# NUTRITION AND HYDRATION GUIDELINE FOR ADULT INPATIENT UNITS

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**VALIDITY – Guidelines should be accessed via the Trust intranet to ensure the current version is used.**

**CHANGE RECORD**

| Version | Date | Change details |
|---|---|---|
| 1.00 | March 2018 | New guideline transferred from policy P195 as agreed by QPaS March 2018. |
| 1.01 | November 2018 | Minor amendments<br>Addition of the IDDSI levels and removal of dysphagia diet food texture descriptions. |
| 1.02 | December 2021 | Minor amendment. Page 8 IDDSI Level 7 – Easy Chew (a new subset of Level 7)<br>Approved PHMD 8 December 2021 |

## Contents

## 1. INTRODUCTION

There is a wealth of evidence to support the relationship between physical health, mental health and nutritional status. Poor hydration and nutrition increases morbidity and mortality, prolongs length of stay in health care environments and increases costs of care. All clinical staff within Humber Teaching NHS Foundation Trust has a crucial role to play in achieving and maintaining good hydration and nutritional care as it is only through a multidisciplinary approach that good nutritional care can be achieved.

## 2. SCOPE

The guideline applies to Trust staff involved in the management of any patient or service user who is an inpatient on the hospital ward or units. This includes; contract, locum, agency staff and all staff working in partnership arrangements.

Please refer to Trust policies for specialist guidance: Nutrition and Feeding Guidelines (for pregnant, women babies and children) (G323).

## 3. GUIDELINE STATEMENT

"*Nutrition is essential for life, as vital as medication and other types of treatment*" (Royal College of Nursing, 2007).

The purpose of this guideline is to ensure that:

- Instruction and tools are provided for staff to identify patients/service users who are at risk of malnutrition and or dehydration and how to address the risk.
- All patients have their hydration and nutritional needs assessed while under the care of the Trust.
- All patients will be provided with nutritional advice that is appropriate and consistent with their needs.
- Patients experience excellence of care in all aspects of hydration and nutritional assistance.
- Standards of hydration and nutritional care are regularly monitored and audited.

## 4. DUTIES AND RESPONSIBILITIES

### Director of Nursing

The director of nursing is the executive lead for this guideline. They are responsible for:

- Ensuring all nursing staff and allied health professionals are aware of this and other policies and guidance which relate to this guideline.
- Assuring the Board that the guideline is acted upon through delegation to the appropriate directorates and committees.

### Care Group Directors are required to:

- Ensure that all nursing staff are aware of this and other policies and guidance which relate to this guideline.
- Ensure that adequate training is given to allow nursing staff and allied health professionals to safely implement the guideline.
- Ensure that staff have access to equipment as identified in the guideline.

### Matrons/Service Managers/Clinical Leads

- Ensure that all staff within their sphere of responsibility are aware of and comply with the guideline, through local induction, instruction, supervision, audit.
- Have local procedures in place to maintain compliance with the guideline.
- Monitor compliance with this guideline and take immediate action when non-compliance is identified.

**Clinical Practitioners**
As part of a clinical practitioner's role, they are responsible for nutrition and hydration screening, monitoring, provision of appropriate fluid and nutrition and referring to appropriate specialist services where required. All clinical staff must be competent in Nutrition and Hydration screening and management.

**Dieticians**
- Provide a comprehensive nutritional assessment such as individuals who are identified as being at risk of malnutrition or requiring specialist diets.
- All enterally-fed patients should be referred to the dietitian.

**Speech and Language Therapists (SLT)**
When required, complete a comprehensive assessment of an individual's eating, drinking and swallowing skills.

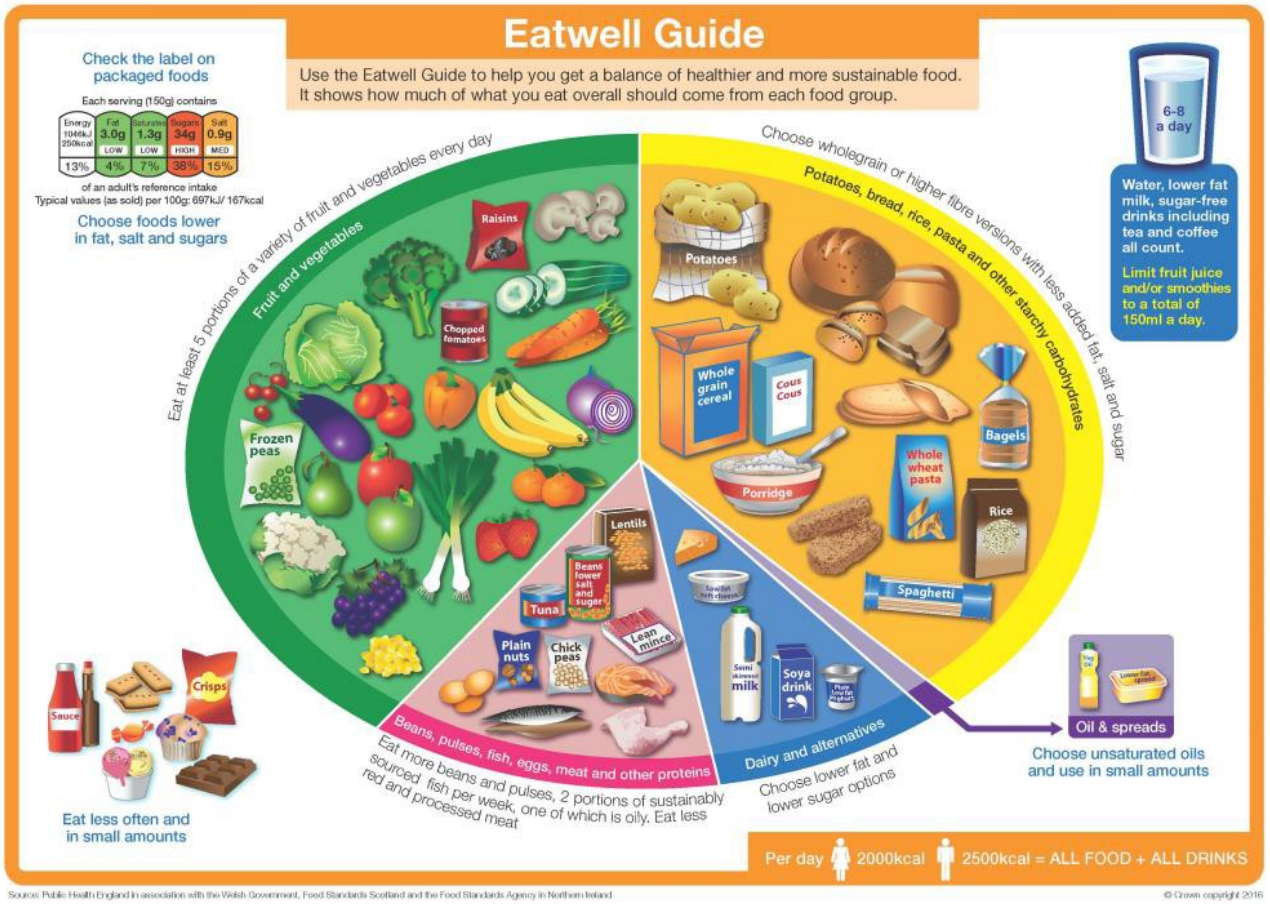
**Occupational Therapists (OT)**
Assessment and interventions to: manage risk, promote skills and abilities, maximise independence and to improve the mealtime experience.

**Catering Staff**
- Provide nutritionally balanced food in line with service/individual needs as identified in care plans.
- Respond to patient/service user feedback to ensure a needs-led quality service.

## 5. NUTRITION

Menus provided on all adult inpatient units within the Trust will meet the Estimated Average Requirements (EARs) of the normal ward population for energy, the Dietary Reference Values (DRV) for protein, carbohydrate and fat and Reference Nutrient Intakes (RNIs) vitamin and minerals. Menus will be devised and nutritionally analysed by the catering liaison dietician within the Nutrition and Dietetic Service to ensure that nutritional requirements are met for the general adult population. Please see the Food Safety Policy for further details.

## 5.1. Healthy Eating




The Eatwell Guide shows the different types of foods and drinks we should consume – and in what proportions – to have a healthy, balanced diet. The Eatwell Guide shows the proportions of the main food groups that form a healthy, balanced diet.

- Eat at least five portions of a variety of fruit and vegetables every day
- Base meals on potatoes, bread, rice, pasta or other starchy carbohydrates; choosing wholegrain versions where possible
- Have some dairy or dairy alternatives (such as soya drinks); choosing lower fat and lower sugar options
- Eat some beans, pulses, fish, eggs, meat and other proteins (including two portions of fish every week, one of which should be oily)
- Choose unsaturated oils and spreads and eat in small amount
- Drink 6-8 cups/glasses of fluid a day
- If consuming foods and drinks high in fat, salt or sugar have these less often and in small amounts

## 5.2. Undernutrition

Malnutrition is a state in which a deficiency of nutrients such as protein, vitamins and minerals adversely effects body composition, function, or clinical outcome. Evidence shows that malnutrition (under-nutrition) is frequently undetected and untreated causing a significant clinical and public health problem. Malnutrition can adversely affect every system of the body causing a significant increase in mortality, complications after illness and length of hospital stay.

