and intervention safely

Planning: Essential Direct Patient/Resident Contact during Pandemic Peaks

• Clinical Nutrition leadership should review and provide guidance on which assessments and interventions are essential. Assessments and interventions should only be provided when there are clinical indicators, Non-essential review of these patients/residents within their isolation room is discouraged.
• Nutrition Care Process modifications re: COVID-19 have been developed for dietitians (see below)
• Staffing resources should be realigned to areas of need.
• It may be beneficial to schedule designated staff within each department, who will work with COVID-19 patients/residents.
• Team leadership should ensure their staff have demonstrated knowledge of PPE and understand the guidelines around dedicated equipment use for COVID-19 patients/residents.

Planning: Virtual/Telephone Patient/Client Team Connections – Ambulatory Care Environment (in alignment with site’s direction)

• Wherever possible staff should coordinate patient/client visits by virtual/phone contacts to minimize in-person visits.
• When access to electronic health documentation and general requirements for working from home are met, employees are encouraged to work from home. Department / Unit (sharedhealthmb.ca)
• Virtual Care resources - Shared Health (sharedhealthmb.ca)
Privacy and Security:

- Virtual (Microsoft Teams or Telehealth) and telephone visits must comply with professional standards and applicable legislation, such as the Personal Health Information Act. Always confirm the patient/resident/client’s identity and confirm demographic information over the phone (e.g. can you provide me with your MH# and PHIN# or 2 person identifiers (name, DOB)).

- As per College of Dietitians of Manitoba, dietitians who are working remotely, must adhere to CDM practice directions on Virtual Practice and Protection of Personal Health Information in Electronic Format. If you discontinue non-essential services, please note the requirements for discontinuing services as stated in section 1.14 of the Code of Ethics for Registered Dietitians. As per the College of Dietitians of Ontario, Registered Dietitians must be licensed with the College of Dietitians of Ontario and Saskatchewan (effective October 1, 2021) to provide virtual care to Ontario and Saskatchewan residents if not seen in person.

- Take precautions to ensure both provider and the patient/client are in a private setting. Patients/clients should be encouraged to use their own device where possible. For video visits, inform patients/clients of the inherent risks of using a third-party video app and obtain their consent. When obtaining consent, provider must use the script provided below. Consent should be documented in the patient care record by the provider.
Obtaining Consent for Telephone or Virtual Appointment:
When scheduling a telephone appointment or virtual appointment (via MS Teams), ensure the below steps are followed:

1. Provide the following privacy information to the patient using the approved script below:

Your privacy is important to us and we have taken steps to select technological tools with reasonable assurances of confidentiality and security. However, these tools do not provide an absolute guarantee in respect to the security of information shared using this platform. By proceeding to receive information and communication with your health-care provider on this platform, you acknowledge and agree that there remains risk associated with this method of communication and waive any and all liability against the health-care provider for any damages or claims related to the use of this tool and platform.

Obtain Consent:

Ask the patient:
1. Do you have concerns associated with this communication platform?
2. Do I have your consent to proceed with this discussion?

French version

Votre vie privée est importante pour nous et nous avons pris des mesures pour choisir des outils technologiques offrant des garanties raisonnables de confidentialité et de sécurité. Toutefois, ces outils ne fournissent pas une garantie absolue en ce qui concerne la sécurité des renseignements divulgués sur cette plateforme. En recevant des renseignements et en communiquant avec votre fournisseur de soins de santé sur cette plateforme, vous reconnaissiez et acceptez qu’il demeure un risque associé à cette méthode de communication, et vous renoncez à toute responsabilité à l’encontre du fournisseur de soins de santé pour tout dommage ou réclamation liés à l’utilisation de cet outil et de cette plateforme.

Obtain Consent:

Ask the patient:
1. Avez-vous des inquiétudes relatives à cette plateforme de communication?
2. Ai-je votre accord pour poursuivre cette discussion?

2. Document Consent in the Health Record

For any questions about the use of a patient’s email please refer to the “COVID-19 – Emergency Preparedness & Privacy and Security Considerations”
Nutrition Care Process: COVID-19 Pandemic

Use PPE as per Shared Health recommendations when conducting nutrition care process. Consider verbal cues for communication while wearing masks. Follow guidelines regarding 2 metre distance as much as possible. Stand at the side of the patient as much as possible when doing an assessment.

