

## Standard Operating Procedure for Blended Diet in Children via Enteral Feeding Tubes

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1.0	April 2022	Danielle Kitney Bianca Gardiner	Draft	A policy was required due to the increased popularity of using 'real' food via enteral feeding tubes.

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### 1. Introduction

The use of sterile, ready to hang feeds has long been considered Best Practice for patients requiring enteral nutrition. Prescribed feeds are often readymade but may also require reconstituting and are usually nutritionally complete within a specified volume. East London NHS Foundation Trust (ELFT) recognises that there has been a national increase in popularity of blended/liquidised diets via enteral feeding tubes as an alternative to commercially available prescribed enteral feeds in the UK.

There is a growing body of new evidence which demonstrates that anecdotal benefits reported by patients and families can be replicated under research conditions. These benefits included:

- Reduced vomiting and retching
- Improved bowel function
- Reduced dependence on medication
- Improved general wellbeing and mood

This new evidence also suggests that the historically reported risks relating to tube blockage, poor nutritional composition and bacterial contamination remain a concern but their occurrence in practice is not widespread.

With the emergence of new evidence, the British Dietetic Association has reviewed its original 2019 position and has published new guidance for UK Dietitians BDA Practice Toolkit: The Use of Blended Diet with Enteral Feeding Tubes <sup>(1)</sup>

This new statement reiterates that commercial formulas remain 'Best Practice' for the majority of patients but that some patients do fail to tolerate and thrive with these formulas. In these instances, a blended diet should be proactively considered by their Dietitian who is an expert in enteral feeding, where they believe there to be potential physiological, social or emotional benefits to the tube-fed individual and their family.

It is important that when patients or families are considering using a blended diet that they are aware of all the possible risks.

A comprehensive, individualised risk assessment should be completed for all (appendix 1), in line with ELFT policy. The risk assessment is likely to be completed by the child's dietitian.

ELFT clinicians will endeavour to support a family's decision to transition to a blended diet aiming to work collaboratively with the patient/ family and carers to reduce the possible risks. The Dietitian should document and discuss reasons for the request and any alternatives that have been considered using the following flow chart.

Occasionally the Dietitian will not be the first professional to become aware that the family have started a Blended Diet or are considering starting. In these instances, the professional should agree with the family that this information will be shared with the dietitians to allow appropriate support and collaborative working.

## **2. Purpose**

The purpose of this standard operating procedure is to provide healthcare professionals with information to enable them to support families in the community who wish to consider feeding their child or young person using a blended diet via enteral feeding tube.

This policy is designed for staff working within ELFT who care for children within the Newham community area. This policy can be adapted by ELFT staff for clients under ELFT adult services.

It aims to:

- Ensure a safe and consistent approach in the administration of a blended diet for children and young people who reside in the London borough of Newham.
- Improve awareness among healthcare professionals, thus improving education and clinical outcomes for children and their families.
- Provide risk assessment tools for healthcare professionals to use in conjunction with parents/carers and other professionals in multiple community settings including home, school and respite care.
- Clearly state the potential risks and ways of mitigating these for each party involved in the care of the patient
- Provide an evidence based framework which reflects best current practice.

### 3. Definitions

Name and abbreviation	Definition
Blended diet (BD)	Household food blended to a consistency whereby it can be administered via an enteral feeding device
Prescribed enteral feed	Commercially prepared formula of a nutritionally complete nature if sufficient volume is received available on prescription.
Anthropometry	Measurements of the body, usually for comparison with standards or to measure individual change over time
Enteral feeding	A method of supplying nutrients directly into the gastrointestinal tract
Gastrostomy	a tube inserted through the abdomen that delivers nutrition directly to the stomach
Jejunostomy	A tube inserted through the abdomen that delivers nutrition directly to the jejunum.
Gastrostomy button	Low profile feeding device passing through the abdominal wall, through which enteral feed, fluid and liquid medication is administered into the stomach via a port accessed adjacent to the abdomen. Held in place by a balloon.
Percutaneous endoscopic gastrostomy (PEG)	Feeding tube passing through the abdominal wall, through which enteral feed, fluid and liquid medication is administered into the stomach via a port accessed at the distal end of the tubing
Percutaneous endoscopic gastrostomy-jejunostomy (PEG- J)/ and gastro-jejunostomy	Feeding tube passed into the stomach through the abdominal wall, advanced through the pylorus to lie within the proximal jejunum to provide nutritional support
Nasogastric tube (NGT)	Feeding tube passing through the nostril, nasopharynx and oesophagus to the stomach, through which enteral feed, fluid and liquid medication is administered via a port accessed at the distal end of the tubing
Nasojejunal tube (NJ)	tube passed from the nose into the jejunum to provide nutritional support
Bolus feed	Intermittent administration of a designated quantity of enteral feed
Pump feed	Administration of enteral feed using an enteral feed pump to control the rate of feeding
Feeding Regime/Plan	An agreed plan often indicating the type, volume and speed of the feed or blended food given via a feeding tube. Typically produced and agreed between parents and dietitian.
Health Care Plan	Document prepared by Nursing Teams detailing care when the child is outside of the home under the care of a third party (i.e school or nursery)

### 4. Roles and Responsibilities

This section sets out the roles and responsibilities for professionals in regards to supporting families using a blended diet in the community.

### **Home enteral feeding Dietitian**

- Discuss and record the reasons for patients/ carers/ parents wanting to commence blended diet via enteral feeding tube.
- Ensure all alternative commercial food formulations and feeding strategies have been considered
- Provide information on risks and limitations involved with blended diet.
- Provide ongoing nutritional advice, nutritional analysis and supplementary products on blended diet to ensure nutritional adequacy
- Liaising with multi-disciplinary team at any settings including school, regarding patients/ carers/ parents' decision for blended diet and provide suggestion for support and monitoring if appropriate
- Clinical risk assessment for blended diet use in conjunction with parents/ carers

### **Community nursing and special school nursing teams**

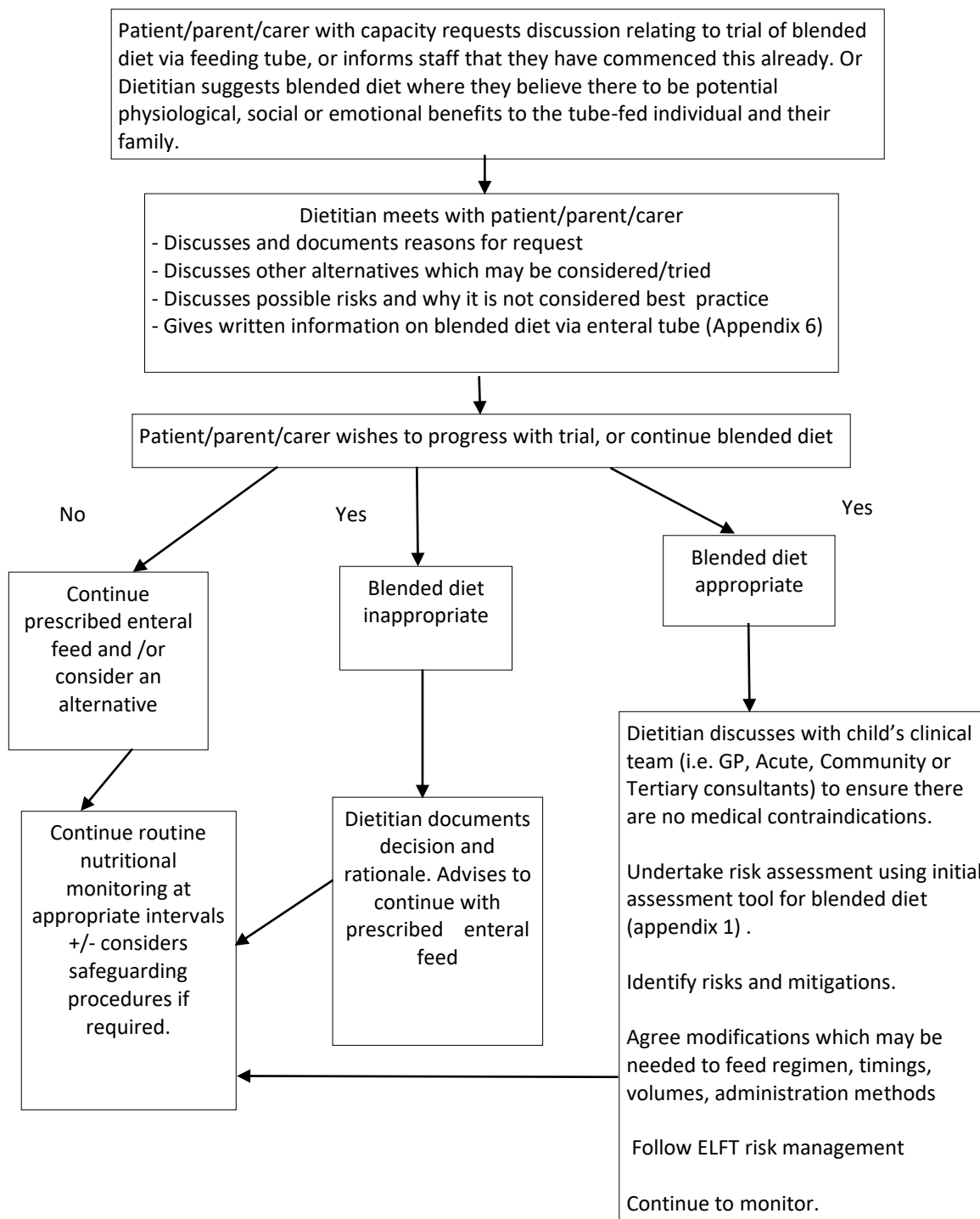
- Provide training for gastrostomy use in the community for parents/ carers looking after enterally fed children.
- Provide training for blended diet use in the community for parents/ carers looking after enterally fed children.
- Clinical risk assessment for safety associated with feeding tubes, use of syringes and assess appropriate level of tube supply where appropriate
- Troubleshooting for tube blockage. Liaise with school and external care providers for monitoring blended diet use remains safe and appropriate in those settings.
- To liaise with school to communicate importance of appropriate equipment and personnel training in facilitating safe delivery of blended diet at school setting.
- Escalate to dietitian if blended diet provision by career/ parents are inappropriate nutritionally e.g. consistently using baby weaning food for an older child.
- Provide ongoing support and education to school staff.