### 5.2.1. Screening

All patients need to be screened using MUST (Malnutrition Universal Screening Tool) (Appendix 3) within 24 hours. MUST scores will be recorded in the MUST recording sheet in relevant documentation and a care plan generated. All staff using the MUST will have received appropriate training. All patients identified at risk of malnutrition will have a care plan, which identifies their nutritional, and hydration care needs and how these needs are to be met. Please refer to the Nutrition Care Plan below which should be followed based on MUST Score.

### 5.2.2. Nutrition Care Plan

**Low risk score – 0 Routine Clinical Care**
Aim: Weight maintenance following a balanced diet incorporating healthy eating principals.

Repeat screening:

- as part of routine care
- where there is clinical concern

**Medium risk score – 1 Observe**
Aim: Prevent further weight loss and restore unintentional weight loss. Improve the overall nutritional quality of the diet and increase nutritional intake.

- Commence food record chart (Appendix 8)
- Inform medical team
- Encourage good oral intake and assist with eating and drinking if appropriate
- Liaise with catering staff to provide fortified diet
- Re-screen using MUST after seven days
- If eating more than 50% of meals and snacks, weight is stable and there is no clinical concern repeat screening as low risk. Stop food record chart.

If oral intake continues to be poor, e.g. eating less than 50% of meals and snacks or if there is a clinical concern:

- Follow unit procedure to alert other staff to client at nutritional risk (e.g. red dot/red tray (Appendix 3)
- Continue with food record chart (Appendix 8)
- Re-screen weekly using MUST for four weeks
- Follow unit procedure to alert other staff to client at nutritional risk (e.g. red dot/red tray (Appendix 3)
- The red trays/mats will indicate patients who need assistance with feeding or patients who are having their food and fluid intake recorded. The “Red Tray” system is endorsed by The Royal College of Nursing, The British Dietetic Association and Age UK
- If no improvement or clinical concern refer to Dietician using referral form (Appendices 2a, 2b and 2c)

**High Risk Score – 2 Treat ***
Aim: Prevent further weight loss and restore unintentional weight loss. Improve the overall nutritional quality of the diet and increase nutritional intake.

- Refer to dietician using referral form (Appendices 2a, 2b,and 2c)
- Commence food record chart (Appendix 8)
- Inform medical team
- Liaise with catering staff to provide fortified diet
- Support and encourage good oral intake and assist with eating and drinking if appropriate

- Re-screen using MUST weekly
- Follow unit procedure to alert other staff to client at nutritional risk (e.g. red dot/red tray – Appendix 3)

* unless detrimental or no benefit is expected from nutritional support

Methods to improve or maintain nutritional intake are known as 'nutrition support'. These include:

- Oral nutrition support, e.g. enriched diet, additional snacks, nourishing drinks which may include nutritional supplements
- Enteral tube feeding – the delivery of a nutritionally complete feed directly into the gut via a tube
- Parenteral nutrition – the delivery of nutrition intravenously
- Nutrition support not only refers to the patient's nutritional needs but also their need for assistance in being able to eat and swallow their food/drinks

An individual who continually refuses to eat or drink/refuse to open their mouth is at high risk of dehydration and malnutrition. The appropriateness of artificial support (e.g. nasogastric or Percutaneous Endoscopic Gastronomy (PEG) feeding), including the ethical issues involved, should be discussed and documented by the multidisciplinary team as part of the patient's clinical review. See page 9 for strategies for dealing with food refusal. People with profound and multiple disabilities can also be at risk of malnutrition due to their dependence on the skills of others to produce palatable food at an appropriate texture and to be fed safely and well.

### 5.2.3. Other Nutritional Concerns

**Re-Feeding Syndrome**: Re-feeding syndrome is a condition which occurs when there has been little or no nutrition for a prolonged period and on replacing nutrition, the patients are at risk of severe fluid and electrolyte shifts and related metabolic complications. Re-feeding syndrome can occur in patients fed orally, enterally and parenterally and should be managed under the advice of the dietitian and medical team. In order to identify patients at risk and how to manage them, please refer to NICE nutrition support for adults: oral nutrition support, enteral tube feeding and parenteral nutrition CG32 published February 2006, updated August 2017.

**Special Diets**: Patients who require special diets for newly-diagnosed clinical conditions such as type 2 diabetes, coeliac disease, renal and liver disease and allergy should be referred to the dietitian.

Staff must ensure that the catering department is informed regarding patients who are on special diets for existing conditions or for religious reasons (Appendix 6).

**Swallowing Concerns**: Any patients with signs of dysphagia (swallowing difficulties) should be referred to the appropriate Speech and Language Therapy Team for a swallowing assessment and clinical advice. The speech and language therapy team will triage the referral and can provide telephone advice if appropriate whilst waiting for an assessment to ensure patient safety. Please refer to the International Dysphagia Diet Standardisation Initiative (IDDSI) guidance document which provides guidance on suitable foods and fluids for any patient placed on a texture modified diet under the guidance of Speech and Language Therapy. They supersede the previous descriptors provided by the National Patient Safety Agency (Textures B-E) and provide standard terminology to be used by all health professionals and food providers from April 2019, when communicating about an individual's requirements for a texture modified diet.

These descriptors detail the types and texture of foods needed by individuals who have dysphagia and who are at risk of choking or aspiration (food or liquid going into their airway).

The fluids textures are:

- IDDSI Level 0 – Thin (previously normal fluids)
- IDDSI Level 1 – Slightly thick
- IDDSI Level 2 – Mildly thick (previously Stage 1)
- IDDSI Level 3 – Moderately thick (previously Stage 2)
- IDDSI Level 4 – Extremely thick (previously Stage 3)

The texture descriptors are:

- IDDSI Level 3 – Liquidised (previously Texture B – thin puree)
- IDDSI Level 4 – Pureed (previously Texture C – thick puree)
- IDDSI Level 5 – Minced and moist (previously Texture D – pre-mashed)
- IDDSI Level 6 – Fork-mashable (previously Texture E – fork-mashable)
- IDDSI Level 7 – Easy Chew (a new subset of Level 7)
- IDDSI Level 7 – Regular (previously Normal Diet)

**EATING DISORDERS**
Eating disorders are associated with significant psychiatric and medical morbidity. Effective management of individuals with eating disorders requires close collaboration between clinicians working in psychiatric and medical settings. The inpatient team should have ready access to advice from an eating disorders psychiatrist or expert and support from a physician and a dietitian with specialist knowledge in eating disorders.

A person with an eating disorder may be acutely medically compromised without necessarily presenting as underweight. Similarly, severely ill individuals requiring urgent nutritional rehabilitation can present as deceptively well and may appear energetic right up to the point of collapse. MARSIPAN (Management of Really Sick Patients with Anorexia Nervosa (CR189, Royal College of Psychiatrists, 2014) and Eating disorders: recognition and treatment (NG 69, NICE, 2017) guidelines should be followed in order to minimise medical and psychiatric risk.

**Other**: Unintentional weight loss, fragile skin, poor wound healing, apathy, wasted muscles, poor appetite, altered taste sensation, impaired swallowing, altered bowel habit, loose fitting clothes, or prolonged illness.

**EXTRA INFORMATION FOOD FORTIFICATION**
When individuals have a small appetite, or need to gain weight they have lost unintentionally then food fortification should be used. This involves adding high calorie foods such as butter, cream, cheese and sugar to dishes to increase the energy content without increasing the volume. Ideas for fortifying the food are listed below:

**IDEAS FOR ENRICHING FOOD**
**Milk** – Whisk 2-4 tablespoons of milk powder into one pint of full cream (pasteurised/sterilised) milk. Use in place of ordinary milk or water to make up coffee, packet soups, sauces, jelly, milk pudding and breakfast cereals.

**Breakfast cereals** – Use fortified milk. Sprinkle extra sugar on top. Add syrup or cream to porridge.

**Soups** – Add cream, grated cheese, mince, lentils, beans or pasta to soup. Use fortified milk to make up packet or condensed soups. Use savoury Build Up or Complan.

**Sauces** – When making home-made sauces, use fortified milk, cream or evaporated milk. Flavour with cheese or for a sweet sauce, syrup or milk shake syrups, e.g. Crusha. Full fat flavoured yogurts can be used as sweet sauces.

**Meat or fish dishes** – Add sauce made with cream or fortified milk to meat or to fish dishes.

**Casseroles** – Add lentils and beans to stews and casseroles. Make a sauce for the casserole with either fortified milk or cream.

**Beans** – Add grated cheese to baked beans on toast.

**Mashed potato** – Mash potatoes with cream or fortified milk. Add a knob of butter/margarine. Sprinkle with grated cheese on top.

**Vegetables** – Melt butter/margarine on top or sprinkle with grated cheese. Add chopped boiled egg to the vegetable. Make a sauce using cream or fortified milk and add grated cheese.

**Salads** – Add a chopped boiled egg or cheese. Use mayonnaise or salad cream.

**Sandwiches** – Use plenty of butter/margarine on bread. Use mayonnaise with fillings such as tuna, egg or grated cheese.

**Puddings** – Add cream, ice cream or evaporated milk to hot or cold puddings such as fruit pies, sponge pudding, trifles. Use fortified milk to make up jellies, milk puddings, custard, instant desserts. Put fruit in a liquidiser with cream, custard or evaporated milk – freeze individual portions. Add sugar, jam, honey or syrups to ice cream or other puddings.

**Yogurts** – Use full fat yogurt. Pureed fruit, jam, marmalade, syrup or honey can be whisked in yogurt – eat as a pudding or use as a sweet sauce over sponge or ice cream. Add herbs to plain yogurt and use as a savoury sauce.