1. Screening/referral: as per current practice.
   a. Patients/residents who are COVID 19 positive should also be screened for poor nutritional intake on an ongoing basis.

2. Nutrition Assessment: includes
   a. SGA: this is the cornerstone of our nutrition diagnosis of malnutrition. Completion of SGA during initial assessment with the following adaptations may be used as appropriate:
      • Visual physical assessment –
        • if patient is severely malnourished and one can diagnose without a complete SGA
        • if one is not severely malnourished, you can ask the patient/resident (if cognitively intact) to lower their gown so you can visually see the shoulders, etc.
        • If hands-on assessment is required, complete assessment with patient/resident facing away from RD.
   b. LTC Assessment Time Frame:
      • Residents not requiring 14-day isolation – complete nutrition assessment within 2 -8 weeks of admission
      • Residents requiring 14-day isolation - complete nutrition assessment 2-8 weeks post admission (considering both history and transition to unit) unless more urgent assessment is required, as indicated by nursing referral
      • Note: 14-day isolation may contribute to increased risk of malnutrition

3. Diagnosis: as per current practice

4. Intervention: see nutrition management below

5. Monitor/Evaluate:
   a. SGA in reassessment: SGA score may be changed through evaluation of non-physical parameters when there are improvements in outcomes. E.g. intake, weight, clinical status.
   b. LTC – document and monitor weights monthly or more often as indicated
1. THE BASICS

Practical guidance for nutrition management for adults with COVID-19 has been reported worldwide and ultimately are site specific with general common recommendations.

The following basic principles apply to all COVID-19 patients:

- Start Oral Diet or Enteral Nutrition as early as possible considering client goals of care.
- Once Enteral Nutrition started, gradual introduction of rate while increasing to Goal Rate by days 3 to 5.
- Manage Intolerances – i.e. gastrointestinal (GI) Intolerances related to diet or EN.
- Prokinetics – it is suggested to use prokinetics when intolerance issues persist.
- Minimize interruptions of nutrition support as much as possible.
- Small bowel feeding tube (nasoduodenal or nasojejunal (NJ) feeding) this form of EN can be used if intolerance issues continue with EN using nasogastric (NG)/orogastric (OG) route.
- Supplement with Total Parenteral Nutrition (TPN) or use exclusive TPN when needed.
- Refer to information below on specific information on Nutrition Support for 1) non-ventilated patient and 2) ventilated patients.
- Functional dependence increases the risk that residents may not take in as much food or drink without assistance. Previously independent residents may need more assistance than baseline. A team approach to actively offering nutrition assistance and beverages each time a direct care provider enters the room can decrease isolation malnutrition and dehydration.

2. NUTRITION SUPPORT: NON-VENTILATED PATIENTS

KEY POINTS: The patient’s underlying medical condition (i.e. any comorbidities) should determine your nutrition assessment. See Clinical Nutrition Handbook for specifics on diseases and nutritional management.

DIET: A high energy, high protein diet is recommended.

ORAL SUPPLEMENTS: Provision of supplements (1.5 to 2 kcal/ml) should be a standard part of the oral diet or as soon as oral intake is commenced. Recommend Med Pass.

HYDRATION (LTC): Increased fluid losses from GI symptoms or diaphoresis increases the risk of dehydration. The ability of a site to provide subcutaneous or intravenous fluid should be discussed with site leadership as the outbreak proceeds. The options for hydration support should be discussed as part of updated goals of care discussions.

HIFLO OXYGEN: can dry and irritate the mucosa. These patients are unwell and therefore appetite, nausea, ability to eat can be an issue. Fluids are generally well tolerated. Dried foods are
not a good option due to drying of the mucosa.

If there are plans for ventilation, the dietitian should then advocate for EN feeds earlier or on admission.

For patient’s whose primary concern is COVID-19, they present as high nutrition risk due to a severe acute, inflammatory response and/or increased work of breathing. These patients should be assessed at minimum every 48 hrs.