### **Parents and Carers**

- To make the decision in conjunction with the dietitian to commence a blended diet via gastrostomy.
- Responsible for choosing the raw ingredients/ cooking/ preparing/ storing and ensuring food hygiene and safety with use of blended diet.
- Responsible for providing nutritious meals for their children while considering the risk involved with this method of gastrostomy feeding.
- Responsible for seeking medical help at timely manner if they are not able to manage any aspect of using blended diet to feed their children regardless of reason or circumstance.
- To report and seek medical support with any adverse reaction/ outcome from this form of feeding.

## **5. Criteria for Initiating a Blended Diet**

### **5.1. Process to support consideration of the use of blended diet via enteral feeding device**



## 5.2 Indications and Contraindications

### Indication

- Patient should be medically and nutritionally stable
- Patient should have a mature stoma (gastrostomy in situ for 3 months minimum) due to the risk of changing a blocked device in an unformed tract <sup>(1)(2)</sup>

- Patient should have a size 12 French gastrostomy device (a narrower French tube may be considered using a thinner blend consistency) <sup>(1)(2)(3)</sup>
- Parents/ carers have discussed with multidisciplinary teams about decision. If reason is due to intolerance, all alternative feeding options should be explored.
- Parents/ carers have the time and capacity to prepare the blended diet safely given the home environment and resources available to them.
- Parents/ carers have capacity to understand the risks associated with blended diet and are willing to work with healthcare professionals to mitigate such risks.

### **Contraindication**

- Age < 6 months
- Nasogastric tube, nasojejunal tube and jejunostomy <sup>(1)(4)</sup>
- Genetic / metabolic condition predisposing very low body weight not due to previous feed tolerance
- Volume restriction or poor volume tolerance
- Immunocompromised patients

## **5.3 Enteral Feeding Devices**

### **Gastrostomy Tubes**

There are several different types of gastrostomy devices in the UK. The type needs to be considered before commencing a blended diet. Balloon gastrostomy devices are preferable as they can be easily changed in the community in the event of a blockage. However, a blended diet can be administered via a disc retained device (PEG) as long as there is a clear plan in place as to how the patient would receive nutrition, fluid and medication in the event of occlusion <sup>(1)(3)</sup> Parents/carers must be taught that regular water flushes are important and be aware of the medical intervention required to replace the disc retained tube if occluded <sup>(1)</sup>

### **Nasogastric Tubes**

It is not common practice to use a blended diet with a nasogastric tube <sup>(1)</sup>. Due to their narrow French size, longer length tubes and risk of splitting of the tube above the epiglottis leading to aspiration; this guidance does not support a blended diet via nasogastric tube. <sup>(1)</sup>

### **Jejunostomy Tubes**

This guidance is not relevant to patients with devices feeding into the small bowel (i.e NJ or Jejunal tubes). Liquidised food is not sterile; feeding directly into the small intestines bypasses the protective acidic environment of the stomach. This guidance does not support a blended diet via jejunostomy tubes.

### **Gastro-jejunostomy Tubes**

Gastro-jejunal tubes may provide a means to use a combination of commercial enteral formula via the jejunum and blended diet via the gastric port. It is possible to provide blended diet via the gastric port of a gastro-jejunal tube although these devices have two internal lumens therefore the diameter of the gastric port is reduced. The consistency of blend needs to be taken into consideration to account for this. Parents/carers must be aware of the medical intervention required to replace the gastro-jejunal device in the event of an occlusion. A plan should be in place as to how nutrition, fluid and medication would be provided if the tube were to be blocked and how it will be replaced.

## **6. Equipment**

Blenders are considered an essential piece of equipment as they allow a greater variety of foods to be used in the diet <sup>(1)</sup>. When starting out, Parents/carers will be informed it is possible to provide a

blended diet using shop bought baby food jars and pouches; which allows a trial without the expense <sup>(12)</sup>. If Parents/carers wish to continue with a blended diet long term, it is recommended they purchase a blender. Parents/carers should be informed of the types of blenders suitable for use, including their advantages and disadvantages in order to make an informed decision based on their individual need <sup>(1)</sup>. Parents/carers will be given information on the following types of blender:

#### **Commercial blenders (e.g. Vitamix®, Omniblend®, BlendTec®)**

This type of blender can blend a greater variety of foods e.g. fruit and vegetables, seeds and nuts. They are also a good option for batch blending. However, they are often very expensive to buy.

#### **Mid-Range (e.g. NutriBullet®, Nutri Ninja®)**

These blenders are considered easy to use and clean. They are often smaller than the commercial blenders and therefore are unable to blend such large quantity of food in one go. Therefore, they are ideal for blending each meal separately and for smaller volumes.

#### **Basic jug / stick blenders**

This blender can cope with soft-cooked foods or pre-pureed foods (e.g. yoghurts, baby foods etc.) but not with all fruits, vegetables, nuts and seeds. A sieve may be needed to ensure the blend is lump free (If using a sieve a metal sieve with holes of 1mm or less diameter is ideal as it is easy to clean). These blenders are considered ideal for blending each meal separately and for smaller volumes

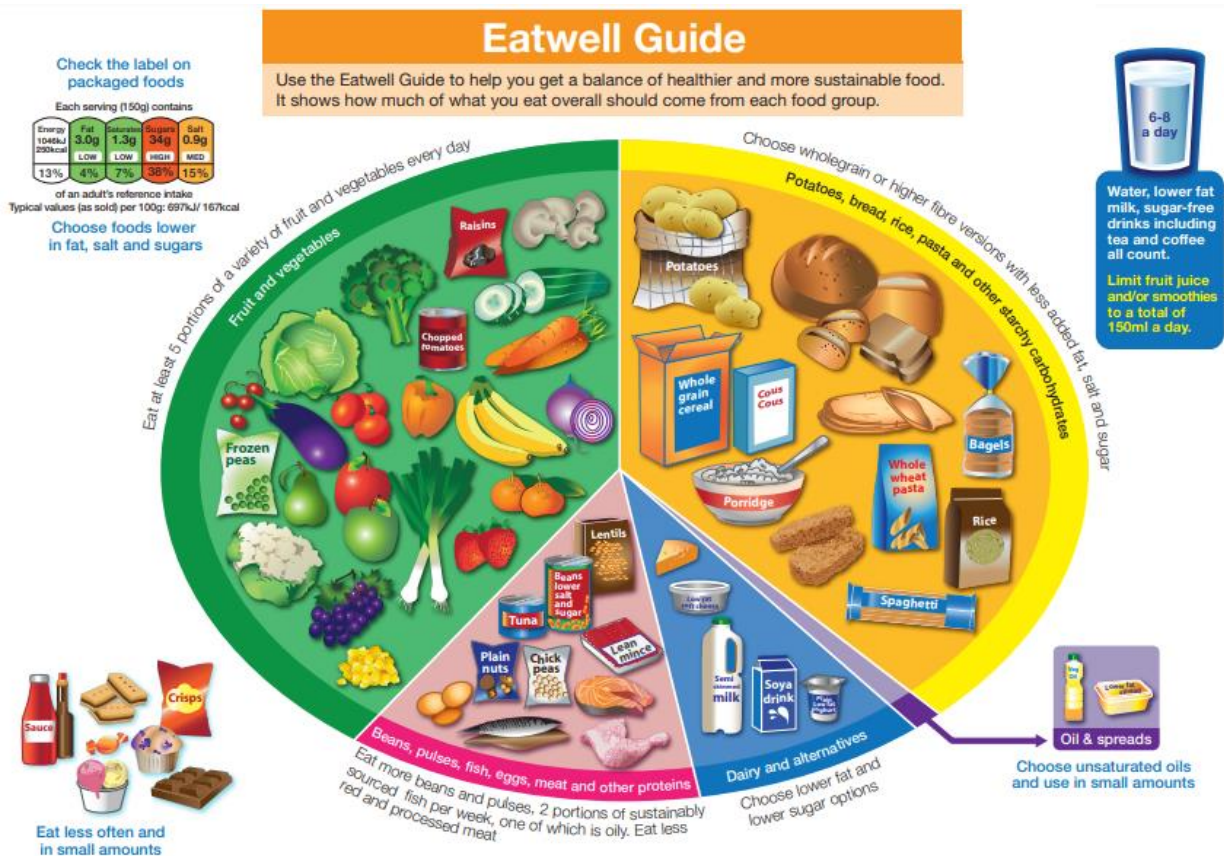
In addition to the blender, parents/carers will be encouraged to purchase

- Labels or markers (to date containers)
- Cool bags and ice blocks to transport blends
- Food safe containers with lids to store and reheat blends

Other equipment include switching from a right angled extension set to a straight bolus set for balloon gastrostomy devices. And additional 60ml syringes to allow bolus feeding. Both of these can be ordered by nursing staff and will be provided by Enabled Living.

## **7. Nutritional Sufficiency**

Unlike commercial formula, blended diet does not have a uniform energy density; therefore the dietitian will advise on daily energy and protein guide in addition to blend consistency rather than a prescribed volume of blend <sup>(1)</sup>. The dietitian will estimate the child's energy and protein requirements taking their age, medical condition and energy expenditure into consideration. If full requirements are met via blended diet, the dietitian will recommend the daily guide be split over 3-7 blends (breakfast, lunch, dinner, supper and 2 to 3 snacks) depending on the child's individual tolerance volume. The guidance from the dietitian will be based on the Public Health England Eat Well Guide, with modifications to meet individual and clinical needs (see picture below) <sup>(10)</sup>. Dietitians will educate parents on healthy eating, age related portion size and advise to include a wide variety of foods from the four main groups. Dietitians will not be expected to provide individualised meal plans, but will review the patient's progress seeking to identify any gaps in their diet.



