

Practical Advice and Guidance for management of nutritional support during COVID-19

Compiled by



Supported by



Version 2.0 April 2020

COVID-19 Resources and Guidance for Health Care Professionals

Nutritional Support

• Introduction	2
• Inpatient oral nutrition support	2
• Enteral tube feeding for inpatients	3
○ Bolus feeding	4
○ Enteral feeding via gravity sets	5
○ Instructions for use of gravity feed sets	6
○ The use of PPE for Nasogastric (NG) and Nasojejunal (NJ)	7
• Nursing care of COVID-19 patients receiving NG tube feeding	8
• Administrative and logistical considerations	9
○ Home Enteral Nutrition	9
○ Discharging patients with enteral nutrition support	10
○ Home Parenteral Nutrition	11
• Resources	12

COVID-19 Resources and Guidance for Health Care Professionals

Nutritional Support

Introduction

In light of the current and evolving situation with regards to COVID-19, we have put together the following document to help provide guidance in relation to the provision of nutritional support.

This document does not seek to replace existing guidelines and policy within your area but may offer some supportive information to help guide decision making at this unprecedented time. Patient staff safety and professional accountability remain paramount.

The information contained within this document should be discussed at organisational level. It should also be noted that the contents are advisory, based on information available at the time of publication.

Useful documents are embedded into sections within this document. In addition are links to useful resources in the final section.

If you have any concerns or queries, then please get in touch

Email: nationalnursesnutritiongroup@gmail.com

Twitter: @NNGUK

Discussion forum in the member's area <https://www.nnng.org.uk/join-us/>

During this difficult time, your own health and wellbeing is paramount. Ensure you are able to find time to reflect on the challenges of the day and seek support when you need it.

Inpatient oral nutrition support

There are additional challenges to consider with regards to oral nutritional intake, these include;

- Ceasing or reduced volunteer mealtime support
- Reduced access to snacks due to no visiting
- Potential for reduced number of staff – patient contacts due to donning and doffing of PPE, resulting in missed opportunities to encourage oral intake
- The above not only impacts on inpatients but will be reflected across community services also
- Consider the use of hydration stations within hospital and care settings
- Ensuring drinks and snacks offered by all HCPs during each contact
- Consider the use of sports bottles, insulated cups etc.

COVID-19 Resources and Guidance for Health Care Professionals

Nutritional Support

- Ensure drinks and snacks are left within easy reach.

Liaison with ward managers, Dietitians and catering to overcome some of these challenges may be needed.

It is important for staff to also have access to adequate food and drink provision especially when wearing PPE.

Enteral tube feeding for inpatients

Oral nutrition support measures should be considered as first line wherever possible.

The potential risks of enteral tube insertion should be considered and in addition, access to competent healthcare personnel, and equipment to safely deliver feed, may be limited.

If there is suspicion of COVID-19 infection, it is advisable to wait for confirmation of a positive result prior to placement of the tube in order to reduce risk to the healthcare professional and ensure appropriate PPE.

Where possible in the acute hospital setting, if feed is to be delivered over a period of hours, this should be done using an enteral feeding pump. Priority of pump allocation should go to those who are ventilated.

Ensure you have made a note of the number of pumps within your organisation and where they are located. Any pumps that are faulty should be replaced or repaired where possible.

It is likely that many pumps available within secondary care will be diverted to critical care areas and as such there may not be sufficient pumps to meet demand.

You may need to consider the use of bolus feeding or gravity feeding in the general ward setting, where appropriate for the patient and skill set of the staff.

With the deployment of many staff to different areas, you will need to take into consideration the most appropriate areas to utilise alternative feeding methods. Areas of high use for NGT feeding such as stroke units or gastro wards may feel more confident with bolus feeding than others.

Nutritional Support

Bolus feeding

Some areas will be familiar with delivering bolus feeding, which can be achieved using oral nutrition supplements, or by decanting enteral feed from a feed container, using a bolus adaptor into a syringe.