**Strategies for dealing with food refusal**

There are individuals who are potentially at risk of malnutrition and may refuse to eat and/or drink. Reasons for this can be complex and it is important to establish what these are and what risk they pose for that individual. Some possible reasons and suggested interventions are given below. These are examples only and not a comprehensive list. Any underlying clinical reasons should be addressed as part of this assessment.

| Possible reason for refusal | Interventions |
|---|---|
| • Dislike of food being offered, e.g. taste, colour, texture, smell<br>• Unfamiliar foods being offered<br>• Cultural requirements<br>• Cognitive changes due to nature of illness | • Food record of likes/dislikes<br>• Know cultural /religious requirements<br>• Use visual cues and pictures of food |
| • Sore mouth<br>• Dentures<br>• Physical problem | • Promote good oral hygiene –treat infections<br>• Dental checks<br>• Refer to SLT if swallowing problems<br>• Provide appropriate adaptive cutlery/give assistance at meal times |
| • Unaware of meal times | • Explain when meal times are, prepare |

| Possible reason for refusal | Interventions |
|---|---|
| • May simply not wish to eat | individual for mealtimes and set regular daily patterns. Have regular helpers to assist with feeding if needed<br>• May take food from relatives<br>• Give finger foods, small regular meals given throughout day not just at set meal times (see examples below)<br>• Physical contact – hold hands, eye contact |
| • Depression causing anorexia<br>• Paranoia (fear of poisoning, giving inappropriately prepared foods) | • Treatment with medication/psychiatric assessment<br>• Sealed food containers opened in front of individual |

## 5.3. Protected Mealtimes

**Purpose**
The purpose of a protected mealtime procedure is to protect mealtimes from unnecessary interruptions. By ensuring that there are enough staff on the wards to enable the meal service to run effectively and efficiently and reducing clinical activities, the focus can then devoted to the meal service. This ensures that service users have a better mealtime experience, are likely to eat more food and improve their nutritional intake.

**Responsibilities**
NHS staff and visitors are asked where possible to stay off the wards or not to enter dining areas during mealtimes so that the emphasis is solely on nutritional care and enjoyment of the meal.

- Ward staff should work together to make food a priority during mealtimes so that all attention is on helping and encouraging service users to eat. Observations regarding the amount of food not consumed can be noted by the nurses to ascertain the need for referral to a dietician or other corrective action.
- Where appropriate, visitors are encouraged to assist relatives and friends with eating to make mealtimes a more sociable and pleasurable experience for service users.

**Key Points**
- To create a quiet and relaxed atmosphere.
- To introduce an ambience at ward level by ensuring the ward dining room area is welcoming, clean and tidy.
- To provide an undisturbed mealtime for service users displaying notices at the entrance to wards – “This ward operates a protected mealtime service”, with the times of the meals displayed.
- To limit clinical activities to those that are relevant to mealtimes or essential at that time.
- To raise awareness to all Trust staff, service users, visitors and medical staff the importance of mealtimes as part of care and treatment for service users (Essence of Care).

**Training for Staff**
- The importance of the protected mealtimes as part of service user care.
- Build the procedure into nutrition training for staff.
- Wards need have an effective communication system in place to ensure that all new staff, e.g. agency and relief staff can enable a meal serving system that operates smoothly, ensures food is served hot, is eaten and an enjoyable part of the day.

**Protected Mealtime Procedure Standards**

- No general cleaning duties undertaken in dining areas during service user meal service.
- Ward staff breaks must be co-ordinated to allow maximum staffing levels, to allow enough staff for the food service operation.
- To eliminate unwanted traffic through the wards during mealtimes, e.g. estates work and linen deliveries.
- To undertake the medication round after meal service unless medications are required to be administered before/with food. This will allow ward staff to observe the mealtimes and see how service users are progressing.

## 5.4. Enteral Feeding

Any patient who has been admitted onto the ward on an enteral feed should be referred to the dietitian for nutritional assessment.

All clinical staff on wards should be trained on management on enteral feeds.

The following guidance should be used to assess feed and ancillary requirements for people being discharged from community wards who require further enteral feeding in a community setting. All items provided must be NPSA compliant. Compliance with the guidance ensures safe equitable provision of enteral feeds and feeding equipment on discharge.

The information is aimed at all community ward staff and dietitians involved in either ordering or providing feed and feeding equipment/ancillaries to patients on discharge from a community ward setting.

Patients, who are enterally tube fed on community wards, will need to be registered with 'Nutricia Homeward' on discharge by the dietetics department, for the further supply and delivery of feed and ancillaries/equipment (Appendix 7).

It is the responsibility of staff on the community wards to inform the dietitian of the patient's intended date of discharge at least 48 hours prior, so that the discharge paperwork administration can be commenced. If the patient has not already had training with regards to the administration of their feed or the care of their feeding device/stoma and requires such training, the Nutricia nurse must be contacted to arrange the training.

The Nutricia nurse can be contacted on 08457 623698.

Ten-day supply of feed and equipment must be provided to allow for the smooth transition from ward to home where further supplies will be provided by Nutricia Homeward. Please see 'Summary of Equipment Required on Discharge for Adult Enteral Tube Feeds'.

* If the patient has been transferred from Hull and East Yorkshire Hospitals NHS Trust on a pump feed, they must supply the Infinity pump on transfer to the community ward.

Reference NICE Guidelines for the Management of Enteral Tube Feeding in Adults; February 2006.

**SUMMARY OF EQUIPMENT REQUIRED ON DISCHARGE FOR ADULT ENTERAL TUBE FEEDS**

| TUBE TYPE | WARDS RESPONSIBILITY: EQUIPMENT TO BE PROVIDED ON DISCHARGE |
|---|---|
| **Corflo PEG** | • 2 x 60ml 7 day ENFIT syringes<br>• 10 day supply of feed or nutritional supplements<br>• If on a pump feed: 10 x 'Flocare Enplus Infinity pack giving sets' and an 'Infinity pump'*<br>• Complete 'Home Enteral Feeding Discharge' paperwork and fax to community dietitians (see appendix) |
| **Balloon Gastrostomy or Corflo RIG (including Prophylactic)** | • 2 x 60ml 7 day ENFIT syringes<br>• 2 x 5ml luer slip syringes (for balloon water changes)<br>• 2 x 5ml sterile water ampoules (plastic ampoules)<br>• 10 day supply feed or nutritional supplements<br>• If on a pump feed: 10 x 'Flocare Enplus Infinity pack giving sets' and an 'Infinity pump'*<br>• Complete 'Home Enteral Feeding Discharge' paperwork and fax to community dietitians (Appendix 7) |
| **Jejunostomy Tube** | • 60ml ENFIT syringe – single use only therefore consider quantity required for 10 day supply to administer medications, feeds and sterile water<br>• 10 day supply of Cow and Gate Sterile water 90ml bottles (if required for flushing)<br>• 10 day supply of Nutrison Sterile Water packs (if extra water required)<br>• 10 day supply of feed / supplements<br>• 10 x 'Flocare Enplus Infinity pack giving sets' and an 'Infinity pump'*<br>• Complete 'Home Enteral Feeding Discharge' paperwork and fax to community dietitians (Appendix 7) |
| **Balloon Jejunostomy Tube** | • 60ml ENFIT syringe – single use only therefore consider quantity required for 10 day supply to administer medications, feeds and sterile water<br>• 2 x 5ml or 10ml luer slip syringes (for balloon water changes– check size required)<br>• 2 x 5ml or10ml sterile water ampoules (plastic ampoules –check size required)<br>• 10 day supply of Cow and Gate Sterile water 90ml bottles (if required for flushing)<br>• 10 day supply of Nutrison Sterile Water packs (if extra water required)<br>• 10 day supply of feed / supplements<br>• 10 x 'Flocare Enplus Infinity pack giving sets' and an 'Infinity pump'*<br>• Complete 'Home Enteral Feeding Discharge' paperwork and fax to community dietitians (Appendix 7) |
| **Nasogastric Tube** | • 2 x 60ml 7 day ENFIT syringes<br>• 10 day supply feed or nutritional supplements<br>• If on a pump feed: 10 x 'Flocare Enplus Infinity pack giving sets' and an 'Infinity pump'*<br>• pH indicator paper (100 tests per packet)<br>• Complete 'Home Enteral Feeding Discharge' paperwork and fax to community dietitians (Appendix 7) |

| TUBE TYPE | WARDS RESPONSIBILITY: EQUIPMENT TO BE PROVIDED ON DISCHARGE |
|---|---|
| **Nasojejunal Tube** | • 60ml ENFIT syringe – single use only therefore consider quantity required for 10 day supply to administer medications, feeds and sterile water<br>• 10 day supply of Cow and Gate Sterile water 90ml bottles (if required for flushing)<br>• 10 day supply of Nutrison Sterile Water packs (if extra water required)<br>• 10 day supply of feed / supplements |

### 5.5. Obesity

Obesity is a form of malnutrition but is one of excess intake of calories/energy. Obesity is a major clinical and public health issue. It is every staff member's responsibility to promote healthy eating and lifestyle choices. Working in partnership with patients and carers is essential.