ESTIMATED NUTRITIONAL REQUIREMENTS (ENERGY AND PROTEIN):
- Energy: 25-30 kcal/kg
- Protein: 1.5 g protein/kg
  - Consider requesting placement of an enteral feeding tube if patients are unable to meet their needs orally.
  - If unable to meet needs through either oral or enteral nutrition, consider use of TPN.

FORMULA SELECTION FOR EN:
- Start with a polymeric tube feed formula unless contraindicated (i.e. severe GI symptoms).
- A low-fiber polymeric formula may be tolerated even in the presence of nausea or mild diarrhea.
- Assess tolerance as required.
- Consider fiber-containing formula for longer term feeds.

3. NUTRITION SUPPORT FOR RESPIRATORY FAILURE (INTUBATED AND VENTILATED):
Guidelines are based on the nutrition management of critically ill patients. An emphasis is placed on the prevention of over feeding patients. If you suspect the patient may not be able to meet their needs with oral nutrition post-extubation, consider requesting placement of Naso-gastric feeding tube.

ESTIMATED ENERGY REQUIREMENTS:
- 20 – 25 kcal/kg IBW or applicable equation to estimate energy needs
- Aim for the low end during the first few days.
- Adjust as needed for Refeeding Syndrome risk.
- If underweight, use actual body weight (BW).
- If feeding, optimize kcals to greater or equal to 25 kcal/kg IBW
- Propofol: Propofol provides 1.1 kcal/ml and must be accounted for in the provision of total calories. Decrease calories from EN or TPN prescription accordingly.
- Dextrose-containing IV fluids: If at a higher rate, factor in kcal provided (3.4 kcal/g dextrose)

ESTIMATED PROTEIN REQUIREMENTS:
- 1.5 – 2.0 – 2.5 g/kg IBW
- Requirements are adjusted for comorbidities:
  - Liver Disease: 1.0 – 1.5 g/kg
  - Renal insufficiency or dialysis
    - Chronic Renal Insufficiency (CRI) (no dialysis) – 1.0 g/kg
    - Continuous Renal Replacement Therapy (CRRT) – 1.5 – 2.0 – 2.5 g/kg
• Intermittent Hemodialysis (IHD) – 1.2 – 1.5 g/kg

**FLUID AND ELECTROLYTES:**
Restrictive fluid management strategy is commonly used. Volumes of EN and PN may need to be limited. It is essential to find balance between fluid balance and meeting nutritional targets. Patients are at risk for developing AKI and may require low electrolyte EN. Critically ill patients are often in very positive fluid balance with fluid resuscitation and edema. Monitor IV fluid provision and discuss fluid goals with physicians and provide minimal water flushes/ adjust flushes as required.
FORMULA SELECTION:
- Starting with a polymeric formula is usually fine.
- Fibre is typically avoided in the beginning but can be considered as the patient stabilizes.

MONITORING ENTERAL NUTRITION:
- Intolerance = abdominal pain/distention; nausea/vomiting and elevated gastric residuals.
- High Blood Glucose – maintenance of normal blood glucose levels is inherent in the care of the patient as several causes are DM insulin sensitivity, critical illness.

MONITORING OF GASTRIC RESIDUAL VOLUMES (GRV):
GRV monitoring is not reliable for detection of delayed gastric emptying and is associated with a risk of aspiration and as such should not be utilized as a monitor of feeding tolerance in patients with COVID-19. Patients should be monitored by daily physical examination and confirmation of passage of stool and gas. These observations should be “clustered” with other provider activities to minimize healthcare team virus exposure.

As per ASPEN, for those ICUs where GRVs are still utilized, holding EN for GRVs <500 mL in the absence of other signs of intolerance should be avoided.

Accept GRV’s up to 500 mL in the absence of other signs of intolerance. Once GRV’s exceed 500 mL, trial prokinetic agents. If that does not work proceed to small bowel feeding tube.

INDIRECT CALORIMETRY: Although there is no conclusive consensus on the use of IC, most references suggest not using IC in patient with COVID-19. IC requires the disconnection of the ventilator circuit which risks exposing staff to the airborne virus. IC also takes considerable time to perform, which will also increase overall exposure to staff.