Some children will require a combination of prescribed feed and/or vitamin and mineral supplement due to their tolerance and potential for blended meals to contain lower than estimated nutrient levels. Unless deficient, children on a blended diet will not be supplemented. The dietitian will follow national recommendations for supplementation in particular age groups; for example vitamin D in children aged 0-4 years <sup>(11)</sup>.

In addition to food education, care will be taken to ensure parents/carers are meeting the hydration needs of the child by teaching them about fluid requirements and monitoring for adequate hydration. Daily fluid requirement will be included in the child's feeding regimen.

## 8. Feed Administration

ELFT staff will not administer blended diet to a child or young person. The ELFT home enteral feeding Dietitian and nursing staff will support parents/carers and school staff in ensuring they receive the required training.

This policy does not support the use of enteral feeding pumps to deliver blended foods. Pump feeding of blended foods is not supported by any manufacturer as they are not calibrated for this purpose and pose a risk of microbial contamination with protracted hanging times. It is therefore advised that all feeds are administered as boluses, using a 60ml enteral syringe.

The feed should be of a smooth custard like consistency and drawn up into the syringe from a container. Drawing up allows any potential lumps to be identified as they are likely to block the tip of the syringe.

Bolus feeds can be administered via gravity or a slow plunge method using a push pause technique<sup>(3)</sup>. Only thinner blends can be administered via gravity and it is noted that this method has a much slower rate<sup>(3)</sup>. A slow plunge push pause technique is preferred when administering blended diet to maintain the patency of the enteral device. It is recommended to plunge the feed and pause at every 5-20ml to mimic the act of oral eating and swallowing<sup>(3)(5)</sup>. If excessive pressure is required to plunge the feed and a push pause technique cannot be used; the consistency is too thick. While adding additional fluid will reduce the blends consistency, this can impact the nutrition provided if the full volume is not delivered. Therefore, the addition of fluid should be documented on the child or young person's feeding regime. The child should be monitored for signs of discomfort whilst plunging the feed. If the child shows discomfort, the feed should be stopped allowing a few minutes for the child to settle before attempting to continue.

Some children will be able to tolerate faster bolus feeds and others may require slower feeds. The blended food needs to be delivered at a rate tolerated by the individual child. The feeding regimen must state the estimated length of feed in minutes, for example '1x 60ml syringe to be given over 6 minutes'. See Appendix 5 for the blended diet feeding plan template.

For information on troubleshooting enteral devices (i.e. blockages), please refer to the ELFT Enteral Feeding Policy for Children and Young People 2022.

## **9. Hygiene and Prevention of Infection**

It is important that good food and hand hygiene methods are followed when preparing, storing and administering a blended diet to avoid and minimise the risk of bacterial contamination. Bacterial contamination and growth can result in food poisoning, leading to symptoms such as diarrhoea, vomiting and abdominal pains. Those administering a blended diet must be made aware of how to minimise these risks.

### **9.1. Preparation**

Good hand washing techniques must be adopted, and hands washed prior to handling food or equipment.

- Cooking and liquidising equipment should be of a design which can be thoroughly cleaned.
- Surfaces on which food is prepared must be clean
- Food must be stored appropriately to avoid deterioration prior to cooking or use
- Avoid undercooking food prior to liquidising
- Prepare blended food as close as possible to the time of administration

### **9.2. Storage**

Avoidance of storing blended foods (i.e. preparing and blending as close to administration as possible) will reduce risks associated with storage. Where storage and reheating is required, Food Safety guidelines should be adopted to minimise associated risks<sup>(9)</sup>. If it is necessary to store food in the fridge or freezer for later administration, the following guidelines should be adopted:

- Store the food in a clean, sealed, air-tight container
- Blends should only be kept at room temperature for a maximum of 2 hours
- Blended food should not remain at room temperature for more than 2 hours before refrigerating
- Blended food may be refrigerated (below 5 °C) and used within 24-48 hours of preparation
- If the blend is not going to be used within 24 hours of preparation, freezing is recommended
- Blended food may be frozen (below - 18°C) for 1-3 months depending on the blend
- Defrosted blends stored in the fridge should be discarded after 24-48 hours

See Appendix 4 for preparation, storage and reheating of a blended diet.

## **10. Monitoring**

A detailed monitoring plan will be established by the dietitian before commencing a blended diet. The aim of effective monitoring is to ensure that nutrition support is provided safely and effectively, that any complications are detected and treated and realistic nutritional goals are met. Once the enteral feeding is established an ongoing monitoring plan tailored to the needs of the child should be established. It is likely that once established on a blended diet, a tube fed child will require the same level of monitoring to those who use a commercial enteral formula. When starting blended diet, some families may require more intense input from the dietitian. The ultimate goal is to empower families to take more control and be proficient in providing safe, nutritionally balanced blends.

Anthropometric measures must be taken regularly, as required by the age and nutritional status of the child. These may include weight, height/length (using actual or proxy measures), BMI, mid-arm circumference, triceps skinfold <sup>(6)</sup>.

Blood chemistry will only be carried out when relevant to the individual child's clinical situation, or if there is reason to believe there is nutritional deficiency. This will not be routine for all children commenced on a blended diet <sup>(2) (7) (8)</sup>.

Any concerns regarding growth and nutritional status will be addressed with the patient/parent/carer and if recommendations are not adhered to then safeguarding procedures will be commenced as per ELFT Safeguarding Children Policy.

The home enteral feeding dietitian will devise an individualised monitoring plan with the patient and community/school nursing team. This may include monitoring the health of the stoma site and patency of the enteral feeding tube <sup>(6)</sup>

## **11. Blended diet in the Education setting**

Education settings may administer a blended diet to a child with an enteral feeding tube providing the child is well established on a blended diet, the education setting has the facilities available to administer a blended diet and staff have received full training.

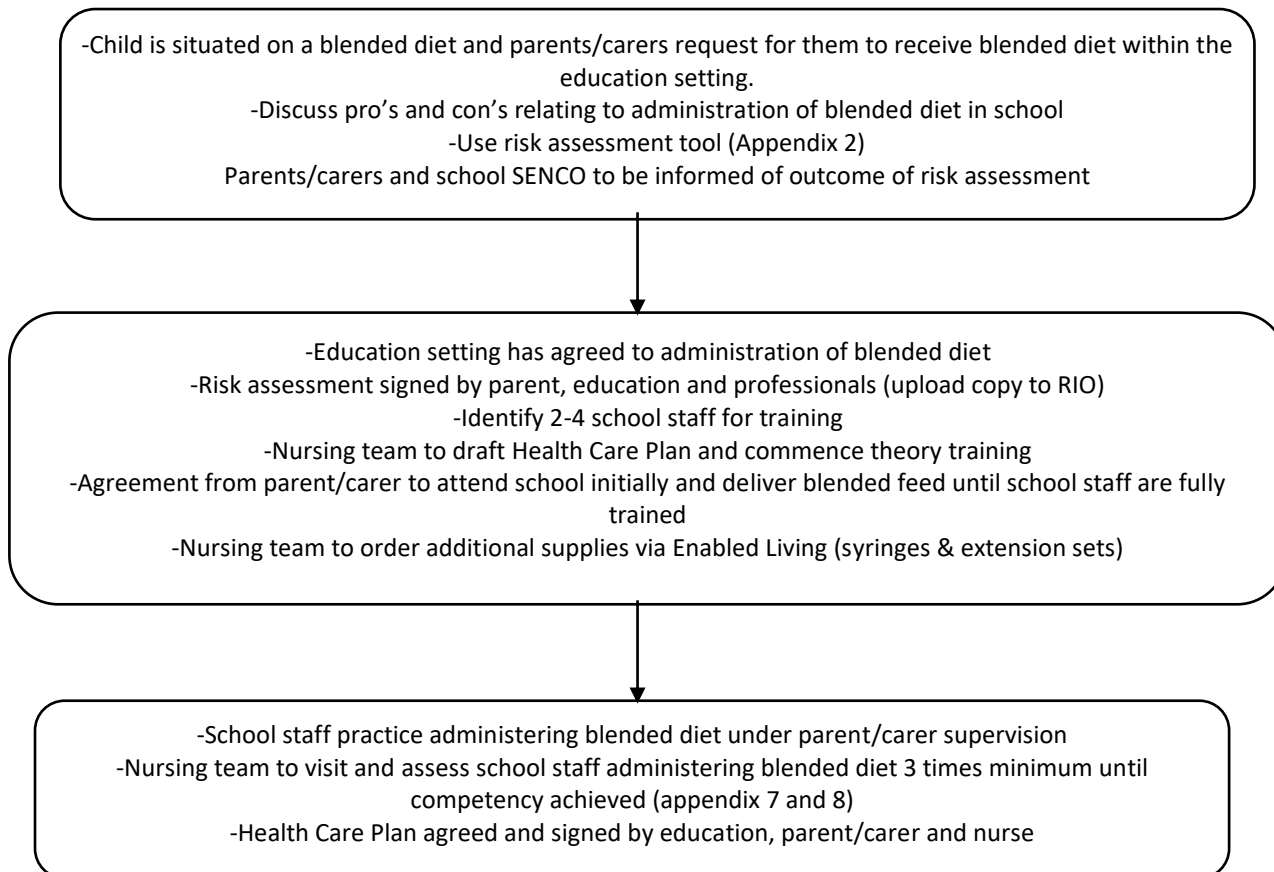
The following conditions must also be met:

- There is an agreement with education, parents/carers, dietitian and nurses that a blended diet is appropriate within the individual education setting.
- The child has an up-to-date health care plan with feeding regimen included, detailing information required to administer the blend safely.
- The parent/carer prepares the blend at home and sends it into school in a labelled container listing all ingredients and the child's name, date of birth and date/time the blend was prepared. Alternatively, ready-made commercial pureed foods are used.
- School staff have attended enteral feeding training and have received competency based training on preparing and administering a blended diet.