Management of obesity is aimed at reducing calorific intake and ensuring greater energy expenditure and should incorporate some component of behavioural change (NICE PH49 Behaviour Change: Individual Approaches) to bring about long term lifestyle changes. The intensity of management will depend upon the level of risk, the appropriateness and will be linked to length of stay.

| **Classification** | **BMI (kg/m $^2$ )** |
|---|---|
| Healthy weight | 18.5–24.9 |
| Overweight | 25–29.9 |
| Obesity I | 30–34.9 |
| Obesity II | 35–39.9 |
| Obesity III | 40 or more |

| **BMI classification** | **Waist circumference** | | |
|---|---|---|---|
| | **Low** | **High** | **Very high** |
| Overweight | No increased risk | Increased risk | High risk |
| Obesity 1 | Increased risk | High risk | Very high risk |
| For men, waist circumference of less than 94cm is low, 94–102cm is high and more than 102cm is very high.<br><br>For women, waist circumference of less than 80cm is low, 80–88cm is high and more than 88cm is very high | | | |

**Reference:** https://www.nice.org.uk/guidance/cg189/chapter/1-Recommendations#identification- and-classification-of-overweight-and-obesity

## 6. HYDRATION

Water is vital to life and there is increasing evidence of the benefits of good hydration in the promotion of health and wellbeing in older people. The evidence suggests that good hydration can help prevent falls, constipation, pressure sores, blood pressure problems and headaches Poor hydration has been shown to contribute to obesity, depression, inactivity and fatigue and to prolong healing and recovery. There is also some evidence to suggest that dehydration can increase mortality. Good hydration has been related to alertness and cognitive performance, people with cognitive impairments may therefore benefit considerably from increasing their intake of liquid.

Patients will have access to food and fluids 24 hours a day. In addition to mealtimes patients will have access to tea and coffee facilities or water at any time. All individuals must be assessed to establish what drink preferences and drinking receptacles they require and provision made for them. Current guidance on drinking enough to stay hydrated reflects this by recommending people aim for six to eight glasses of fluid each day. Fruit juices, tea, coffee (the effect of caffeine is negligible), milky drinks and water can all be offered and enjoyed.

Completion of fluid charts on the wards will be the responsibility of everyone who is involved in providing the patient with fluids or assisting them to drink; this includes qualified nurses, healthcare assistants, allied health professionals and housekeepers and domestic staff.

**Dehydration screening and care**
Fluid balance is a monitoring process; optimal hydration is achieved when intake of fluid equals or exceeds excretion or output.

1. Screen all patients for hydration using GULP Assessment tool – see Appendix 5.
2. Establish when fluid balance monitoring and intervention is needed (new admission, declining health, critical illness, signs of dehydration, condition places individual at risk from dehydration)
3. Commence appropriate assessment of fluid status following GULP risk assessment and assessment of patient
4. Intervention established and documented in care plan including Fluid Balance Chart, Urine colour chart

| Dehydration Urine Colour Chart | |
|---|---|
| | Doing OK. You're probably well hydrated. Drink water as normal. |
| | You're just fine. You could stand to drink a little water now, maybe a small glass of water. |
| | Drink about 1/2 bottle of water (1/4 litre) within the hour, or drink a whole bottle (1/2 litre) of water if you're outside and/or sweating. |
| | Drink about 1/2 bottle of water (1/4 litre) right now, or drink a whole bottle (1/2 litre) of water if you're outside and/or sweating. |
| | Drink 2 bottles of water right now (1 litre). If your urine is darker than this and/or red or brown, then dehydration may not be your problem. See a doctor. |

### Keeping hydrated

You should aim to have 1.6-2 litres (around 6-8 glasses) of fluid per day to stay hydrated. Keeping hydrated can prevent or aid the treatment of constipation, low blood pressure, urinary tract infections (UTIs), pressure ulcers and falls.

**All fluids count, except for alcohol!** Choose a drink that you are most likely to enjoy and finish.

**Do not wait until you feel thirsty** to have a drink; thirst is a late response to dehydration.

**Use the pee chart to score your hydration status** as the colour of your urine can indicate dehydration risk.

**Serve drinks at their optimum temperature** and replenish any drink that has been left to stand.

**Choose nourishing fruit or milk-based drinks** if you are not eating well or need to gain weight (see the 'super shakes' resource for recipe examples).

**Opt for water, skimmed milk or sugar-free drinks** if you have diabetes or are trying to lose weight.

**Replace fluid that is lost** through sweat, open wounds, diarrhoea or vomit to prevent dehydration. You will sweat more in warm conditions and when you are more active. Limiting your fluid intake can make incontinence worse because it reduces your bladder's capacity. Increase your fluid intake earlier in the day if you worry about urinating at night.

Fit your fluid intake around your daily routine and take a bottle with you on the go. Spout cups, handled mugs or plastic tumblers may be lighter and easier to handle.

**Tip**: use a measuring jug to gauge the volume of your cups/glasses at home and complete the 'Self- reported fluid intake' resource to record your daily fluid intake.

## 7. REFERRAL TO APPROPRIATE SERVICES

### Nutrition and Dietetics Department

- All referrals from mental health units need to be forwarded to CHCP ER Adult Community Dietitians if they have an ER GP (Appendix 2a or CHCP Hull Community Dieticians if the patient has a Hull GP (Appendix 2b)
- All Whitby Referrals must be sent to Dietitian Services at Whitby Hospital (Appendix 2c)

### Speech and Language Therapy

It is essential that all clinical staff have an awareness of the signs of aspiration. Aspiration is defined as food or fluid entering the airway. A referral to Speech and Language Therapy should be made for any patient displaying any of the signs of aspiration. All inpatient units have identified speech and language therapists who can be contacted for advice.

- Patients requiring assistance to eat or drink should be offered this in a manner commensurate with their needs following assessment by SLT or OT as appropriate.
- Patients requiring assessment of dysphagia (swallowing difficulties, including, coughing, choking on food or fluid) must be assessed by specially trained staff, usually speech and language therapists, and appropriate textured food and fluids provided

**Occupational Therapy**
Please contact the department for referral procedures.

**Catering**
The catering department will be notified by ward staff of patients requiring therapeutic diets (Appendix 6).

## 8. TRAINING

Managers are responsible for ensuring that appropriate staff are provided with training to use all the appendices outlined in this guideline.

## 9. EQUALITY AND DIVERSITY

An equality and diversity impact assessment has been carried out on this document using the Trust-approved EIA.

## 10. MENTAL CAPACITY

The implications of the Mental Capacity Act have been applied to this document.

- As with all clinical assessment and care, staff implementing this guideline will presume the patient has capacity unless this is doubted, whereby an assessment of capacity must be undertaken for the specific action or decision to be made. Staff must work with the five key principles of the Mental Capacity Act at all times.
- If found that the patient lacks the capacity to consent to an assessment and or interventions, practitioners must always work in the patient's best interests and care clearly documented within a care plan which must be agreed with relevant others prior to treatment commencing.
- Treatment may need to be discussed with relevant others (see best interests pathway for further details as to who are relevant others) in a best interests meeting. This must occur before treatment is provided.

## 11. BRIBERY ACT

The Bribery Act 2010 makes it a criminal offence to bribe or be bribed by another person by offering or requesting a financial or other advantage as a reward or incentive to perform a relevant function or activity improperly performed.

The penalties for any breaches of the Act are potentially severe. There is no upper limit on the level of fines that can be imposed and an individual convicted of an offence can face a prison sentence of up to ten years.

The Bribery Act applies to this guideline.

## 12. IMPLEMENTATION

These guidelines will be disseminated by the method described in the Policy for the Development and Management of Procedural Documents.

The implementation of this guideline requires no additional financial resource.

## 13. MONITORING AND AUDIT

The Department of Health ‘Care Quality Commission Patient Outcome 5, Regulation 14’ requires that all healthcare organisations are supported to have adequate nutrition and hydration.

In order to demonstrate the level of compliance with this standard, an annual nutrition audit is undertaken by the dietetic department and the hotel services manager in all Community and Mental Health Units, action plans are generated from the findings by the matrons.

Monitoring is by intentional rounding 1-2 hourly in the Community Hospitals as part of the quality dashboard.

MUST assessments are monitored via the admission assessment in the monthly documentation audit.

## 14. LINKS TO OTHER TRUST DOCUMENTS

Nutrition and Feeding Guidelines (for Pregnant Women, Babies and Children)
Food Safety Policy (F-001)
Deteriorating Patient Policy
Deteriorating Patient Protocol

## 15. REFERENCES/EVIDENCE/GLOSSARY/DEFINITIONS REFERENCES

National Institute for Health and Care Excellence (NICE) (2006) Nutrition support in adults: oral nutrition support, enteral tube feeding and parenteral nutrition. NICE clinical guideline CG32. London: National Institute for Health and Care Excellence.

Malnutrition Universal Screening Tool (MUST), British Association of Parenteral and Enteral Nutrition (BAPEN) www.bapen.org.uk (Accessed April 2012)

The Care Quality Commission. Essential standards of quality and safety. 2010. https://services.cqc.org.uk/sites/default/files/gac_-_dec_2011_update.pdf

NICE (2014) Behavioural change: individual approaches. Public health guideline PH49. London: National Institute for Health and Care Excellence.

Eatwell Guide
https://assets.publishing.service.gov.uk/government/uploads/system/uploads/attachment_data/file/528193/Eatwell_guide_colour.pdf and
https://assets.publishing.service.gov.uk/government/uploads/system/uploads/attachment_data/file/742750/Eatwell_Guide_booklet_2018v4.pdf Public Health England.

Dysphagia Diet Food Texture Descriptors. NHS National Patient Safety Agency 2011.