Bolus feeding via nasogastric tube

Considerations:

- Essential Equipment
 - pH paper
 - Bolus adaptors (for decanting from feed containers)
 - Syringes
- Skill mix of staff
- Refeeding risk
- Tolerance of large volume in each administration
- Frequent pH checks
- Guidance on options if appropriate pH reading is not obtained
- Timings of medications such as PPIs, Phenytoin, Warfarin, Theophylline
- Supplements to be administered at room temperature
- Time burden for staff

In addition:

- If decanting from an enteral feed pack, you will also need to consider storage of unused feed between boluses. Refer to local guidelines with regards to infection control.
- Allow time for feed to warm to room temperature from being stored in the fridge between feeds (approx. 20-30 minutes).

Patients may take time to build up tolerance of bolus feeding. as there is potential for nausea, vomiting and changes to bowel habit. Please be mindful of patient positioning during administration, they should be at a minimum of 30° angle maintaining this position for at least 30 minutes following completion of feed.

Nutritional Support

Enteral feeding via gravity sets

Gravity feeding involves the controlled flow of feed using the roller clamp on a giving set. It is anticipated that this will be in high demand giving rise to a shortage of gravity feeding sets, therefore confirm supply to your area before proceeding with this plan of care.

The number of drops/minute will determine the ml/hr. Different manufacturers may have different drops/ml. Please check the packaging.

Calculating Drip Rate:

$$\frac{\text{Total volume to be infused}}{\text{Time of infusion (in minutes)}} \times \text{Drip rate (this will be on the packaging for the gravity set)}$$

Worked example

$$\frac{500\text{ml}}{600 \text{ (mins)}} \times 20 \text{ (drops/ml)} = 16.6 \text{ drops/min}$$

Considerations:

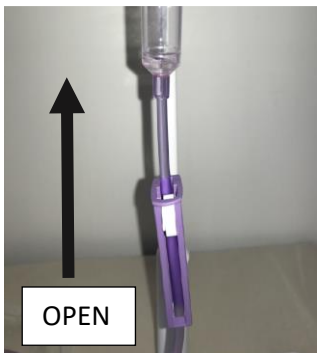
- Essential Equipment
 - pH paper
 - Bolus giving set
 - Syringes
 - Drip stand
- Skill mix of staff for monitoring of flow rate to avoid rapid or delayed administration

Nutritional Support

Instructions for administration of feed via a gravity feed set



- Before connecting the gravity giving set to the feed, make sure the roller clamp is shut.
- Connect the giving set to the feed bag.
- Hang the container on the drip stand.



- Prime the giving set:
 - Allow the giving set to hang downwards, but make sure to hold the end of the giving set upwards.
 - Slowly open the roller clamp to fill the giving set with feed and expel air to end of the set, but fully close the roller clamp approx. 3cm before the feed gets to the end of the giving set to avoid spillage.
- Hang the feed approximately one metre above the feeding tube.
- Connect set to feeding tube and slowly open roller clamp to start feed.
- Gently squeeze the drip chamber until it has filled to one-third full.

Nutritional Support

- Watch the drip chamber and count the number of drips over 1 minute.
- You can adjust the rate by opening or closing the roller clamp until your drip rate is set correctly.
- Check drip rate of feed **HOURLY** to make sure the feed is still running at the same rate.
- CAUTION: The position of the patient in relation to the height of the drip stand affects flow rate.
- Discard the gravity pack set after 24 hours or as per local policy.

The use of PPE for insertion of nasogastric (NG) and nasojejunal (NJ) feeding tubes

There have been many conflicting opinions regarding the use of PPE and the insertion of enteral feeding tubes in relation to COVID-19.

You should ensure you keep up to date with regards to any changes to this advice.

<https://www.gov.uk/government/publications/wuhan-novel-coronavirus-infection-prevention-and-contr>

The insertion of NG and NJ tubes is considered a non-aerosol generating procedure (AGP) by Public Health England (PHE). However, amongst nursing and other HCPs it is widely acknowledged that there is significant potential for the patient to initiate a cough or may also require suction to the oral cavity or upper airway, which is considered an AGP.