Appropriate storage of blend during transportation to the education setting must be maintained. Ideally, the blend should be transported in a cool box/bag with evenly distributed ice or gel packs to maintain the temperature less than 5°C. The school should have suitable refrigeration capacity to

store blends and ensure there is a system in place for checking fridge temperatures daily. <sup>(1)</sup> Reheating guidance in Appendix 4 must be followed.

### Pathway for commencing a blended diet in the education setting:



## 12. Training

Training for parents/carers and school staff will be competency based. Before administering a blended diet via enteral feeding tube independently, they will need to be observed and assessed as competent. The dietitian is responsible for observing and assessing parents/carers in clinic and the practice development nurse/special school nurses are responsible for training school staff either in the school or the classroom setting. On initial training, school staffs are expected to be assessed a minimum of three times before successfully achieving competency. Refresher training for school staff is required every 18 months. See Appendix 6 and 7 for the two competency documents that must be completed.

All staff handling food should have basic food hygiene in their local areas.

Staff within ELFT, Community Children's Nursing Service (Newham) will receive in-house training and advice from the lead Dietitian and Practice Development Nurse to be able to supervise, assess and sign competencies for parents, carers and school staff.

ELFT staff will not be responsible for training staff within respite care, external agencies or other NHS Trusts.

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<b>Appendix 1</b>
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### **Initial Assessment Tool for Blended Diet**

Patient's Name: .....

Date of Birth: .....

NHS No: .....

Date of Assessment: .....

**Feeding tube:**

**It is recommended that Blended Diet (BD) is fed via a balloon gastrostomy which can easily be replaced.**

Manufacturer and brand of gastrostomy tube or button: .....

Size of tube: .....

Previous tube blockages? (including reasons and management):

.....

**Document** why the patient/parent wishes to give blended diet?

.....

.....

.....

Risk/Issue	Potential Mitigation of Risk	Discussed with patient/ carer
<b>Tube Blockage</b>	<ul style="list-style-type: none"> <li>• Flushing advice for pre and post feeding.</li> <li>• Achieving the correct consistency, recognising that this increases the volume required and may impact on tolerance.</li> <li>• Use of larger bore feeding tube (14Fr bore for a button gastrostomy).</li> <li>• The risk of changing the tube may be significant if an interventional procedure is involved.</li> <li>• Ensure use of high power blender.</li> <li>• Sieving blended food will ensure there are no lumps.</li> </ul>	<input type="checkbox"/> Yes <input type="checkbox"/> No
<b>Some tubes and our feeding pumps are unlicensed for blended diet.</b>	<ul style="list-style-type: none"> <li>• It is important to monitor any impact of blended diet on the lifespan of the tube – this could result in early / unexpected degradation and so it's important to ensure you always have a spare button at home.</li> <li>• The condition of the gastrostomy tube should also be regularly reviewed as you would do routinely.</li> <li>• Take care to administer a smooth blend with care. On occasion, plunging very thick blends could impact the integrity of the buttons internal valves and cause leakage.</li> <li>• Enteral feeding companies do not support the use of feeding pumps for administering blended food as they are not licensed or calibrated for this use. They will occlude and alarm.</li> </ul>	<input type="checkbox"/> Yes <input type="checkbox"/> No
<b>Infection</b> Due to risk of food being lodged in tube after feeding <b>and/or</b> poor food hygiene practices including storage of the food/puree which is an ideal medium for bacterial growth	<ul style="list-style-type: none"> <li>• Recommend good food hygiene / handling / storage (<a href="http://www.food.gov.uk/food-safety">http://www.food.gov.uk/food-safety</a> and Appendix 4).</li> <li>• Adequate flushing of the tube pre and post feeding to ensure it is kept clean.</li> <li>• Administer all pureed food via bolus method</li> <li>• Do not pump feed due to the risk of microbial contamination with long hanging time of blended food.</li> <li>• If you are transporting BD, it should be placed in a cool bag/ice box with an ice pack. Food may be stored for up to 4 hours in this manner. Ensure any containers are clearly labelled with your child's name if you are leaving food with</li> </ul>	<input type="checkbox"/> Yes <input type="checkbox"/> No

	<p>carers.</p> <ul style="list-style-type: none"> <li>• If BD needs to be stored in a fridge, check the fridge thermometer on the outside of the fridge, which should be below 5 degrees centigrade (°C).</li> <li>• Feeds may be stored in the fridge for up to 24 hours after making.</li> <li>• If you are freezing blended feeds, ensure the food is cooled and placed in the freezer as soon as possible.</li> <li>• Reheating pre cooked/ frozen blended feeds – please follow good hygiene practice guidelines to reheat thoroughly then cool to temperature required.</li> <li>• Do not leave blended feeds at room temperature for longer than necessary when cooling for storage or freezing.</li> <li>• Keep cooling food covered.</li> </ul>	
<p><b>Nutritional intake</b> may be compromised due to unknown concentration of puree.</p>	<ul style="list-style-type: none"> <li>• The patient should not be nutritionally compromised when commencing blended diet.</li> <li>• Use of nourishing fluids to achieve required consistency, recognising that volume tolerance may be a limiting factor.</li> <li>• Guidance around the use of energy dense / nutrient rich foods as a basis for the puree.</li> <li>• Begin with using a 'mix' of commercial formula / feed and puree food.</li> <li>• Monitor weight/growth as clinically indicated to identify inadequate nutritional intake early on.</li> <li>• Discuss and agree an introduction plan for BD based on overall assessment requirements and priorities for the child.</li> <li>• Discuss and plan for initiation of nutritional blood test 6 months after commencing BD.</li> <li>• Dietitian will assess 3-5 day food intake record annually (either quantitatively or via food recall assessment) or when there are concerns, feed back results and give advice accordingly.</li> </ul>	<input type="checkbox"/> Yes <input type="checkbox"/> No
<p><b>Poor volume tolerance</b> It is common for people requiring tube feeding to experience reflux / poor volume tolerance. This method of feeding may worsen / continue to cause these problems</p>	<ul style="list-style-type: none"> <li>• As above.</li> <li>• Advise patient/parent to keep feeding and symptom diaries to assess tolerance and enable informed review.</li> <li>• Frequent small boluses.</li> <li>• Do not pump feed due to the risk of microbial contamination with long hanging time of blended food.</li> </ul>	<input type="checkbox"/> Yes <input type="checkbox"/> No
<p><b>Poor weight gain / weight loss (&amp; faltering growth in children)</b></p>	<ul style="list-style-type: none"> <li>• Review as clinically indicated &amp; monitoring of weight / height and other nutritional indicators.</li> <li>• Discuss options for other health professionals/clinics or parents weighing patient if more frequent weight monitoring is required than can be provided.</li> <li>• As above to ensure optimal nutritional enhancement of blended diet.</li> </ul>	<input type="checkbox"/> Yes <input type="checkbox"/> No
<p><b>Allergic reactions</b></p>	<ul style="list-style-type: none"> <li>• Risk of food allergies higher in those with eczema</li> <li>• If child is atopic or there is a strong family history of allergy discuss value of skin prick testing regarding allergen introduction</li> <li>• No known increased risk of food allergy related to giving food via gastrostomy rather than oral route</li> </ul> <p>Allergy checklist – is there any history of:</p> <ul style="list-style-type: none"> <li>• Previous reactions to any ingested foods (type of reaction/what food)</li> <li>• Any contact reactions to foods (type of reaction/what food)</li> <li>• Any history of eczema/asthma/hayfever</li> </ul>	<input type="checkbox"/> Yes <input type="checkbox"/> No  <input type="checkbox"/> Yes <input type="checkbox"/> No <input type="checkbox"/> Yes <input type="checkbox"/> No <input type="checkbox"/> Yes <input type="checkbox"/> No

	<ul style="list-style-type: none"> <li>Family history of eczema/asthma/food allergies</li> </ul> <p>If any yes's please contact allergy team for advice</p>	<input type="checkbox"/> Yes <input type="checkbox"/> No
--	---	--

There are perceived **potential issues** associated with giving blended food via a feeding tube, but these can usually be managed without issues if the following areas are considered. In practice, we are seeing very few problems where the following preparation and administration areas are considered thoughtfully.

**To be discussed with the patient/parent to inform decision-making:**

**Individual issues identified after discussion:**

Risk	Potential Mitigation of Risk/ management advice

The patient/parent has been made aware that if any of the following issues occur, blended diet may need to be reviewed and alternatives may need to be reconsidered:	
<ul style="list-style-type: none"> <li>• The patient's symptoms become worse</li> <li>• New problems or symptoms develop</li> <li>• Weight is not maintained/gained according to agreed care plan (and / or growth is adversely affected for children)</li> <li>• Tube blockages become a problem requiring other interventions</li> <li>• There is a gastroenteritis illness</li> </ul>	<input type="checkbox"/> Yes <input type="checkbox"/> No
Patient/ Carer has also been made aware that it is recommend that nutritional bloods are monitored to ensure blended diet is meeting the patient's nutritional requirements.	<input type="checkbox"/> Yes <input type="checkbox"/> No
Feeding plan agreed	<input type="checkbox"/> Yes <input type="checkbox"/> No
Discussions around Blended Diet in Hospital	<input type="checkbox"/> Yes <input type="checkbox"/> No



Date completed .....

Parent / Patient Name: .....

Parent/Patient Signature: .....

Dietitian's Name: .....

Dietitian's Signature: .....

Agreed date of review: .....

**Copies to be provided to:**

- The patient / family
- RIO
- GP

In other HCP records (as agreed) as appropriate to the individual's care, please list:

**Appendix 2**

## Risk Assessment for Giving Blended Diets in Special Schools, Respite Care and Nursery Settings

Name: .....

Date of Birth:..... NHS Number: .....

Name of staff member making assessment (this should ideally be completed by dietitian along with the child's teacher and a nursing representative - either school nurse or CCN):

.....