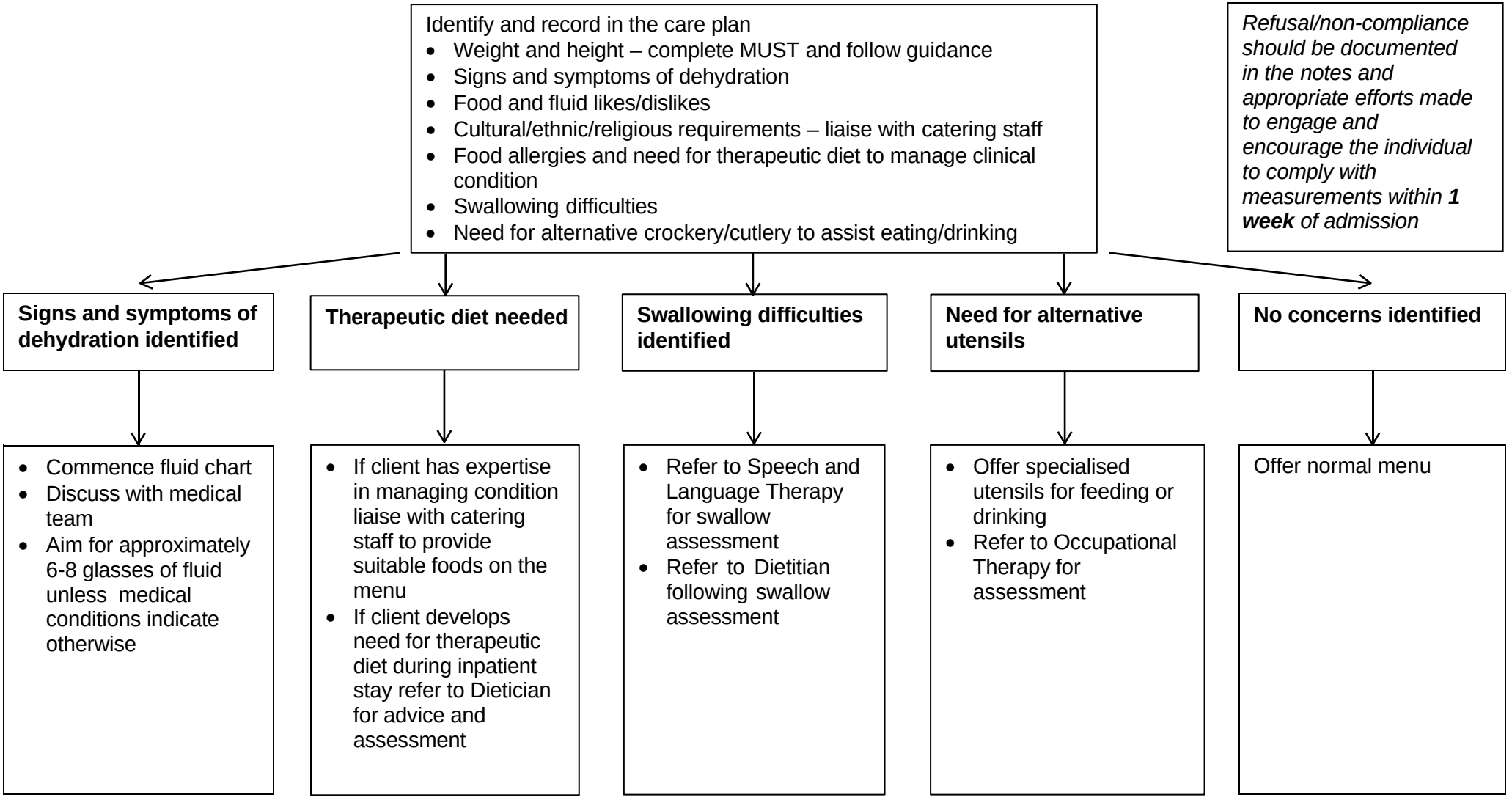
GULP Screening Tool – SEPT Community Health Services Bedfordshire – South Essex Partnership University NHS Foundation Trust

MARSIPAN (Management of Really Sick Patients with Anorexia Nervosa. CR189, 2nd edition, Royal College of Psychiatrists (2014)
http://www.rcpsych.ac.uk/usefulresources/publications/collegereports/cr/cr189.aspx

Eating disorders: recognition and treatment. NICE guideline NG 69. National Institute for Health and Care Excellence (2017). https://www.nice.org.uk/guidance/ng69

**APPENDIX 1 – ADMISSIONS FLOW CHART**

**Within 24 Hours of Admission to Inpatient Unit**



## APPENDIX 2A – EAST RIDING ADULT NUTRITION AND DIETETICS SERVICE – REFERRAL FORM

City Health Care Partnership CIC

a co-owned business

### EAST RIDING ADULT NUTRITION AND DIETETICS SERVICE – REFERRAL FORM

**PLEASE NOTE**: Incomplete forms (especially **without a recent weight and height**) may be returned and lead to a delay in the patient being seen by a dietitian.

| | |
|---|---|
| SURNAME: | FIRST NAME: |
| MR/MRS/MISS/MS: | ETHNICITY: |
| ADDRESS:<br><br>POSTCODE: | DATE OF BIRTH:<br>TEL NO:<br>NHS NUMBER: |
| GP NAME: | GP TEL NO: |
| GP ADDRESS: | GP FAX NO:<br>Interpreter needed: □ Yes □ No |
| DIAGNOSIS: | |

| **ESSENTIAL INFORMATION**<br><br>Date measured: _____ | | **SUPPORTING INFORMATION**<br>• Is there a lone working risk? □ Yes □ No<br>• Is there a safeguarding (adults/paeds) risk? □ Yes □ No<br>• Is the patient aware of referral? □ Yes □ No<br>• Has the patient given consent for the referral? □ Yes □ No<br>(to include unintentional weight loss (last 3-6 months), all relevant blood results, social, past medical history, social, psychological, school) |
|---|---|---|
| Height (metres) | | |
| Weight (kg) | | |
| BMI | | |
| Nutritional screen/MUST score | | |

**REASON FOR REFERRAL**

| | | |
|---|---|---|
| □ Anaemia<br>□ Assessment of nutritional status<br>□ Diabetes<br>□ Food consistency advice<br>□ Gastrointestinal conditions<br>□ Management o enteral feed<br>□ Nutritional support<br>□ Osteoporosis<br>□ Poor dietary intake | □ Poor tissue viability<br>□ Symptom management<br>□ Unintentional weight loss<br>□ Weight management/obesity<br>**Oncology patients only**<br>□ Chemotherapy<br>□ Radiotherapy<br>□ Palliative care<br>Other (please provide details) | Other<br>• Can patient weight bear? Y/N<br>• Carer information |

| | |
|---|---|
| PRINT NAME: | JOB TITLE: |
| ADDRESS (work place):<br><br>Is the referral a ward referral? □ Yes □ No | SIGNED:<br><br>Note – student referrals to be countersigned by a supervisor |
| TEL. NO.: | DATE: |

East Riding Adults please post/fax/email to: Nutrition and Dietetics Service, Beverley Health Centre, Manor Road, Beverley, HU17 7BZ

Fax 01482 347880, or email CHCP.ERDietitianService@nhs.net

## APPENDIX 2B – HULL NUTRITION AND DIETETICS SERVICE – REFERRAL FORM

City Health Care Partnership CIC

a co-owned business

**PLEASE NOTE: Incomplete forms (especially without a recent weight and height) may be returned and lead to a delay in the patient being seen by a dietitian.**

| | |
|---|---|
| SURNAME: | FIRST NAME: |
| MR/MRS/MISS/MS: | ETHNICITY: |
| ADDRESS:<br><br>POSTCODE: | DATE OF BIRTH:<br>TEL NO:<br>NHS NUMBER: |
| GP NAME: | GP TEL NO: |
| GP ADDRESS: | GP FAX NO:<br>Interpreter needed: □ Yes □ No |
| DIAGNOSIS: | |

| REASON FOR REFERRAL | | |
|---|---|---|
| □ Anaemia<br>□ Assessment of nutritional status<br>□ Diabetes<br>□ Food consistency advice<br>□ Gastrointestinal conditions<br>□ Management o enteral feed<br>□ Nutritional support<br>□ Osteoporosis<br>□ Poor dietary intake | □ Poor tissue viability<br>□ Symptom management<br>□ Unintentional weight loss<br>□ Weight management/obesity<br>**Oncology patients only**<br>□ Chemotherapy<br>□ Radiotherapy<br>□ Palliative care<br>Other (please provide details) | Other<br>• Can patient weight bear? Y/N<br>• Carer information |

| ESSENTIAL INFORMATION | | SUPPORTING INFORMATION |
|---|---|---|
| Date measured:<br>_____ | | • Is there a lone working risk? □ Yes □ No<br>• Is there a safeguarding (adults/paeds) risk? □ Yes □ No<br>• Is the patient aware of referral? □ Yes □ No<br>• Has the patient given consent for the referral? □ Yes □ No<br>(to include unintentional weight loss (last 3-6 months), all relevant blood results, social, past medical history, social, psychological, school) |
| Height (metres) | | |
| Weight (kg) | | |
| BMI | | |
| Nutritional screen/MUST score | | |

| | |
|---|---|
| PRINT NAME: | JOB TITLE: |
| ADDRESS (work place):<br><br>Is the referral a ward referral? □ Yes □ No | SIGNED:<br><br>Note – student referrals to be countersigned by a supervisor |
| TEL. NO.: | DATE: |