4. SPECIAL NUTRITIONAL CONSIDERATIONS
The following points have been identified as special considerations that have a nutritional implication:
1. Gastrointestinal (GI) intolerance
2. Proning
3. Glycemic control
4. Fluid restrictions

GI INTOLERANCE: GI Intolerances are common as the GI tract is affected by the shock of the infection. The patient can be hemodynamically unstable and require high dosages of vasopressors which indicate decreased perfusion to the organs including the GI tract. The GI system is also affected by the overall systemic inflammation and dysregulated microbiota. The effects of sedation medications can also induce constipation and gut paralysis. COVID-19 with GI involvement is often seen at home prior to admission to acute care/ ICU and therefore patients may be presenting with GI intolerance and/or may develop intolerances due to feeds. Appropriate monitoring and adjustment of the provision of nutrition support must be considered.
PRONING:
The evidence reviewed includes information on ARDS and proning. ARDS proning is used for improved oxygenation. Episodes of proning can last 12 hours or more. If the patient is fed by NG tube, it is suggested to turn off feeding 1 hour before prone position turn, NG tubes to be aspirated prior to any position changes and for EN to be recommenced as soon as possible to avoid unnecessary interruption to feeding.

WRHA/HSC local practice is to insert a SBFT. For patients who need proning, they are likely severely ill and on high dosage of sedation, paralyzed and have failed gastric feeds. If proning is part of the treatment plan, the nutrition plan should be formulated with the medical staff to insert a SBFT.

When EN is initiated during prone position it is recommended to keep the head of the bed elevated to at least 10 to 25 degrees to decrease the risk of aspiration of gastric contents, facial edema and intra-abdominal hypertension.

Glycemic Control: Diabetes: Glycemic control is problematic and made worse with stress response. Glycemic control is carefully monitored and followed in the ICU and protocols are in place that should be referred to with the medical team.

Fluid management
A restrictive fluid management strategy may be used for these patients and therefore volume of enteral and parenteral nutrition may need to be limited. Close communication with the medical team to manage the balance between fluid management and meeting nutrition targets.

OTHER NUTRITIONAL CONSIDERATIONS

RENAL PATIENTS
The COVID-19 pandemic has led to unprecedented challenges to the delivery of renal dietetic services. This will require significant planning and possible re-structuring of dietetic services to ensure that we are able to provide a safe and effective service during this time.

Changes to dialysis schedules: For patients, whose dialysis or treatment schedule is not affected, it is suggested that patients continue to be managed according to appropriate local, national and international nutritional guidelines; face to face contact should be avoided where possible; remote review of patients should be considered, unless this may compromise patient care.

NICE guidance (2020) states that dialysis units should develop individualized plans for patients so that their dialysis schedule can be reduced safely if that becomes necessary, to enable the ongoing operational delivery of dialysis in the unit or at home if there are constraints because of widespread COVID-19.

Less frequent dialysis will lead to reduced removal of potassium and fluid on a weekly basis, with longer gaps for the build-up of these between dialysis sessions. For patients whose dialysis schedule is reduced, appropriate guidance should be considered to minimize risk of potential complications associated with hyperkalemia and fluid overload.
**Potassium:** Pre-dialysis serum potassium levels should be managed according to local policy, but in the absence of this suggest that levels should ideally be ≤5.5mmol/l, and no higher than 6.0mmol/l. If dialysis frequency is reduced, the frequency of monitoring for pre-dialysis serum potassium levels should be increased according to local policy. Non-dietary causes of high serum potassium should be considered, and treatment provided according to local policy. Dietary advice should be provided to those patients with pre-dialysis serum potassium levels ≥5.5mmol/l, aiming to reduce dietary potassium intake to 50-70mmol per day. Local policies should address the prescription of potassium binders to allow the frequency of dialysis to be reduced, and the potential for their use should be explored on an individual patient basis. Consider reducing potassium contribution from protein foods by advising patients to reduce their dietary protein intake.