School/Respite/Nursery setting name and address:

.....

.....

### Pupil / patient attendance status:

Day pupil                       Boarder                       Respite                       Nursery

Other (Please specify):.....

### Food / feed provision plan (discuss and agree this with parents/carers):

Mix of oral food and blended foods

Mix of enteral feeding and blended foods

Only to be given sealed, readymade puree pouches in school/respice environment

Blended food to be provided by school/ respice caterers

Other arrangement agreed by school/ Respite/Nursery management. Please specify:

.....

NB: ELFT recommend that the **safest** option for food provision is to provide a blended version of the school or respite meal available on site. Where there are specific reasons for this not being possible e.g. ketogenic diet, food not available on site, the school manager will need to give permission for the parent to bring food into school. We further recommend that the parent consider using lower risk foods when preparing blends for transport to school, respite or nursery. ( See Appendix 4)

### Parental Consent:

I would like staff to administer the blended diet via gastrostomy and give permission for them to do so.

I understand that tube blockage may potentially occur and that blended food is not sterile. I have discussed this with my dietitian and specialist school nurse.

Recommended option: I understand that the school/ care setting will provide my child with a pureed version of the school/ respite meals available to children at school. This meal will be prepared as other meals are done and then given to my child at just above room temperature as soon after preparation as possible.

State details of food provision agreed: .....

.....

.....

Alternative agreement: (to be negotiated and agreed with the school management team). This would be a local decision in a non health care setting and agreed by the relevant manager.

Reason for alternative food provision plan: .....

.....

.....

If food is to be brought in from home, I understand that it is my responsibility to ensure it is freshly prepared and stored in a suitable way to minimise bacterial contamination. I understand I have been advised to use lower risk foods to prepare blends for use outside my home (See Appendix 4).



Name: .....

Signed: .....

Relationship to child: .....

**Appendix 3**

## Risks and Control Measures for Giving Blended Diets in a school / care setting:

Risk	Control Measure	Discussed with parent and school staff
<b>Staff Training</b>	<p>School nurse will provide gastrostomy training to staff.</p> <p>The school nurse should be present at this and at least 2 members of the class staff team.</p> <p>Staff should be identified to feed the child and trained by the school nurse. The parent should come into school ideally at the same time to demonstrate how their child is fed at home with BD. The specialist school nurse will observe staff competency to administer blended foods using the agreed competency checklist. It is recommended that school staff sign that they feel competent to feed in this way prior to starting BD at school. This should be documented.</p> <p>If staff members change, there should be alternative staff identified to train to give BD.</p> <p>There should be several staff members trained within each class to administer blended diets.</p> <p>Where possible, take measures to ensure the same staff feed BD to the child each day.</p> <p>The school nurse should amend the gastrostomy care plan to reflect the type of gastrostomy feeding requested by the parent.</p> <p><b>Please refer to ELFT enteral feeding competency check list when observing staff for training purposes.</b></p>	<input type="checkbox"/> Yes <input type="checkbox"/> No
<b>Tube Blockage</b>	<p>Ensure the tube is kept clean and well flushed. There should be no visible signs of food residue in the tube.</p> <p>If necessary, flush the tube with at least 5mls water in between syringeful to ensure the tube is kept free of blockage.</p> <p>Look at BD food provided and ensure it is the correct consistency before administering - medium custard consistency with NO lumps.</p> <p>If the tube becomes blocked, contact your school nurse to review or call the parent into school.</p> <p>The parents are responsible for providing school with a spare gastrostomy button.</p>	<input type="checkbox"/> Yes <input type="checkbox"/> No
<b>Equipment</b>	<p>Feeding pumps should NOT be used to administer blended food.</p> <p>School nurse should regularly check the visible parts of the PEG tube to ensure it remains in good condition and is clean.</p>	<input type="checkbox"/> Yes <input type="checkbox"/> No

Risk	Control Measure	Discussed with parent and school staff
	<p>Use a 60ml (large with single 'O' ring) syringe to administer BD. Apply a degree of pressure in a slow and steady manner to administer the food. Care should be taken. If you need to force the food through, stop, add additional fluid to the blend to achieve a looser puree.</p> <p>It is recommended that a clean syringe is provided for administration of BD each day in a school/respite setting. Discard this at the end of the school day.</p> <p>Keep in mind the time it may take to feed a child eating orally as a guide.</p>	
<b>Food Hygiene</b>	<p>It is advised that the safest way to provide BD in school is for a blended version of school dinner to be provided.</p> <p>Blended food will be requested on a child by child basis from the kitchen supplying the school/ respite unit. If consistency of the supplied food is not smooth enough and further blending is required this should be undertaken in a suitable high power blender.</p> <p>After each use the parts of the blender that have come into contact with the food should be ideally washed in the dishwasher.</p> <p>We recommend schools purchase a blender where the jug can be safely placed in the dishwasher e.g. Nutribullet, Nutrininja. Ensure that the jug container is washed thoroughly in the dish washer after use.</p> <p>Some blenders e.g. Vitamix, may advise that the blender jug and blades are not placed in a dishwasher – please follow manufacturers instructions. If hand washing - use hot soapy water and leave to air dry after each use.</p> <p><b>If a special arrangement/ agreement is in place with the school management team for the parent to bring food into school, we would recommend the following:</b></p> <ul style="list-style-type: none"> <li>• Good food hygiene / handling / storage are recommended as with any other type of food for consumption (see Appendix 4)</li> <li>• All blended foods should be brought to school in a cold bag with a freezer pack. Food can be stored for up to 4 hours in this way in the absence of a refrigerator.</li> <li>• For longer storage periods (over 4 hours), ensure that a fridge is used to store food and that it has a thermometer. Ensure it is kept at a temperature below 5 degrees.</li> <li>• Ensure the fridge is kept clean in line with existing requirements for food storage.</li> </ul>	<input type="checkbox"/> Yes <input type="checkbox"/> No

Risk	Control Measure	Discussed with parent and school staff
	<ul style="list-style-type: none"> <li>• Ensure all unused food is discarded at the end of each meal time.</li> <li>• Follow FSA reheating guidelines if the blend needs reheating (<a href="http://www.food.gov.uk/food-safety">http://www.food.gov.uk/food-safety</a>)</li> <li>• Alternatively, pre sealed UHT treated food pouches, fromage frais, smooth desserts and custards can be given without reheating.</li> <li>• Lower risk foods are recommended for blends to be brought into school or respite. Blending and handling of foods can increase the risk of bacterial growth. Please see Appendix 4 for further advice.</li> <li>• Research has shown that bacterial load in blended foods can increase to unacceptable levels after 48 hours. Freshly prepared food is preferable to reduce this risk.</li> <li>• Adequate flushing of the tube pre and post feeding to ensure it is kept clean.</li> <li>• Administer all pureed food via bolus method is recommended.</li> <li>• Do not pump feed due to the risk of microbial contamination with long hanging time of blended food.</li> <li>• If you are transporting BD, it should be placed in a cool bag/ice box with an ice pack. Food may be stored for up to 4 hours in this manner in the absence of access to a refrigerator. Ensure any containers are clearly labelled with your child's name if you are leaving food with carers.</li> <li>• If BD needs to be stored in a fridge, check the fridge thermometer on the outside of the fridge, which should be below 5 degrees centigrade (°C)</li> <li>• Reheating pre cooked/ frozen blended feeds – please follow good hygiene practice guidelines to reheat thoroughly then cool to temperature required (see appendix 5).</li> <li>• Do not leave blended feeds at room temperature for longer than necessary. Food should not remain at room temperature for longer than 2 hours</li> <li>• Staff must wash their hands thoroughly before and after handling blended feeds for administration and associated equipment.</li> <li>• Food should not be stored in a freezer on school or respite premises.</li> <li>• All staff handling food must have basic food hygiene training.</li> <li>• You will be provided with a fresh 60ml syringe each day for use. Discard at the end of every day.</li> </ul>	
<b>Giving a</b>	Flush the tube well prior to and after giving BD.	<input type="checkbox"/> <b>Yes</b>

Risk	Control Measure	Discussed with parent and school staff
<b>meal</b>	<p>The meal duration should be similar to a normal meal for the particular child's tolerance.</p> <p>Whilst administering the meal, observe the child for any signs of discomfort or distress. Stop if this occurs.</p> <p>If possible, ensure that syringes used for BD are not used for other purposes.</p> <p>A new 60ml syringe should be used for each blended diet feed via gastrostomy in a school or respite setting.</p> <p>Report any issues with poor feed tolerance to the parent, school nurse and dietitian. These may be gagging, retching, vomiting, child becomes distressed, sweaty and clammy or looks uncomfortable.</p> <p>Pay attention to supporting the syringe whilst giving a blended meal as it will be heavier than with milk. Take care not to tug or pull at the PEG tube as this may affect the stoma sight and make it sore.</p> <p>Follow the guidelines in the child's feeding plan - bolus sizes will vary according to age, requirements and tolerance in each child.</p> <p>When a child is first starting BD - this should be planned and a written advice sheet provided by the dietitian and/ or parent.</p>	<input type="checkbox"/> No
<b>Nutritional adequacy</b>	<p>Children receiving BD should have weight and growth monitored regularly. The dietitian will discuss and arrange a plan for this to happen.</p> <p>Usually, fluids used to dilute blends should be nutrition dense. However, this is not always the case so please refer to the child's Blended Diet Feed Plan where this will be identified.</p> <p>Parents will receive advice and support from their dietitian to ensure blends are balanced and as nutrient dense as required.</p> <p>BD bolus size and volume at each meal will be outlined in the child's feed plan and school are to be guided by the parents.</p>	<input type="checkbox"/> Yes <input type="checkbox"/> No
<b>School Trips</b>	<p>Supply of school prepared blended diet will not be possible on day trips.</p> <p>Agree with the parent what will be provided and advise that this should be a pre-prepared commercial pouch</p>	<input type="checkbox"/> Yes <input type="checkbox"/> No
<b>Additional issues discussed</b>		

Risk	Control Measure	Discussed with parent and school staff

**Individual issues identified:**

Risk	Potential Mitigation of Issue / Risk

**After all sections of the form are discussed and completed:**

**Date of meeting and discussions:** .....

**Parent / Patient Name:** .....

**Parent/Patient Signature:** .....

**Dietitian's Name:** .....

Dietitian's Signature: .....