Please post/email/fax to: Nutrition and Dietetics Service Hull Paediatrics and Adults, CHCP Dietetics Service, Unit 4, Henry Boot Way, Hull, HU4 7DY or CHCP.247111@nhs.net or fax number 01482 34763

**APPENDIX 2C – WHITBY NUTRITION AND DIETETICS ADULTS SERVICE (OVER 18'S ONLY) – REFERRAL FORM**

NHS
Humber Teaching
NHS Foundation Trust

**PLEASE NOTE: Incomplete forms (especially without a recent weight and height) may be returned and lead to a delay in the patient being seen by a dietitian.**

| | |
|---|---|
| SURNAME: | FIRST NAME: |
| MR/MRS/MISS/MS: | ETHNICITY: |
| ADDRESS:<br><br>POSTCODE: | DATE OF BIRTH:<br>TEL NO:<br>NHS NUMBER: |
| GP NAME: | GP TEL NO: |
| GP ADDRESS: | GP FAX NO:<br>Interpreter needed: ☐ Yes ☐ No<br>If YES which language? |
| DIAGNOSIS: | |

| **ESSENTIAL INFORMATION**<br><br>Date measured: _____ | **SUPPORTING INFORMATION**<br>• Is there a lone working risk? ☐ Yes ☐ No<br>• Is there a safeguarding (adults/paeds) risk? ☐ Yes ☐ No<br>• Is the patient aware of referral? ☐ Yes ☐ No<br>• Has the patient given consent for the referral? ☐ Yes ☐ No<br>(to include unintentional weight loss (last 3-6 months), all relevant blood results, social, past medical history, social, psychological, school) |
|---|---|
| Weight (kg) | |
| BMI | |
| MUST score | |

**REASON FOR REFERRAL**

| | | |
|---|---|---|
| ☐ Anaemia<br>☐ Assessment of nutritional status<br>☐ Diabetes<br>☐ Food consistency advice<br>☐ Gastrointestinal conditions<br>☐ Management o enteral feed<br>☐ Nutritional support<br>☐ Osteoporosis<br>☐ Poor dietary intake | ☐ Pressure ulcer and grade<br>☐ Unintentional weight loss<br>☐ Hyperlipidaemia<br>☐ Weight management/obesity<br>Other (please provide details) | Other<br>• Can patient weight bear? Y/N<br>• Carer information |

| | |
|---|---|
| PRINT NAME: | JOB TITLE: |
| ADDRESS (work place):<br><br>Is the referral a ward referral? ☐ Yes ☐ No | SIGNED:<br><br>Note – student referrals to be countersigned by a supervisor |
| TEL. NO.: | DATE: |

Email to HNF-TR.WhitbyNCS@nhs.net or post to The Dietetics Service, Whitby Hospital, Spring Hill, Whitby YO21 1DP

## APPENDIX 3 – MUST

Taking measurements for MUST

**Height**
Use a height stick (stadiometer) where possible. A tape measure should be available for alternative measurements for height if individual is unable to stand (see below).

Ensure that it is correctly positioned against the wall.

Ask client to remove shoes and to stand upright, feet flat, heels against the height stick or wall. Ensure that the client is looking straight ahead and lower the head plate until it touches the top of the head. Read and document height in metres.

**Weight**
Use clinical scales wherever possible. Scales should be regularly serviced and checked for accuracy. Scales suitable for weighing individuals who cannot stand/walk should be available Ensure that scales read zero without the client standing on them. Weigh client in light clothing and without shoes.

Record and document weight in kilograms.

**Calculation of Body Mass Index (BMI)**
Actual BMI can be calculated using the following equation:

$$\text{BMI} = \frac{\text{Weight in kg}}{(\text{Height in m})2}$$

**Alternative Measurements for Height**
If height cannot be measured, use a recently documented or self-reported height (if reliable and realistic). If height cannot be obtained from either of these methods, alternative measurements can be used to calculate the height, details of which are obtainable from the MUST explanatory booklet (https://www.bapen.org.uk/pdfs/must/must_explan.pdf)

**Subjective Criteria**
If neither BMI nor weight loss can be established subjective criteria can be used to help form a clinical impression of an individual's overall nutritional risk category. The factors listed below can either contribute to or influence the risk of malnutrition.

**Please note:** these criteria should be used collectively not separately as alternatives to steps 1 and 2 of MUST and are not designed to assign an actual score. Mid upper arm circumference (MUAC) may be used to estimate BMI category in order to support your overall impression of the subject's nutritional risk.

**BMI**

- Clinical impression – thin, acceptable weight, overweight. Obvious wasting (very thin) and obesity (very overweight) can also be noted.

**Unplanned weight loss**

- Clothes and/or jewellery have become loose fitting (weight loss)
- History of decreased food intake, reduced appetite or swallowing problems over 3-6 months and underlying disease or psycho-social/physical disabilities likely to cause weight loss

**Acute disease effect**

- No nutritional intake or likelihood of no intake for more than five days.

| Patient Label |
|---|
| **Name:** |
| **NHS No:** |

Humber Teaching NHS Foundation Trust

## MALNUTRITION UNIVERSAL SCREENING TOOL ASSESSMENT (MUST)

| Height: | Weight: | BMI: |
|---|---|---|

**STEP 1**
BMI Score

| BMI kg/m² | Score |
|---|---|
| >20 | 0 |
| 18.5 – 20 | 1 |
| <18.5 | 2 |

**STEP 2**
Weight loss score

| Unplanned weight loss in past 3-6 months | Score |
|---|---|
| Less than 5% | 0 |
| 5-10% | 1 |
| More than 10% | 2 |

**STEP 3**
Acute disease effect score

If client is acutely ill **and** there has been or is likely to be no nutritional intake for >5 days
**Score 2**

### Step 4
### Overall risk of malnutrition
Add scores together to calculate overall risk of malnutrition

### Step 5
### Management guidelines

- Treat underlying conditions e.g. medical, swallowing, oral health, side effects of medications which may affect nutritional intake
- Check client can potentially meet nutritional needs safely via oral route
-

**0**
**Low risk**
**Routine clinical care**

- Document MUST score on SystmOne or MUST assessment record
- Follow appropriate care plan

**1**
**Medium risk**
**Observe**

- Document MUST score on SystmOne or MUST assessment record
- Follow appropriate care plan/initial red tray

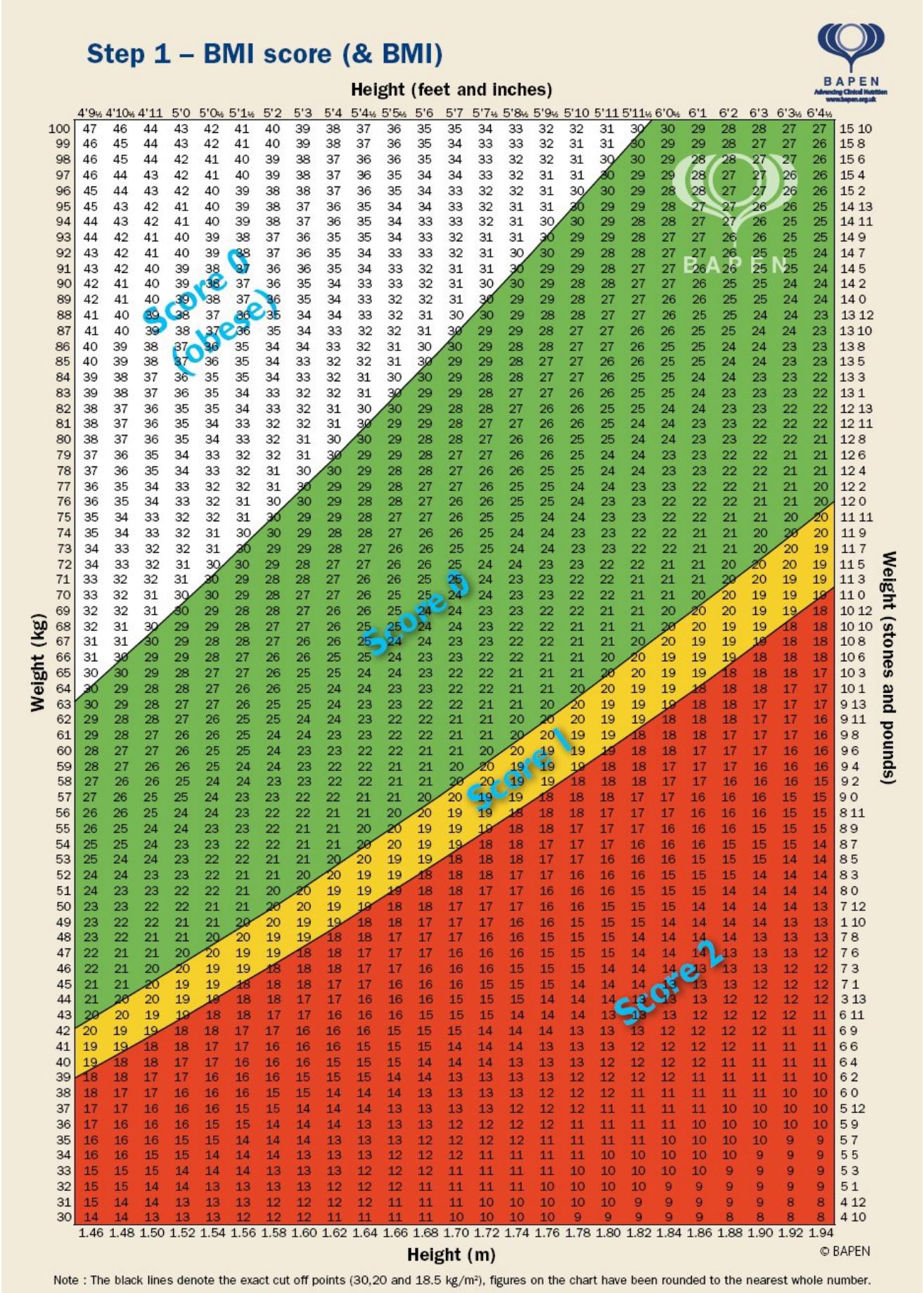
**2 or more**
**High Risk**

* unless detrimental or no benefit is expected from nutritional support

- Document MUST score on SystmOne or MUST assessment record
- Follow appropriate care plan/initiate red tray

| **MUST** | **Step 1** | | | **Step 2** | | **Step 3** | **Step 4** | |
|---|---|---|---|---|---|---|---|---|
| Date | Weight (kg) | BMI (kg/m²) | BMI Score | % Weight Change in past 3-6 months | Weight loss score | Acute Disease Effect Score | Total MUST Score | Signature |
| | | | | | | | | |
| | | | | | | | | |
| | | | | | | | | |
| | | | | | | | | |
| | | | | | | | | |
| | | | | | | | | |
| | | | | | | | | |
| | | | | | | | | |