In view of this, we would deem NG and NJ tube insertion to be an aerosol generating procedure and recommend that the PHE guidelines for AGP are followed.

In addition, as per RCN recommendations, for those patients who are non-COVID-19 a risk assessment should take place and any PPE deemed necessary should be worn.

Fluid resistant surgical mask can be worn for a maximum of 4 hours but should be changed sooner if becomes damp or damaged. The mask should not be touched while being worn.

When wearing FFP3, a fit check must be performed every time

Ensure you are well hydrated before donning PPE.

Hand washing remains paramount.

On removal of PPE, hands must be washed thoroughly.

In order to reduce accidental tube removal and therefore the need for repeat insertions, consideration of the use of a nasal retention device may be appropriate in this patient group.

National guidelines should be adhered to with regards to NG tube insertion and position checks.

Nutritional Support

For those working in the community, apron and gloves are required and in addition, a face mask as risk assessment determines.

Nursing care of COVID-19 patients receiving NG tube feeding

Standard safety checks with NG tube feeding **must** continue, regardless of a patient's COVID-19 status, as there is the ever-present risk of a Never Event should NG tubes not have a tip position confirmed prior to use.

pH testing using aspirate from the NG tube should be the first line check, ensuring the nurse undertaking the test has the appropriate PPE in line with the insertion procedure.

Should the first line position check not be successful, then the use of a chest X-ray would be the second method of confirmation of tip position. You will need to establish the local arrangements for access to radiology.

In those who are critically ill, being nursed either prone or supine, it may be more appropriate to consider the use of chest x-ray as first line due to the risk of aspiration leading to false positive on pH check.

In addition, for patients who are being nursed prone:

- Prior to patient being proned
 - Stop feed
 - Note measurement to nostril of the tube and observe for coiling of the tube in the mouth
 - Aspirate NG tube
 - Prone patient

- Once proned
 - Check position of NG tube at nostril and pH test (or x-ray)
 - Restart feed

If being fed by NJ tube, proceed as above without position check. Stopping of feed during proning is not necessary but may be required in order to reduce the potential for accidental tube removal.

It may be pertinent to consider the use of nasal retention devices, if these are already in use within your organisation, to avoid accidental removal during repositioning.

Nutritional Support

Administrative and logistical considerations

Nutrition support patients are at high risk of infection.

Shielding the most vulnerable is important but in addition we also need to consider the reduced contact to HCPs but also friends and family. We need to consider the psychological impact this may have.

Providing over the phone and virtual support will play an important role in maintaining individual's needs and managing expectations during this time of change.

Signpost to local and national support networks such as PINNT and community hubs. Many are offering telephone contacts to those self-isolating or who are shielding.

Home Enteral Nutrition

Priority of the HEN service should be to facilitate quick and safe discharges and prevent hospital admissions.

Review of established patients on home enteral nutrition should be through virtual clinics. This may be by telephone or alternative interface. It should be noted within clinic letters and documentation that, due to exceptional circumstances, the patient has not been examined and therefore assessment is limited.

- Industry partners have all put in place new processes for managing their case loads and, in addition, changes to deliveries. Make yourself and all relevant HCPs familiar with these
- Ensure your patients' deliveries have been reviewed recently and is reflective of their current needs.
- Ensure they have enough supplies of emergency and troubleshooting equipment such as; spare end connectors, clamps, ENplugs / Cortstop as well as information regarding their safe use.
- Ensure any nursing or care home where there are EN patients have up-to-date contact details for homecare companies and HCP's. In addition, it may also be of benefit to consider supplying out guidance on avoiding and managing tube blockages, accidental tube removal, replacement of broken parts etc.

COVID-19 Resources and Guidance for Health Care Professionals

Nutritional Support

Routine elective cases have, in the most part, been cancelled; therefore, good tube maintenance and care is paramount to prolong the life of the device. This is significant for individuals that would normally attend an inpatient facility for tube changes.

The documents below are the most recent communications from the main industry providers.



Coronavirus -
Abbott's H2H and AN.