**Fluid:** Local policies should address the use of fluid restriction to allow the frequency of dialysis to be reduced. Inter-dialytic fluid weight gain (IDWG) should be <2.5kg or <5% of dry weight, in accordance with local policy. CNS guidance recommends reduced HD in patients with adequate residual urine output >600ml/day. Dietary advice should be provided on the importance of reducing dietary salt intake to no more than 3g per day. (Kuehneman, T. et al. 2018 Kalantar-Zadeh, K. and Fouque, D. 2017.) Close communication with the medical and nursing team regarding fluid management targets and fluid allowances

**Protein:** Consider advising patients to reduce dietary protein intake to 0.8-1g/kg/d, particularly in patients who are complaining of uremic symptoms. The potential benefits and risks of protein restriction should be considered on an individual basis, dependent on current nutritional status and risk of protein energy wasting. Close monitoring of nutritional status, and adjustment of recommendations for dietary protein intake as necessary

**Critical Illness:** For renal patients who become critically ill and require critical care, the RNG recommend following appropriate guidance, e.g. Critical Care Specialist Group guidelines.

**Acute Kidney Injury:** The incidence of Acute Kidney injury (AKI) in hospitalized patients with COVID 19 is relatively low (29%), in comparison to severe lung injury which requires mechanical ventilation (71%) (Malha et al 2020). For patients who develop AKI, either with or without pre-existing kidney disease, it is recommended following appropriate national and international guidelines for nutritional management.
NUTRITION MANAGEMENT OF PATIENTS RECOVERING FROM COVID-19

KEY STATEMENT
The nutritional management of patients in the acute phase of COVID-19 is based on the guidelines for the nutritional management of Critically Ill Patients and Acute Respiratory Distress Syndrome (ARDS). As the pandemic continues, dietitians are now faced with not only the management of the acute phase, but further, the nutritional management of patients who are recovering from COVID-19 infection in the hospital, community or long term care setting (LTC). This document outlines the nutritional management of the patient with COVID-19: 1) living in the community and LTC / general guidelines; 2) recovering in hospital; 3) discharged home from hospital/ post-acute COVID-19 in LTC; and 4) the role of nutrition screening of patients in the community setting.

COVID 19 DURING RECOVERY – PATIENTS LIVING IN THE COMMUNITY and LTC / GENERAL GUIDELINES

Nutritional Requirements: A high calorie / high protein diet is recommended in the acute phase and during recovery of COVID-19. Nutritional supplements should be considered as a means of increasing calories/protein to promote the maintenance and/or regaining of any muscle mass lost during illness.

Nutrition Related Complaints:

- **Taste, Smell & Appetite:** Changes in/ loss of taste and/or smell and/or appetite post COVID-19 have been documented and can impact the amount and quality of food consumed during recovery and longer term. Strategies on enhancing flavor/taste and appeal of food can be implemented and education should be provided to recovering patients.

- **Hydration:** Unintentional weight loss during illness can be associated with fluid loss and the body’s use of fat and muscle for energy and can result in dehydration. Dehydration can be due primarily to a water deficit (water loss dehydration) or a salt and water deficit (salt loss dehydration) as a result of inadequate intake, vomiting, diarrhea or fever. Dehydration can further result in thickened respiratory secretions which are more difficult to clear from lungs. As such, proper hydration during and after COVID-19 illness is important. General guidelines for hydration may include: (Refer to LTC Nutrition and Hydration guideline COVID-19 Resources for WRHA Long Term Care | WRHA Professionals)
  - Notice the warning signs of dehydration: increased thirst; dry/sticky mouth or tongue; complaints of headaches, dizziness, and/or felling tired; dry/brittle hair or skin; unaware of need to drink; decreased thirst or dependent for feeding; recent UTI’s or having UTIs often; constipation/diarrhea; fever; reduced urine output; increased heart rate.
  - General recommendation is to hydrate regardless of thirst or hunger cues.
  - Use general guidelines for healthy nutrition and hydration which include consuming water and clear liquid beverages throughout the day. For those who have reduced intake and are not able to consume sufficient high protein and high energy foods, inclusion of fortified protein and energy fluids is warranted as required.
  - Aim to replace any of the body’s fluid losses and thin respiratory secretions (if a concern during recovery).
  - Recommendations for fluid: 2-4 oz. of fluid every 15 minutes. Increase fluid intake as needed to ensure urine is light yellow and passed every 3-4 hours.
  - Oral Rehydration Solutions (ORS): ORS may be suggested in cases of dehydration. These are aqueous solutions composed of glucose and electrolytes, including sodium, potassium, chloride, magnesium, and phosphorus, with dehydration preventative and rehydration...
activities. ORS is available through pharmacy as a powder or in ready to use format. Flavored ORS can increase palatability. When commercial ORS are not available, the following are options:

| Base Beverage: Water | 1 liter water  
| ½ teaspoon table salt  
| 6 level teaspoons sugar |
| Base Beverage: Tomato Juice | 625mL plain tomato juice  
| 375mL water |
| Base Beverage: Orange Juice | 360mL unsweetened orange juice  
| 600mL water  
| ½ teaspoon table salt |
| Base Beverage: Gatorade® G2 | 1 liter Gatorade® G2  
| ½ teaspoon table salt |

**Micronutrient supplementation:** There is insufficient data to recommend either for or against the use of zinc, vitamin C or vitamin D for the treatment of COVID-19 (ANHI). However, higher doses, but within the tolerable upper level intake, may be warranted in the presence of a deficiency determined by lab values.

**COVID 19 DURING RECOVERY – HOSPITALIZED PATIENTS**

Nutritional management in patients in hospital, recovering from COVID-19, may be dependent on the patient’s course in hospital i.e. the need for mechanical ventilation, length of stay and/or admission to the ICU. There is an increased risk of sarcopenia among patients discharged from hospital, recovering from COVID-19. Most patients also lose weight during their admission to hospital with COVID-19. Nutritional management includes guidelines noted for Patients living in the Community and LTC / General Guidelines with the addition of the following:

**Post Intubation Dysphagia (PID):** Post intubation dysphagia can occur in critically ill patients who receive mechanical ventilation during their hospital stay. The extent of PID is related to the duration of mechanical ventilation the patient receives and can negatively affect the return to oral intake. PID can also result in a prolonged hospital length of stay. Assessment from a Speech Language Pathologist and changes in diet texture/viscosity are warranted as a means for managing PID.

**COVID 19 DURING RECOVERY – POST HOSPITALIZATION and POST ACUTE STAGE (LTC)**

Nutritional management in patients discharged from hospital may be dependent on the patient’s course in hospital. Residents living in LTC recovering from a post-acute stage of COVID-19 may also be included in these recommendations. Nutritional strategies recommended at discharge from hospital/in LTC post recovery may include: food fortification, oral nutritional supplements, nutrient dense foods, snacks, and referral to the community dietitian. There may be an increased attention needed to feeding assistance (LTC) in cases of increased fatigue and weakness. Nutritional management of a post-hospitalized patient and post-acute stage in LTC recovering from COVID-19 includes those guidelines noted for the Patients living in the Community & LTC/General Guidelines and Hospitalization, with the addition of the following:

**Post ICU Syndrome (PIS):** PIS is a grouping of health problems that can occur in patients following a stay in the ICU and hence can be experienced by patients with COVID-19. PIS involves physical symptoms (fatigue, muscle weakness and nerve pain) and non-physical symptoms (interfere with attention, memory, thoughts, mood changes and emotional state; PTSD, depression and anxiety) and PIS has the potential to impact nutrition/nutritional status depending on the
symptoms experienced by the individual. Because PIS is sometimes difficult to diagnose, it is important to understand the impact of PIS may have on nutritional intake and status of patient recovering from COVID-19 following their ICU admission. It is also possible that these conditions persist for a long time in which case these conditions impact an individual’s social life and potentially their ability to return to their normal daily activities or even return to work.

Managing Breathlessness – Breathlessness post COVID-19 is common. It is often due to being in hospital and the loss of strength and fitness. Normally this improves once exercise resumes. Practicing controlled breathing helps manage breathlessness.

Exercise – will help increase muscle strength, improve energy and manage breathlessness.