School/Respite/Community Nurse Name:  
.....

School/Respite/Community Nurse Signature:  
.....

School/ Respite/nursery representative name:  
.....

School/ Respite/ Nursery representative signature:  
.....



**Copies to be provided to:**

The patient / family

RIO

GP

In other HCP records (as agreed) as appropriate to the individual's care, please list:

**Appendix 4**

**Preparation, Storage and Reheating of a Blended Diet**

**Guidelines for preparation, storage and reheating of a blended diet, (BD)**

The same principles of preparing food for oral consumption apply to the preparation of BD enteral feeds.

**It is recommended that patients/parents/carers complete on-line food hygiene training. This is readily available at minimal or no cost.**

**Guidelines included here are based on national food safety guidelines. Please refer to Food Standards Agency for further information, [www.food.gov.uk/food-safety](http://www.food.gov.uk/food-safety).**

## **Preparation**

- Good hand washing techniques must be adopted, and hands washed prior to handling food or equipment.
- Cooking and liquidising equipment should be of a design which can be thoroughly cleaned; manufacturer's instructions on cleaning blender should be followed.
- Surfaces on which food is prepared must be clean, prior to preparation and again once completed.
- Food must be stored appropriately to avoid deterioration prior to cooking or use.
- Avoid undercooking food prior to liquidising.
- Prepare blended food as close as possible to the time of administration.
- A high powered blender (minimum 900 Watts) is recommended for the preparation of BD e.g. Vitamix, Blendtec, Optimum. Basic jug blenders can cope with soft foods, but will limit choice and variety of foods offered.
- Until confident that the blender can produce a blend that is free from all lumps, it is recommended to additionally sieve the blend. For some blenders, it will be necessary to always sieve after blending with particular foods, e.g. certain types of meat, seeds, fruit with pips etc.
- Discuss with the dietician the most appropriate liquid to achieve the correct consistency of feed in order to best meet nutritional requirements.

## **Storage**

If it is necessary to store food in the fridge for later administration, the following guidelines should be adopted:

- Store the food in a labelled clean container with a lid on the top shelf of the fridge.
- Cool food as rapidly as possible and store in the fridge as soon as is cool enough.
- Blended food should not remain at room temperature for more than 2 hours; it should be discarded after this time if not used.
- Blended food that will not be used immediately may be refrigerated (below 5 °C) for up to 24 hours after preparation.
- It is preferable to have a fridge thermometer to monitor the temperature of the fridge.
- Blended food may be frozen (below -18 °C) for up to 1 month.

## **Reheating**

Administering the feed at the desired temperature can be achieved in the following ways if it is not administered immediately after cooking.

- Remove feed from fridge, transfer to a suitable container, and microwave until 'steaming hot' or 'piping hot' throughout (or if using a thermometer, a minimum of 70°C for at least 2 minutes). Stir well before serving. Allow to cool to body temperature (37°C) or below before feeding.
- Remove feed from fridge and stand on work surface for 30 minutes to allow this to come to room temperature.
- Remove feed from fridge and place the container in a jug of hot water for no more than 10 minutes. Shake or stir before feeding.

## **Defrosting**

- Frozen blends should be either defrosted in the fridge over night or on the defrost setting in a microwave.
- It should be reheated in accordance with the information above paying particular attention to achieving an even heat throughout (not hot or cold spots) and preferably using a thermometer to check.
- Use defrosted feeds within 24 hours of removing from the freezer.

## **Administering blends**

- Ensure syringes and other ancillaries used to administer BD are cleaned thoroughly in hot soapy water as per manufacturer's recommendations. Allow to air dry.

- Administer all pureed food via bolus method to prevent unnecessary hanging time.
- Flush tubes thoroughly pre and post feeds.
- Ensure stoma site and gastrostomy are clean before and after administration of feeds.

**Foods with a higher potential to cause food poisoning:**

- Poultry – Ensure storage and cooking safety advice is followed. Wash your hands before and after handling.
- Eggs – choose eggs with the British lion mark – these are now declared salmonella free.
- Raw green leafy vegetables – Salad and green leafy vegetables can harbour bacteria, particularly Listeria. Cooking thoroughly will destroy bacterial growth.
- Soft unpasteurised cheeses and blue cheese
- Raw sprouts e.g. bean sprouts
- Seafood and shellfish
- Rice
- Deli meats, particularly those stored in an open counter



**Appendix 5**

**Blended Diet Feeding Plan**

**(To include back up plan when Blended diet cannot be administered)**

If the patient is admitted to hospital / to respite care or other setting who cannot support BD, the alternative feeding plan should be agreed and followed.

<b>TUBE FEEDING PLAN - BLENDED DIET</b>		Date:
Name:	DOB:	NHS no:
TUBE FEED(S) USED: Gastrostomy		
Type of feeding: blended diet		



**SPECIAL INSTRUCTIONS:**

When feeding please keep at an angle of >30°  
 If it is a hot day add extra water flushes of 80 -100mls as you would drink more. Every 2-3 hours during the day.  
 Flush with water before meds in between and at the end of meds – to keep the tube clean.  
 Please check the feed label carefully to ensure you have the correct feed.  
 If you are using a thickener for feeds – it is important to store this in a safe place where your child does not have access to direct ingestion



**Any Nutritional supplements to be given (vitamins, minerals, Dioralyte, probiotics) :**

APPROX. STARTING TIME	BOILED THEN COOLED WATER FLUSH BEFORE	DOSE OF FEED/BLEND USED and TARGET KCALS	BOILED THEN COOLED WATER FLUSH AFTER	Estimated length of feed
TOTALS:				
Energy				
Fluid				

Specialist Paediatric Dietitian Name:

Contact number:

My working days are:  
 cc: parents, school, CCN

**Appendix 6**

# Blended Diet via Feeding Tubes

## Information for Patients and Carers

### **What is a feeding tube?**

Some people have feeding difficulties and require another route for nutrition. A gastrostomy, surgical opening, made through the abdominal wall into the stomach, is used in the longer term. A feeding tube can be passed through the opening (stoma) to provide special liquid feed to help your child meet their nutritional needs.

### **What is a blended diet?**

Every day foods are blended with liquid to a thin, smooth consistency which can be administered via a gastrostomy. Blended diet is also sometimes known as liquidised or blended diet.

### **What are the benefits of starting a blended diet?**

Prescribed liquid enteral formula is usually used in the first instance to meet your child's nutritional needs. Occasionally though the prescribed enteral formula isn't very well tolerated, and your child may have symptoms such as:

- Persistent vomiting
- Tummy pain
- Increased reflux

Blended diet can sometimes improve these symptoms. Some families also enjoy being able to prepare food and meals for their child and feel that a blended diet provides this opportunity.

### **What needs to be considered before starting a blended diet?**

Starting a blended diet needs to be a shared decision between you, your child and the healthcare professionals involved in your child's care to ensure that it is a suitable option. To help with this process, a shared decision-making tool will be completed with your child's dietitian.

There may be alternative feeding options that need to be considered before commencing a blended diet, which will be discussed with you.

It can often take several weeks for your child to be switched on to a blended diet. Your dietitian will make a plan with you on how to start and increase the blended diet.

Using a blended diet via gastrostomy can involve extra work and cost more, for example buying and preparing food, especially when you first start using a blended diet.

### **What feeding tubes can be used?**

Blended Diet is used with gastrostomy feeding tubes. Some manufacturers of gastrostomy tubes do not support a blended diet being given through their product. Blended diet can still be used even if this is the case. Feeding into the jejunum (small bowel) bypasses the protective gastric acid therefore it is recommended that a blended diet isn't given into the jejunum. Nasogastric tubes are thin and long which make it very difficult to use a blended diet.

There are lots of different types and sizes of gastrostomies that can be placed. For a blended diet, the size should ideally be 12Fr or larger, however if a smaller tube has been placed, a blended diet can still be given but it may need to be a thinner consistency to prevent the gastrostomy from blocking.

If the gastrostomy tube does become blocked and cannot be cleared, your child may need to undergo an operation for a replacement to be inserted depending on the type they are using.

### **What should I do if the tube becomes blocked?**

If the tube becomes blocked, only water (cold or warm) can be used to try and unblock it. Administer a flush of water using a push/pull action with a 60ml syringe to try and unblock the tube.

If the 60ml syringe hasn't cleared the blockage, a smaller size syringe can be used to try and unblock the tube using the same push/pull action. This needs to be done carefully to prevent any tube damage.

If you are unable to unblock the tube, contact your children's community nurse for advice.

### **What equipment do I need?**

#### **Syringes:**

Blended diet is usually delivered using a 60ml syringe. A slow plunge technique is recommended. Feeding pump manufacturers in the UK have advised against the use of blended diet using a feeding pump. Your dietitian can discuss this in more detail with you.

#### **Blenders**

There are many different types and brands of blenders available to purchase. The choice depends on the size and power of the motor and cost.

Commercial blenders (e.g. Vitamix®, Omniblend®, BlendTec®,)

This type of blender can blend a greater variety of foods e.g. fruit and vegetables, seeds and nuts. They are also a good option for batch blending. However, they are often very expensive to buy.

Mid-Range (e.g. NutriBullet®, Nutri Ninja®)

These blenders are considered easy to use and clean. They are often smaller than the commercial blenders and therefore are unable to blend such large quantity of food in one go. Therefore, they are ideal for blending each meal separately and for smaller volumes.