Nutricia Nurse
Update 17032020 v3



COVID-19 Nutricia
Homeward Patients P



Fresenius Kabi
COVID Plans 27.03.21

Discharging patients with enteral nutrition support

As a general rule, non-elective activity in endoscopy and radiology units is on hold; this includes insertion of gastrostomy tubes. This may mean that if enteral nutrition support is to continue, this may be required through an NG tube (NG) tube or NJ tube.

Whilst there are areas across the UK that offer this service already, it is not established practice for many. With the changes to clinical practice brought about by the COVID-19 pandemic, it may be necessary to review this.

Liaise with your discharge teams, as many have put in place or are considering rapid discharge to community hospitals and nursing homes.

If NG or NJ feeding is required for an individual on discharge, it is essential that clear communication and discharge criteria are set to patient safety and adequate support for community healthcare professionals and carers.

Nutritional Support

Considerations:

- What resources will be required?
- Who will manage the day to day care of the tube?
- Who requires training, and how will this be achieved?
- If the tube requires replacement, how will this be managed?
- Who will review the patient in term of feeding regimen, and how will this be managed?
- How will troubleshooting issues be managed?



Nasogastric
discharge checklist - E

Home Parenteral Nutrition

Clear communication within the multi-disciplinary team (MDT) is an essential part of being able to safely manage the patients who are already receiving parenteral nutrition (PN) within an acute setting.

If the hospital outsources its production of PN, now is the time to establish their capacity and their contingency measures should they not be able to fulfil their contractual obligations.

If a patient can be switched to an enteral route of nutrition, then this is probably preferable given the easier nature of accessibility to enteral nutritional feed and ancillary items; but this would need a full multi-disciplinary discussion to ensure the safe management of the patient and their nutritional needs.

Those patients, who need to continue with PN, may need to change their bags to 'off the shelf' or multi-chamber bags that may require pre-rolling. Please be mindful that some patients may need additional trace elements.

NHS England is now centralising MCB deliveries and therefore early registration is required with further discussion regarding prescriptions.



C0106 HPN COVID
patient information_U

<https://www.bapen.org.uk/resources-and-education/education-and-guidance/clinical-guidance>

COVID-19 Resources and Guidance for Health Care Professionals

Nutritional Support

Resources

https://assets.publishing.service.gov.uk/government/uploads/system/uploads/attachment_data/file/876569/Infection_prevention_and_control_guidance_for_pandemic_coronavirus.pdf

https://assets.publishing.service.gov.uk/government/uploads/system/uploads/attachment_data/file/874411/When_to_use_face_mask_or_FFP3.pdf

<https://www.bsg.org.uk/covid-19-advice/>

<https://pinnt.com/News/News/COVID-19-statement.aspx>

<https://pinnt.com/News/News/Non-Members/NHS.aspx>

<https://www.bda.uk.com/uploads/assets/f5215258-7a34-4426-83620ba89f87c638/63decf82-db85-41d7-b5a6cbabe757a4a2/CCSG-Guidance-for-COVID-19-Formatted.pdf>

<https://www.bapen.org.uk/resources-and-education/education-and-guidance/covid-19>

https://www.bspar.org.uk/downloads/clinical_guidelines/RCN_telephone_advice_guidance_2006.pdf

<https://www.bapen.org.uk/about-bapen/bapen-special-interest-groups/bifa>

<https://fg.bmj.com/content/early/2020/03/25/flgastro-2019-101230>

<https://www.rcn.org.uk/get-help/member-support-services/counselling-service/covid-19-and-your-mental-wellbeing>

<https://www.rcn.org.uk/get-help/rcn-advice/covid-19>

IT resources to enable working from home:

- NHS Provision of Microsoft Teams: Can be mapped to your work place PC, Lap-top , iPhone and iPad.
- NHS Provision of 'Attend Anywhere' video conferencing.
- Hospify is also available on NHS App Store for 'instant and group messaging' - now available as a clinically accredited alternative to WhatsApp and available via mobile app stores.



BMJ Telephone clinic.pdf



COVID-19-easy-visual-guide-to-PPE-poster