Managing problems with swallowing – the muscles involved with swallowing can become weak if the patient is mechanically ventilated in hospital. Anecdotal data supports that dysphagia-like symptoms may be present among those recovering from COVID-19 in even without previous mechanical ventilation. Eating well and drinking water / fluids are critical to recovery to support adequate nutrients and may be challenging if dysphagia is present. Techniques that help support proper eating and drinking include: sitting upright while eating or drinking; trying foods of different consistencies; concentrating during meals; regular clearing of the mouth; eating smaller, more frequent meals throughout the day. Consult Speech Language Pathologists as appropriate.

COMMUNITY NUTRITION SCREENING FOR MALNUTRITION

Screening for malnutrition continues to be of significance post COVID-19 infection. It is recommended that all individuals with and / or recovering from COVID-19 living in the community should be assessed for risk of malnutrition at the first healthcare professional contact and subsequently when there is any clinical concern. Screening can be done by remote consultation and ideally, the nutrition screen should be linked to a documented management plan appropriate for the patient’s level of nutritional risk. Left undetected or untreated, malnutrition can result in readmissions to hospital.

A comprehensive multi-system telephone screening tool called COVID-19 Yorkshire Rehabilitation Screening (C19-YRS) tool has been developed. This tool is used to assess, capture symptoms and guide rehabilitation interventions for patients recovering from COVID-19. The tool was developed by a multidisciplinary team and was designed to connect with patients who had COVID-19 and determine if the patient is experiencing any problems related to their recent illness. The C19-YRS asks specific nutrition/diet related questions which include:

1. Are you having difficulties eating, drinking or swallowing such as coughing, choking or avoiding any food or drinks? If yes, rate the significant of impact on a scale of 0-10 with 0 being no impact and 10 being significant impact.

2. Are you or your family concerned that you have ongoing weight loss or any ongoing nutritional concerns as a result of COVID-19? Yes or No.

3. Please rank your appetite or interest in eating on a scale of 0-10 since COVID-19, 0 being same as usual/no problems to 10 being very severe problems/reduction.
REFERENCES/RESOURCES – NUTRITION MANAGEMENT OF PATIENTS WITH COVID-19

1. Nutritional Management of Critically Ill Patients – WRHA Clinical Handbook
3. https://www.espen.org/guidelines-home
4. Editorial (in Press) to be published in the Journal of Clinical Nutrition titled: The ESPEN expert statements and practical guidance for the nutritional management of individuals with SARS-CoV-2 infection. (See attached)
5. WHO interim guidance on Clinical management of severe acute respiratory infection (SARI) when COVID-19 disease is suspected. (See attached)
7. https://www.eatrightpro.org/coronavirus-resources
18. https://www.indi.ie/
20. www.diabetes.ca
evaluation of proposed protocols for the United Kingdom, Canada and Australia. Diabetes research and clinical practice 167 (2020) 108353 DOI: 10.1016/j.diabres.2020.108353

24. Nutrition Support for Critically Ill patient with COVID 19 Disease Top 10 Key Recommendations: https://www.youtube.com/watch?v=dNmMW3ybXdY


REFERENCES – NUTRITION MANAGEMENT OF PATIENTS RECOVERING FROM COVID-19


• Derbyshire E, Delange J. COVID-19: is there a role for immunonutrition, particularly in the over 65s? BJM Nutrition, Prevention & Health 2020; 3:e000071. doi:10.1136/ bmjnph-2020-000071


RESOURCES – NUTRITION MANAGEMENT OF PATIENTS RECOVERING FROM COVID-19

- [http://www.nutritioncare.org/COVID19Resources/](http://www.nutritioncare.org/COVID19Resources/)
- [www.euro.who.int](http://www.euro.who.int)
- [https://anhi.org/resources/](https://anhi.org/resources/)
- [https://www.malnutritionpathway.co.uk/library/covid19](https://www.malnutritionpathway.co.uk/library/covid19)
- [https://www.who.int/emergencies/diseases/novel-coronavirus-2019?gclid=EAIaIQobChMln-To3I348wIVGGpvBB1XWwP7EAAYASAAEgJLo_D_BwE](https://www.who.int/emergencies/diseases/novel-coronavirus-2019?gclid=EAIaIQobChMln-To3I348wIVGGpvBB1XWwP7EAAYASAAEgJLo_D_BwE)