Step 1 – BMI Score (& BMI)




Note : The black lines denote the exact cut off points (30,20 and 18.5 kg/m²), figures on the chart have been rounded to the nearest whole number.

# Alternative measurements and considerations

## Step 1: BMI (body mass index)

**If height cannot be measured**

- Use recently documented or self-reported height (if reliable and realistic).
- If the subject does not know or is unable to report their height, use one of the alternative measurements to estimate height (ulna, knee height or demispan).

## Step 2: Recent unplanned weight loss

If recent weight loss cannot be calculated, use self-reported weight loss (if reliable and realistic).

## Subjective criteria

If height, weight or BMI cannot be obtained, the following criteria which relate to them can assist your professional judgement of the subject's nutritional risk category. Please note, these criteria should be used collectively not separately as alternatives to steps 1 and 2 of 'MUST' and are not designed to assign a score. Mid upper arm circumference (MUAC) may be used to estimate BMI category in order to support your overall impression of the subject's nutritional risk.

**1. BMI**

- Clinical impression – thin, acceptable weight, overweight. Obvious wasting (very thin) and obesity (very overweight) can also be noted.

**2. Unplanned weight loss**

- Clothes and/or jewellery have become loose fitting (weight loss).
- History of decreased food intake, reduced appetite or swallowing problems over 3-6 months and underlying disease or psycho-social/physical disabilities likely to cause weight loss.

**3. Acute disease effect**

- Acutely ill and no nutritional intake or likelihood of no intake for more than 5 days.

Further details on taking alternative measurements, special circumstances and subjective criteria can be found in *The 'MUST' Explanatory Booklet*. A copy can be downloaded at www.bapen.org.uk or purchased from the BAPEN office. The full evidence-base for 'MUST' is contained in *The 'MUST' Report* and is also available for purchase from the BAPEN office.

BAPEN Office, Secure Hold Business Centre, Studley Road, Redditch, Worcs, B98 7LG. Tel: 01527 457 850. Fax: 01527 458 718.
bapen@sovereignconference.co.uk BAPEN is registered charity number 1023927. www.bapen.org.uk



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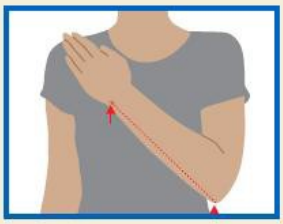
*Reviewed and reprinted with minor changes March 2008 and September 2010*
'MUST' is supported by the British Dietetic Association, the Royal College of Nursing and the Registered Nursing Home Association.

# Alternative measurements: instructions and tables

If height cannot be obtained, use length of forearm (ulna) to calculate height using tables below. *(See The 'MUST' Explanatory Booklet for details of other alternative measurements (knee height and demispan) that can also be used to estimate height).*

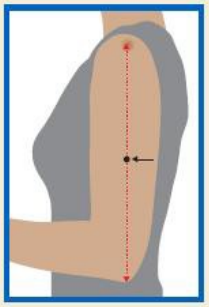
## Estimating height from ulna length



Measure between the point of the elbow (olecranon process) and the midpoint of the prominent bone of the wrist (styloid process) (left side if possible).

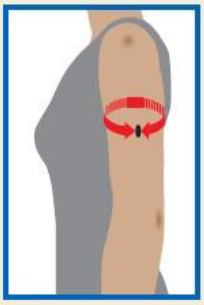
| | | | | | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| HEIGHT (m) | Men(<65 years) | 1.94 | 1.93 | 1.91 | 1.89 | 1.87 | 1.85 | 1.84 | 1.82 | 1.80 | 1.78 | 1.76 | 1.75 | 1.73 | 1.71 |
| | Men(≥65 years) | 1.87 | 1.86 | 1.84 | 1.82 | 1.81 | 1.79 | 1.78 | 1.76 | 1.75 | 1.73 | 1.71 | 1.70 | 1.68 | 1.67 |
| | Ulna length(cm) | 32.0 | 31.5 | 31.0 | 30.5 | 30.0 | 29.5 | 29.0 | 28.5 | 28.0 | 27.5 | 27.0 | 26.5 | 26.0 | 25.5 |
| HEIGHT (m) | Women(<65 years) | 1.84 | 1.83 | 1.81 | 1.80 | 1.79 | 1.77 | 1.76 | 1.75 | 1.73 | 1.72 | 1.70 | 1.69 | 1.68 | 1.66 |
| | Women(≥65 years) | 1.84 | 1.83 | 1.81 | 1.79 | 1.78 | 1.76 | 1.75 | 1.73 | 1.71 | 1.70 | 1.68 | 1.66 | 1.65 | 1.63 |
| HEIGHT (m) | Men(<65 years) | 1.69 | 1.67 | 1.66 | 1.64 | 1.62 | 1.60 | 1.58 | 1.57 | 1.55 | 1.53 | 1.51 | 1.49 | 1.48 | 1.46 |
| | Men(≥65 years) | 1.65 | 1.63 | 1.62 | 1.60 | 1.59 | 1.57 | 1.56 | 1.54 | 1.52 | 1.51 | 1.49 | 1.48 | 1.46 | 1.45 |
| | Ulna length(cm) | 25.0 | 24.5 | 24.0 | 23.5 | 23.0 | 22.5 | 22.0 | 21.5 | 21.0 | 20.5 | 20.0 | 19.5 | 19.0 | 18.5 |
| HEIGHT (m) | Women(<65 years) | 1.65 | 1.63 | 1.62 | 1.61 | 1.59 | 1.58 | 1.56 | 1.55 | 1.54 | 1.52 | 1.51 | 1.50 | 1.48 | 1.47 |
| | Women(≥65 years) | 1.61 | 1.60 | 1.58 | 1.56 | 1.55 | 1.53 | 1.52 | 1.50 | 1.48 | 1.47 | 1.45 | 1.44 | 1.42 | 1.40 |

## Estimating BMI category from mid upper arm circumference (MUAC)



The subject's left arm should be bent at the elbow at a 90 degree angle, with the upper arm held parallel to the side of the body. Measure the distance between the bony protrusion on the shoulder (acromion) and the point of the elbow (olecranon process). Mark the mid-point.

Ask the subject to let arm hang loose and measure around the upper arm at the mid-point, making sure that the tape measure is snug but not tight.



If MUAC is <23.5 cm, BMI is likely to be <20 kg/m².
If MUAC is >32.0 cm, BMI is likely to be >30 kg/m².

The use of MUAC provides a general indication of BMI and is not designed to generate an actual score for use with 'MUST'. For further information on use of MUAC please refer to *The 'MUST' Explanatory Booklet*.