Basic jug / stick blenders

This blender can cope with soft-cooked foods or pre-pureed foods (e.g. yoghurts, baby foods etc.) but not with all fruits, vegetables, nuts and seeds. A sieve may be needed to ensure the blend is lump free (If using a sieve a metal sieve with holes of 1mm or less diameter is ideal as it is easy to clean). These blenders are considered ideal for blending each meal separately and for smaller volumes

#### **Extension sets:**

If your child has a gastrostomy button, extension sets will still need to be used to administer blends. These will still be provided for your child by either the community nurse or your monthly delivery from the feed company, depending upon your local area.

#### **Other:**

You may also find the following equipment useful.

- Labels or markers (to date containers)
- Cool bags and ice blocks to transport blends Food safe containers with lids to store and reheat blends

### **Food Safety and Hygiene**

It is important that good food and hand hygiene methods are followed when preparing, storing and administering a blended diet to avoid and minimise the risk of bacterial contamination. Bacterial contamination and growth can result in food poisoning, leading to symptoms such as diarrhoea, vomiting and abdominal pains. How to minimise this risk is listed below.

## Washing Hands

Bacteria are spread very easily from your hands to food and work surfaces and equipment. It is therefore very important that your hands are washed thoroughly with soap and warm water before handling any food and especially after touching raw food.

## Storing and preparing food:

- Clean your work area before starting to prepare any food
- Raw meat, especially poultry can contain harmful bacteria that can be easily transferred, therefore keep raw food separate from cooked foods. It is recommended that raw meat or fish is stored in a sealed container on the bottom shelf of the fridge
- Use a different chopping board for raw and ready-to eat foods
- Make sure foods are used before their 'use by' date
- Blends should only be kept at room temperature for a maximum of 2 hours
- Blends can be stored in a fridge for 24-48 hours
- Blends can be stored in the freezer for 1-3 months depending on the ingredients used
- Frozen blends should ideally be defrosted thoroughly in the fridge if they are not used within 24-48 hours they should be thrown away.

## Cooking food

- Make sure you cook food at the right temperature (see guidelines on the packaging) as this will kill any harmful bacteria
- Cook the food to be used in the blend as if it was to be eaten orally (before blending it with liquid)
- Check that food is steaming hot and fully cooked before blending.

## Equipment

- All equipment used such as a blenders, should be cleaned with warm soapy water and left to air dry after use or according to manufactures guidelines
- Ensure all extension sets and syringes are cleaned thoroughly according to manufactures guidelines after use.

Further information on food hygiene and how to store food safely can be found at the following websites or ask your child's dietitian.

[www.nhs.uk](http://www.nhs.uk)

[www.food.gov.uk](http://www.food.gov.uk)

## What foods should I blend?

Most food can be blended however you may need to pass the blend through a sieve to remove seeds and husks depending on how powerful your blender is (A metal sieve with 1mm holes is ideal). You may prefer to blend each meal separately just before giving it, or alternatively you may want to cook a large amount of food and freeze into individual portions. This is entirely up to you.

It is important to provide your child with a balanced diet, making sure they get enough energy, protein, vitamins and minerals to stay healthy. Your dietitian can give you/your child's estimated daily requirements as a starting point. This can then be divided between their daily blends.

Food can be split into four main groups:

- Carbohydrates
- Protein
- Fruit and vegetables
- Dairy (and alternatives)

The Eatwell Guide shows how these foods should ideally be proportioned in your child's diet. This doesn't need to be achieved with each blend, but the balance should ideally be achieved each day. Including a wide variety of foods from each group will help ensure that your child is meeting their nutritional needs.

If your child needs a special diet for their condition which doesn't follow The Eatwell Guide, your dietitian will provide you with more guidance as to how to tailor your child's blended diet to meet their needs.

Your dietitian can make recommendations to increase or decrease the energy and protein in the blend to promote a healthy pattern of growth. It is important that your child's weight and height are monitored. Your dietitian will also ask for a blended diet food diary to be completed to ensure all nutritional requirements are being met. It is possible to use prescribed enteral formula and blended diet in combination to ensure your child receives all the nutrition required for growth. Your child's dietitian will be able to give you advice about appropriate vitamin and mineral supplementation if required.

### **How do I prepare a blend?**

There are different ways that blended diet can be used, your dietitian will work with you to identify the best approach. The main ways of using blended diet are listed below. You may find that your method changes over time or you use a combination, it's about what works best for you and your child.

- Batch cooking
- Blending individual/family meals
- Using set recipes
- Using in combination with oral intake

All ingredients should be prepared and cooked as per pack/recipe instructions. The foods should be blended until a smooth single cream consistency is achieved. You may need to add more liquid to the food to achieve a thinner consistency once it has been blended. If you find it difficult to smoothly draw up the prepared blend through a 60ml syringe, it may need blending for longer or more liquid added to make it a thinner consistency.

### **How do I transport and store the blend?**

Blended food can be stored in appropriate food containers in the fridge for 24-48 hours or in the freezer for 1-3 months depending on the type of food used. It is recommended that these are clearly labelled with the date food was made and what the food is (you may need to put your child's name on the label if it is to be sent to school or other places).

Blended diet should be kept at room temperature for a maximum of 2 hours. If you are going out, cool bags (with an ice pack) are ideal to store the containers of blended food to keep them at an appropriate temperature for short periods of time.

### **How do I administer a blend?**

Blended diet should be cooled to a temperature which could comfortably be eaten orally before administering it into a gastrostomy. The duration of a feed should take the same amount of time as it would to eat a meal. Once your blend is ready to be used:

1. Use a 60ml syringe and draw up or pour in the blended food into the syringe. If food is difficult to go through the syringe, it may be too thick or lumpy, in which case add more fluid and try blending it again.
2. Wipe the outside of the syringe with a clean cloth to get rid of any excess.
3. Attach the 60ml syringe to the gastrostomy.
4. Apply small gentle pressure on the syringe plunger – making sure that the blend will go gradually and smoothly through the syringe.
5. The blend should be given at a slow and steady rate 5-20 ml at a time, pausing in between to mimic the rate a person would eat food orally.
6. Repeat steps until the desired amount of blended diet has been given ('feeding plan' for amounts recommended).
7. Flush with enough water using a clean enteral syringe to clear the blend out of the gastrostomy tube.

### **Alternative feeding plans**

It is the East London NHS Foundation Trust guideline to support blended diet when they are felt to be appropriate for your child. However, some care settings such as other hospitals, hospices and schools are unable to support blended diet. In this situation an alternative feeding regimen will need to be considered.

If your child is due to attend a care setting where blended diet is not supported, please inform your community dietitian to allow an alternative feeding plan to be developed. This should be reviewed regularly.

If your child is unwell and admitted into hospital, their nutritional needs can change. Therefore, it is important that a hospital dietitian assesses your child, even if blended diet can be provided.

**Competency for the Administration of Blended Diet via  
Enteral Feeding Device**

**Learner's name:** \_\_\_\_\_

**Date Commenced:** \_\_\_\_\_

<b>I</b>	Initial Training
<b>P</b>	Practical Training
<b>C1</b>	Competent to practice
<b>C2</b>	Competent and experienced
<b>S</b>	Competent to supervise
<b>Q</b>	Assessed through questions
<b>D</b>	Assessed through demonstration

The 'level reached' section must be dated and initialled by a Registered Nurse who has achieved this Competency. They must also sign the last page of this record to enable a record of assessors to be kept.

AREA OF CONCERN	REQUIRED SKILLS AND KNOWLEDGE	LEVEL REACHED				
		I	P	C1	C2	S
	<input type="checkbox"/> (Tick as appropriate)					
1) Understanding of the benefits and risks of a blended diet.	<input type="checkbox"/> Reduced vomiting and retching. <b>Q</b> <input type="checkbox"/> Improved bowel function, mood and general wellbeing. <b>Q</b> <input type="checkbox"/> Risk of tube blockage, infection (poor hygiene), poor weight gain and volume tolerance. <b>Q</b> <input type="checkbox"/> Risk of allergic reaction. <b>Q</b>					
2) Awareness of infection control procedures.	<input type="checkbox"/> Safe hand washing technique. <b>D</b> <input type="checkbox"/> Gloves and aprons for professionals. <b>Q</b> <input type="checkbox"/> Disposal of any waste. <b>D</b> <input type="checkbox"/> Cleaning of equipment. <b>D/Q</b> <input type="checkbox"/> Non touch technique process. <b>D</b>					
3) Awareness of food safety guidelines.	<input type="checkbox"/> Cleaning work area before food preparation. <b>Q/D</b> <input type="checkbox"/> Separating raw foods from cooked foods. <b>Q</b> <input type="checkbox"/> Using a different chopping board for raw and ready to eat foods. <b>Q</b> <input type="checkbox"/> Making sure foods are used before their 'use by' date. <b>Q</b>					

