The National Clinical Programme in Gastroenterology and Hepatology

Guidance for Nutrition relating to COVID-19

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1. Background

It is important at this time that we continue to reinforce the importance of good nutritional care and the role it plays in defining both short- and long-term outcomes of our patients. Malnutrition and unintentional weight loss contribute to progressive decline in health and individuals are more at risk from negative outcomes. We also know that patients surviving acute complications through long ICU stays will face further worsening or further exacerbation of malnutrition and sarcopenia (1). This document from the National Clinical Programme in Gastroenterology and Hepatology was developed by the Nutrition subcommittee to offer some guidance on managing nutrition support during COVID-19 for vulnerable patients, those in ICU and patients with co-morbidities, which are independently associated with malnutrition and its negative impact on patient survival.

The biggest risk to these patients is related not only to the infection itself, but also the emergency reorganisation of hospitals and general practice services to deal with the pandemic. Routine nutrition services will be affected. Any reduction in the provision of nutritional care has the potential for negative impacts on morbidity and mortality. Under difficult times of high pressure, we therefore must aim at following recommendations for best-practice in nutritional care to improve our patient's outcomes. At present there are no dedicated studies on nutrition management in COVID-19 infection. The following considerations can currently only be based on the best of knowledge and clinical experience. Please refer to the IrSPEN and ESPEN web sites for the most up to date information for guidance in nutritional care and to continue to review updates on COVID-19. Please check the HSE Repository for Interim Clinical Guidance intended for the Clinical Community for the latest version of all clinical guidance https://hse.drsteevenslibrary.ie/Covid19V2.

This guidance document has been endorsed by the Irish Society of Gastroenterology (ISG) and Irish Society for Clinical Nutrition and Metabolism (IrSPEN). For further information please contact Dr Cara Dunne at CarDunne@stjames.ie

2. Risk factors and prevention of COVID-19 in at risk patients

What measures should Home Parenteral Nutrition (HPN) patients take to avoid COVID-19?

There is a careful balance to strike to ensure we get the risk stratification right so as to not restrict too many individuals while ensuring the most vulnerable people are protected during the COVID-19 health emergency. All patients should follow the HSE guidelines and advice. All patients receiving parenteral nutrition support are considered to be immunosuppressed and therefore would be considered in the "at risk" category and should follow the cocooning advice as per HSE guidelines. The Government's advice is clear that support from family members and carers for essential care should continue. https://www2.hse.ie/coronavirus/ . The approach taken by patients receiving HPN may vary according to personal circumstances - we would encourage patients to discuss this with their Clinical Team.

How to triage HPN patients with pyrexia during COVID-19

The diagnosis of catheter sepsis in patients on home parenteral nutrition can be difficult and patients often do not present with classical symptoms of pyrexia whilst feeding. It is further complicated during the COVID 19 crisis. A catheter related blood stream infection can be fatal and we would recommend the BIFA pathway for COVID-19 pyrexia protocol for patients on HPN https://www.bapen.org.uk/pdfs/bifa/covid-19-national-pyrexia-plan-for-hpn-patients-testing-unavailable.pdf and https://www.bapen.org.uk/pdfs/bifa/covid-19-national-pyrexia-plan-for-hpn-patients-testing-available.pdf

What measures should patients on other nutrition support such as home enteral feeding take to avoid COVID-19?

All complex nutrition risk/support patients should observe the standard HSE and Government advice to minimise the risk of infection. https://www2.hse.ie/coronavirus/

What about the malnourished patient not on parenteral or enteral nutrition support?

These patients would also be considered an at risk group and should follow the appropriate advice on the HSE website https://www2.hse.ie/coronavirus/. Patients can be directed to https://www.hse.ie/eng/services/list/2/primarycare/community-funded-schemes/nutrition-supports/ to avail of oral nutrition support resources if appropriate. Oral nutritional supplements (ONS) should be used whenever possible to meet patient's needs when dietary counselling and food fortification are not sufficient to increase dietary intake and reach nutritional goals. Patients should follow the nutritional care plan set by their Dietitian or team until they can be reviewed.

3. Prevention and treatment of malnutrition for admitted patients

Screening for malnutrition in admitted at risk patients or patients with COVID-19

About 30% of all patients in hospital are malnourished. A large proportion of these patients are malnourished when admitted to hospital and in the majority of these, malnutrition develops and further progresses in hospital (2-4). Malnutrition can be prevented if special attention is paid to nutritional care. Nutritional assessment should be performed on all patients identified as being at risk of malnutrition. The check should initially comprise of the MUST criteria for hospitalised patients https://www.bapen.org.uk/screening-and-must/must-calculator. Nutrition screening should follow the local hospital's screening policy and the HSE nutrition and hydration policy https://www.hse.ie/eng/services/publications/hospitals/food-nutrition-and-hydration-policy-for-adult-patients-in-acute-hospital.pdf. We recommend all healthcare providers, including dietitians, nurses, and other healthcare professionals involved in the nutrition assessment should follow PPE standards set forth by the HSE for all patients with COVID-19 disease and adhere to their institutional recommendations. There must be continued vigilance for refeeding syndrome (RFS) for all at risk patients and patients with COVID-19. Refeeding syndrome can be defined as the severe fluid and electrolyte shifts associated with recommencement of feeding, both oral and artificial nutrition via the enteral and parenteral route, in malnourished patients resulting in metabolic complications (5-6). Please review https://www.irspen.ie/wp-content/uploads/2014/10/IrSPEN_Guideline_Document_No1.pdf for the management of RFS. It is important to note that along with the other well documented symptoms of COVID-19 infection, gastrointestinal (GI) symptoms can also occur. A study by Lin et al in GUT demonstrated GI symptoms in 95 cases with COVID-19 infection with 11.6% occurring on admission and 49.5%

developing during hospitalisation. Diarrhoea (24.2%), anorexia (17.9%) and nausea (17.9%) were the main symptoms. These symptoms can impair food intake and absorption. Current recommendations are to individualise all treatment decisions in such patients with COVID-19 in conjunction with infectious disease and respiratory specialists