<p>5) Awareness of safe preparation and storage.</p>	<ul style="list-style-type: none"> <li><input type="checkbox"/> Ensuring food is cooked at the correct temperature. <b>Q/D</b></li> <li><input type="checkbox"/> Ensure blend is kept at room temperature for a maximum of 2 hours. <b>Q</b></li> <li><input type="checkbox"/> Aware blend can be stored on the top shelf in the fridge for 24-48 hours. <b>Q</b></li> <li><input type="checkbox"/> Aware blend can be stored in the freezer for 1-3 months. <b>Q</b></li> <li><input type="checkbox"/> Frozen blends should ideally be defrosted in the fridge; if not used within 24-48 hours, to be discarded. <b>Q</b></li> </ul>					
<p>4) Safely reheats blended food.</p>	<ul style="list-style-type: none"> <li><input type="checkbox"/> Transfers to a suitable container and microwave until 'steaming hot' or 'piping hot' throughout (or if using a thermometer, a minimum of 70°C for at least 2 minutes). Stir well before serving. Allow to cool to body temperature (37°C) or below before feeding. <b>D</b></li> <li><input type="checkbox"/> Stand on work surface for 30 minutes to allow this to come to room temperature. <b>D</b></li> <li><input type="checkbox"/> Place the container in a jug of hot water for no more than 10 minutes. Shake or stir before feeding. <b>D</b></li> </ul>					
<p>6) Safe administration of blended food.</p>	<ul style="list-style-type: none"> <li><input type="checkbox"/> Checks care plan and familiar with consistency, volume and rate of feed. <b>D</b></li> <li><input type="checkbox"/> Ensure correct positioning of the child &gt;30° Angle. <b>D</b></li> <li><input type="checkbox"/> Uses a non touch technique during preparation and administration. <b>D</b></li> <li><input type="checkbox"/> Primes extension set for balloon gastrostomies. <b>D</b></li> <li><input type="checkbox"/> Checks stoma site is clean and enteral device is intact. <b>D</b></li> <li><input type="checkbox"/> Administers all pureed food via gravity bolus or slow plunge method (depending on care plan). <b>D</b></li> <li><input type="checkbox"/> Flush tube thoroughly pre and post feeds. <b>D</b></li> <li><input type="checkbox"/> Ensure stoma site and gastrostomy are clean after administration. <b>D</b></li> <li><input type="checkbox"/> Ensure syringes, extension set and other equipment are cleaned thoroughly in hot soapy water as per manufacturer's recommendations. Allow to air dry. <b>D</b></li> </ul>					
<p>7) Aware of potential problems and solutions.</p>	<ul style="list-style-type: none"> <li><input type="checkbox"/> What to do if the blend is too thick in consistency. <b>Q/D</b></li> <li><input type="checkbox"/> Managing a blocked tube; massage tube, flush with warm water, push-pull technique. <b>Q</b></li> </ul>					

	<input type="checkbox"/> Managing a dislodged tube- emergency en-plug procedure or passing a new balloon gastrostomy tube (for parents/guardians only). <b>Q</b> <input type="checkbox"/> Managing vomiting, diarrhoea, or abdominal discomfort by stopping feed immediately and informing dietitian/nurse. <b>Q</b> <input type="checkbox"/> Recognising and escalating overgranulation, leaking and any other stoma issues. <b>Q</b> <input type="checkbox"/> Whom to contact for advice. <b>Q</b>					
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Individual levels assessed by:

NAME	INITIALS	SIGNATURE
_____	_____	_____
_____	_____	_____
_____	_____	_____

I certify that the person named as Learner on this document is competent to carry out the procedure detailed above and that I have current N.M.C. registration.

**Overall competency: (TO BE SIGNED BY A REGISTERED NURSE)**

NAME \_\_\_\_\_ SIGNATURE \_\_\_\_\_ DATE \_\_\_\_\_

I, the below named learner, confirm that I have been sufficiently supervised in administering a blended diet via enteral feeding device and have demonstrated my competence with a registered nurse. I am happy to carry out the procedure within the competencies detailed above. I understand the scope of these competencies. I will not carry out procedures, which are contrary to or not covered by this training. I will seek further training if I have any concerns about my competency will renew my training every 18 months as standard. Upon the date of expiry of this competency, if my training has not been renewed, or if I have concerns about my competency, I will discontinue undertaking the procedure detailed in this document and seek appropriate advice from a suitably qualified clinician and/or my employer. In all other respects I will seek all necessary advice, guidance, and further training needed from time to time in order for me to continue to operate within these competencies. The competency may be withdrawn with immediate effect if my practice is considered to be unsafe or incorrect.

NAME \_\_\_\_\_ SIGNATURE \_\_\_\_\_ DATE \_\_\_\_\_

## Competency for Enteral Tube Feeding

Learner's name: \_\_\_\_\_

Date Commenced: \_\_\_\_\_

<b>I</b>	Initial Training
<b>P</b>	Practical Training
<b>C1</b>	Competent to practice
<b>C2</b>	Competent and experienced
<b>S</b>	Competent to supervise
<b>Q</b>	Assessed through questions
<b>D</b>	Assessed through demonstration

The 'level reached' section must be dated and initialled by a Registered Nurse who has achieved this Competency. They must also sign the last page of this record to enable a record of assessors to be kept.

AREA OF CONCERN	REQUIRED SKILLS AND KNOWLEDGE	LEVEL REACHED				
		I	P	C1	C2	S
	<input type="checkbox"/> (Tick as appropriate)					
1) Learner to understand reason for Enteral feeding tube.	<input type="checkbox"/> The ability to identify whether the child can take oral food or fluids. <b>Q</b>					
2) Learner to understand psychological aspects of enteral feeding for both the child and their family.	<input type="checkbox"/> Importance of oral hygiene. <b>Q</b> <input type="checkbox"/> Encouragement of normal interaction at family mealtimes. <b>Q</b> <input type="checkbox"/> Loss of "normal feeding role". <b>Q</b> <input type="checkbox"/> Social interaction and food. <b>Q</b>					
3) Learner to understand the safety aspects of feeding.	<input type="checkbox"/> Safe hand washing technique. <b>D</b> <input type="checkbox"/> Storage of feeds. <b>Q</b> <input type="checkbox"/> Where and how long feed can be stored once opened. <b>Q</b> <input type="checkbox"/> Need to check correct feed at room temperature, expiry date, required rate, look and smell of feed. <b>D/Q</b>					

	<input type="checkbox"/> Importance of checking tube position prior to feed. <b>D/Q</b> <input type="checkbox"/> Correct positioning of child during and after feed. <b>D</b> <input type="checkbox"/> Clean environment for feeds. <b>Q</b> <input type="checkbox"/>					
4) Learner to be competent using equipment required.	<input type="checkbox"/> All appropriate equipment checked for integrity and placed accessibly. <b>D</b> <input type="checkbox"/> Feeding pump and alarm systems. <b>D</b> <input type="checkbox"/> Priming the sets to dispel air. <b>D</b> <input type="checkbox"/> How to gravity feed. <b>D</b> <input type="checkbox"/> How to administer water flushes and water feed. <b>D</b> <input type="checkbox"/> Use of balloon device extension sets. <b>D</b> <input type="checkbox"/> Flushing tube before and after feed as per care plan. <b>D</b> <input type="checkbox"/> Community policy for use of disposables. <b>Q</b>					
5) Learner to be competent with daily care of tube	<input type="checkbox"/> Daily cleaning requirements. <b>Q</b> <input type="checkbox"/> Advance and rotation gastrostomy tube ( <b>Must not rotate jejunal tubes</b> ). <b>D</b> (Delete for school staff) <input type="checkbox"/> Advance of the Jejunal Tube. <b>D</b> (Delete for school staff) <input type="checkbox"/> Weekly water changes using cool boiled water for balloon retained devices <b>D</b> . (Delete for school staff) <input type="checkbox"/> Signs of infection- general and site specific. <b>Q</b>					
6) Learner to be competent in safe administration of medication via enteral device	<input type="checkbox"/> Checks the expiry date of medication. <b>D</b> <input type="checkbox"/> Explains what to do if medication has expired. <b>D</b> <input type="checkbox"/> Checks the pharmacy label to ensure the name of the child is printed on the label. <b>D</b> <input type="checkbox"/> Checks the correct dose against the care plan or medication chart. <b>D</b> <input type="checkbox"/> Checks the correct time for medication. <b>D</b> <input type="checkbox"/> Checks and administers medication via the correct route. <b>D/Q</b>					
7) Learner to be aware of potential problems and solutions.	<input type="checkbox"/> What to do if tube is blocked. <b>Q</b> <input type="checkbox"/> What to do if tube becomes dislodged. <b>Q</b> <input type="checkbox"/> What to do if a child develops vomiting, diarrhoea, or abdominal discomfort. <b>Q</b> <input type="checkbox"/> Recognising and escalating overgranulation, leaking and any other stoma issues. <b>Q</b> <input type="checkbox"/> Whom to contact for advice. <b>Q</b>					

8) Learner to describe what to do if concerned about tube position.	<input type="checkbox"/> Describe how tube should look. <b>Q</b> <input type="checkbox"/> Adjusting the external fixator. <b>D</b> (For parents and main carers only) <input type="checkbox"/> Taping tube. <b>D</b> <input type="checkbox"/> Whom to contact. <b>Q</b>					
9) Learner to describe what to do if tube comes out.	<input type="checkbox"/> Demonstrate/describe emergency En-plug procedure. <b>D/Q</b> <input type="checkbox"/> Follow up procedure for PEG/PEG-J/G-J and J tubes. <b>Q</b> <input type="checkbox"/> Passing a new balloon gastrostomy tube. <b>D</b> (For parents and main carers only) <input type="checkbox"/> What to do if the child has no spare tube or En-Plugs. <b>Q</b>					

Individual levels assessed by:

**NAME**

**INITIALS**

**SIGNATURE**


Workbook reviewed, assessed and passed (for ELFT and school staff only).

Yes

No

Please tick the appropriate box. Training completed:

Face to face directly on the child or young person

Simulation, classroom setting

**I certify that the person named as Learner on this document is competent to carry out the procedure detailed above and that I have current N.M.C. registration.**

**Overall competency: (TO BE SIGNED BY A REGISTERED NURSE OR NURSE ASSCOAITE)**

NAME \_\_\_\_\_ SIGNATURE \_\_\_\_\_ DATE \_\_\_\_\_

**I, the below named learner, confirm that I have been sufficiently supervised in feeding a child or young person within my designated area and have demonstrated my competence with a registered nurse. I am happy to carry out the procedure within the competencies detailed above. I understand the scope of these competencies. I will not carry out procedures, which are contrary to or not covered by this training. I will seek further training if I have any concerns about my competency will renew my training every 18 months as standard. Upon the date of expiry of this competency, if my training has not been renewed, or if I have concerns about my competency, I will discontinue undertaking the procedure detailed in this document and seek appropriate advice from a suitably qualified clinician and/or my employer. In all other respects I will seek all necessary advice, guidance, and further training needed from time to time in order for me to continue to operate within these competencies. The competency may be withdrawn with immediate effect if my practice is considered to be unsafe or incorrect.**

NAME \_\_\_\_\_ SIGNATURE \_\_\_\_\_ DATE \_\_\_\_\_