How to manage patients with confirmed COVID-19 infection admitted to ICU who will require artificial nutrition support

To provide help to those dealing with ventilated patients who need feeding, new guidelines have been developed for feeding patients admitted to ICU. These are being released in draft form on the IrSPSEN website and can be accessed at https://www.irspen.ie/coronavirus-news-guidelines-for-nutrition-support-of-icu-patients. These guidelines have been developed by a sub group of ICU dietitians for the HSE Critical Care Program, with input from Speech and Language Therapy and Pharmacy. Updates to the document may be made over the coming days/weeks so please check online to ensure you have the latest edition.

How to manage nutrition support in COVID-19 patients not intubated and ventilated

If non-intubated ICU patients are not reaching their energy target with an oral diet, then oral nutritional supplements (ONS) should be considered first and then enteral nutrition treatment. The presence of at least two chronic diseases in the same individual can be defined as polymorbidity and is also characterised by high nutritional risk. For guidelines on the management of individuals with various co morbid conditions please see https://kclpure.kcl.ac.uk/portal/files/74502190/ESPEN_guidelines_on_nutritional_GOMES_Publishedonline24July2017_GREEN_AAM_CC_BY_NC_ND_.pdf. For guidelines on clinical nutrition and hydration in geriatric patients please review https://www.espen.org/files/ESPEN-Guidelines/ESPEN_GL_Geriatrics_ClinNutr2018ip.pdf. In general on admission nutritional treatment should start as early as possible in patients who are malnourished and are COVID-19 positive. Nutrition targets should be met slowly to prevent RFS. Please refer to individual guidelines for optimisation of calorie target https://www.espen.org/files/Espen_expert_statements_and_practical_guidance_for_nutritional_management_of_individuals_with_sars-cov-2_infection.pdf. However if enteral feeding is not feasible, not tolerated or insufficient to maintain nutrition targets then parenteral nutrition should be considered.

4. Preparations for possible disruption to patient specific PN during COVID-19

Securing supply of HPN during COVID-19

Budget holders, who approve funding for HPN, should allow for flexibility in the invoicing of Parenteral Nutrition (PN) between homecare providers depending on their capacity to compound patient specific PN to our HPN patients. HPN patients are often provided with patient specific PN. The patient specific PN provides the unique nutrition, electrolyte and fluid requirements for each individual patient, so is an essential daily/weekly prescription. The stability of this patient specific formulation is short. Hospitals should consider preparations to account for supply disruption. This includes extension of the stability of the patient specific PN bags, provision of prescriptions for standard PN formulations and multi-chamber-bags (MCBs) for use in the case of supply disruption. Supply disruption may occur where a compounding unit cannot be adequately manned due to an

outbreak of COVID-19 among employees. Homecare companies should consider all options where reasonable to prevent disruption to supply and should agree co-operation between compounding units should it be required to maintain supplies of patient specific PN.

5. Outpatient and review processes

How to manage outpatient and inpatient reviews for patients requiring nutrition support during COVID-19

We recommend all healthcare providers, including dietitians, nurses, and other healthcare professionals involved in the nutrition assessment should follow PPE standards set forth by the HSE for all patients with COVID-19 disease and adhere to their institutional recommendations. If possible reviews should be conducted via telemedicine and or virtual review. Patients on HPN will need regular blood monitoring. Where possible we should limit visits to hospital and limit the patient journey around the hospital geographically. Review most recent labs and if possible defer routine labs for nutrition stable patients for as long as possible. Some HPN patients may have the facility to have bloods taken by homecare teams including Point of Care, Public Health Nurse (PHN), Community Intervention Team (CIT), GP home visits.

The Infusion service during COVID-19

This service remains a priority area and infusion units should continue to treat all patients that require urgent electrolyte replacement. We should aim to maximise oral electrolyte replacement to try to avoid the need for infusions. Increase oral supplements as much as possible. If possible switch medications to liquid or oro-dispersible formula to help with absorption. Parenteral electrolyte and iron replacement services should be reserved for urgent cases only. If capacity is reduced due to staff shortages, daily / weekly triage of infusions should take place. According to HSE guidelines, all patients should be screened for COVID-19 symptoms before attendance at the unit. Any patient who reports possible COVID-19 symptoms should be referred for testing and IV treatment delayed until negative swab results. Standard infection control precautions must be maintained. Patients must be scheduled in such a way that a minimum of 2m social distancing can be maintained. If the capacity of the unit is insufficient, stable patients could have infusions deferred for up to 2 weeks. Ideally if possible consider a move off-site to a 'clean' area.

References

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