## Step 2 – Weight loss score

BAPEN

Current weight

| KILOGRAMS | | | | STONES AND POUNDS | | | |
|---|---|---|---|---|---|---|---|
| | Score 0 Wt loss < 5% | Score 1 Wt loss 5 - 10% | Score 2 Wt loss > 10% | | Score 0 Wt loss < 5% | Score 1 Wt loss 5 - 10% | Score 2 Wt loss > 10% |
| | Weight 3 to 6 months ago | | | | Weight 3 to 6 months ago | | |
| kg | Less than (kg) | Between (kg) | More than (kg) | st lb | Less than (st lb) | Between (st lb) | More than (st lb) |
| 30 | 31.6 | 31.6 - 33.3 | 33.3 | 4 10 | 5 0 | 5 0 - 5 3 | 5 3 |
| 31 | 32.6 | 32.6 - 34.4 | 34.4 | 4 12 | 5 2 | 5 2 - 5 6 | 5 6 |
| 32 | 33.7 | 33.7 - 35.6 | 35.6 | 5 1 | 5 4 | 5 4 - 5 8 | 5 8 |
| 33 | 34.7 | 34.7 - 36.7 | 36.7 | 5 3 | 5 7 | 5 7 - 5 11 | 5 11 |
| 34 | 35.8 | 35.8 - 37.7 | 37.8 | 5 5 | 5 9 | 5 9 - 5 13 | 5 13 |
| 35 | 36.8 | 36.8 - 38.9 | 38.9 | 5 7 | 5 11 | 5 11 - 6 2 | 6 2 |
| 36 | 37.9 | 37.9 - 40.0 | 40.0 | 5 9 | 6 0 | 6 0 - 6 4 | 6 4 |
| 37 | 38.9 | 38.9 - 41.2 | 41.1 | 5 12 | 6 2 | 6 2 - 6 7 | 6 7 |
| 38 | 40.0 | 40.0 - 42.2 | 42.2 | 6 0 | 6 4 | 6 4 - 6 9 | 6 9 |
| 39 | 41.1 | 41.1 - 43.3 | 43.3 | 6 2 | 6 7 | 6 7 - 6 12 | 6 12 |
| 40 | 42.1 | 42.1 - 44.4 | 44.4 | 6 4 | 6 9 | 6 9 - 7 0 | 7 0 |
| 41 | 43.2 | 43.2 - 45.6 | 45.6 | 6 6 | 6 11 | 6 11 - 7 2 | 7 2 |
| 42 | 44.2 | 44.2 - 45.6 | 46.7 | 6 9 | 6 13 | 6 13 - 7 5 | 7 5 |
| 43 | 45.3 | 45.3 - 47.8 | 47.8 | 6 11 | 7 2 | 7 2 - 7 7 | 7 7 |
| 44 | 46.3 | 46.3 - 48.9 | 48.9 | 6 13 | 7 4 | 7 4 - 7 10 | 7 10 |
| 45 | 47.4 | 47.4 - 50.0 | 50.0 | 7 1 | 7 6 | 7 6 - 7 12 | 7 12 |
| 46 | 48.4 | 48.4 - 51.1 | 51.1 | 7 3 | 7 9 | 7 9 - 8 1 | 8 1 |
| 47 | 49.5 | 49.5 - 52.2 | 52.2 | 7 6 | 7 11 | 7 11 - 8 3 | 8 3 |
| 48 | 50.5 | 50.5 - 53.3 | 53.3 | 7 8 | 7 13 | 7 13 - 8 6 | 8 6 |
| 49 | 51.6 | 51.6 - 54.4 | 54.4 | 7 10 | 8 2 | 8 2 - 8 8 | 8 8 |
| 50 | 52.6 | 52.6 - 55.6 | 55.6 | 7 12 | 8 4 | 8 4 - 8 10 | 8 10 |
| 51 | 53.7 | 53.7 - 56.7 | 56.7 | 8 0 | 8 6 | 8 6 - 8 13 | 8 13 |
| 52 | 54.7 | 54.7 - 57.8 | 57.8 | 8 3 | 8 9 | 8 9 - 9 1 | 9 1 |
| 53 | 55.8 | 55.8 - 58.9 | 58.9 | 8 5 | 8 11 | 8 11 - 9 4 | 9 4 |
| 54 | 56.8 | 56.8 - 60.0 | 60.0 | 8 7 | 8 13 | 8 13 - 9 6 | 9 6 |
| 55 | 57.9 | 57.9 - 61.1 | 61.1 | 8 9 | 9 2 | 9 2 - 9 9 | 9 9 |
| 56 | 58.9 | 58.9 - 62.2 | 62.2 | 8 11 | 9 4 | 9 4 - 9 11 | 9 11 |
| 57 | 60.0 | 60.0 - 63.3 | 63.3 | 9 0 | 9 6 | 9 6 - 10 0 | 10 0 |
| 58 | 61.1 | 61.1 - 64.4 | 64.4 | 9 2 | 9 9 | 9 9 - 10 2 | 10 2 |
| 59 | 62.1 | 62.1 - 65.6 | 65.6 | 9 4 | 9 11 | 9 11 - 10 5 | 10 5 |
| 60 | 63.2 | 63.2 - 66.7 | 66.7 | 9 6 | 9 13 | 9 13 - 10 7 | 10 7 |
| 61 | 64.2 | 64.2 - 67.8 | 67.8 | 9 8 | 10 2 | 10 2 - 10 9 | 10 9 |
| 62 | 65.3 | 65.3 - 68.9 | 68.9 | 9 11 | 10 4 | 10 4 - 10 12 | 10 12 |
| 63 | 66.3 | 66.3 - 70.0 | 70.0 | 9 13 | 10 6 | 10 6 - 11 0 | 11 0 |
| 64 | 67.4 | 67.4 - 71.1 | 71.1 | 10 1 | 10 9 | 10 9 - 11 3 | 11 3 |
| 65 | 68.4 | 68.4 - 72.2 | 72.2 | 10 3 | 10 11 | 10 11 - 11 5 | 11 5 |
| 66 | 69.5 | 69.5 - 73.3 | 73.3 | 10 6 | 10 13 | 10 13 - 11 8 | 11 8 |
| 67 | 70.5 | 70.5 - 74.4 | 74.4 | 10 8 | 11 1 | 11 1 - 11 10 | 11 10 |
| 68 | 71.6 | 71.6 - 75.6 | 75.6 | 10 10 | 11 4 | 11 4 - 11 13 | 11 13 |
| 69 | 72.6 | 72.6 - 76.7 | 76.7 | 10 12 | 11 6 | 11 6 - 12 1 | 12 1 |
| 70 | 73.7 | 73.7 - 77.8 | 77.8 | 11 0 | 11 8 | 11 8 - 12 3 | 12 3 |
| 71 | 74.7 | 74.7 - 78.9 | 78.9 | 11 3 | 11 11 | 11 11 - 12 6 | 12 6 |
| 72 | 75.8 | 75.8 - 80.0 | 80.0 | 11 5 | 11 13 | 11 13 - 12 8 | 12 8 |
| 73 | 76.8 | 76.8 - 81.1 | 81.1 | 11 7 | 12 1 | 12 1 - 12 11 | 12 11 |
| 74 | 77.9 | 77.9 - 82.2 | 82.2 | 11 9 | 12 4 | 12 4 - 12 13 | 12 13 |
| 75 | 78.9 | 78.9 - 83.3 | 83.3 | 11 11 | 12 6 | 12 6 - 13 2 | 13 2 |
| 76 | 80.0 | 80.0 - 84.4 | 84.4 | 12 0 | 12 8 | 12 8 - 13 4 | 13 4 |
| 77 | 81.1 | 81.1 - 85.6 | 85.6 | 12 2 | 12 11 | 12 11 - 13 7 | 13 7 |
| 78 | 82.1 | 82.1 - 86.7 | 86.7 | 12 4 | 12 13 | 12 13 - 13 9 | 13 9 |
| 79 | 83.2 | 83.2 - 87.8 | 87.8 | 12 6 | 13 1 | 13 1 - 13 12 | 13 12 |
| 80 | 84.2 | 84.2 - 88.9 | 88.9 | 12 8 | 13 4 | 13 4 - 14 0 | 14 0 |
| 81 | 85.3 | 85.3 - 90.0 | 90.0 | 12 11 | 13 6 | 13 6 - 14 2 | 14 2 |
| 82 | 86.3 | 86.3 - 91.1 | 91.1 | 12 13 | 13 8 | 13 8 - 14 5 | 14 5 |
| 83 | 87.4 | 87.4 - 92.2 | 92.2 | 13 1 | 13 11 | 13 11 - 14 7 | 14 7 |
| 84 | 88.4 | 88.4 - 93.3 | 93.3 | 13 3 | 13 13 | 13 13 - 14 10 | 14 10 |
| 85 | 89.5 | 89.5 - 94.4 | 94.4 | 13 5 | 14 1 | 14 1 - 14 12 | 14 12 |
| 86 | 90.5 | 90.5 - 95.6 | 95.6 | 13 8 | 14 4 | 14 4 - 15 1 | 15 1 |
| 87 | 91.6 | 91.6 - 96.7 | 96.7 | 13 10 | 14 6 | 14 6 - 15 3 | 15 3 |
| 88 | 92.6 | 92.6 - 97.8 | 97.8 | 13 12 | 14 8 | 14 8 - 15 6 | 15 6 |
| 89 | 93.7 | 93.7 - 98.9 | 98.9 | 14 0 | 14 11 | 14 11 - 15 8 | 15 8 |
| 90 | 94.7 | 94.7 - 100.0 | 100.0 | 14 2 | 14 13 | 14 13 - 15 10 | 15 10 |
| 91 | 95.8 | 95.8 - 101.1 | 101.1 | 14 5 | 15 1 | 15 1 - 15 13 | 15 13 |
| 92 | 96.8 | 96.8 - 102.2 | 102.2 | 14 7 | 15 4 | 15 4 - 16 1 | 16 1 |
| 93 | 97.9 | 97.9 - 103.3 | 103.3 | 14 9 | 15 6 | 15 6 - 16 4 | 16 4 |
| 94 | 98.9 | 98.9 - 104.4 | 104.4 | 14 11 | 15 8 | 15 8 - 16 6 | 16 6 |
| 95 | 100.0 | 100.0 - 105.6 | 105.6 | 14 13 | 15 10 | 15 10 - 16 9 | 16 9 |
| 96 | 101.1 | 101.1 - 106.7 | 106.7 | 15 2 | 15 13 | 15 13 - 16 11 | 16 11 |
| 97 | 102.1 | 102.1 - 107.8 | 107.8 | 15 4 | 16 1 | 16 1 - 17 0 | 17 0 |
| 98 | 103.2 | 103.2 - 108.9 | 108.9 | 15 6 | 16 3 | 16 3 - 17 2 | 17 2 |
| 99 | 104.2 | 104.2 - 110.0 | 110.0 | 15 8 | 16 6 | 16 6 - 17 5 | 17 5 |

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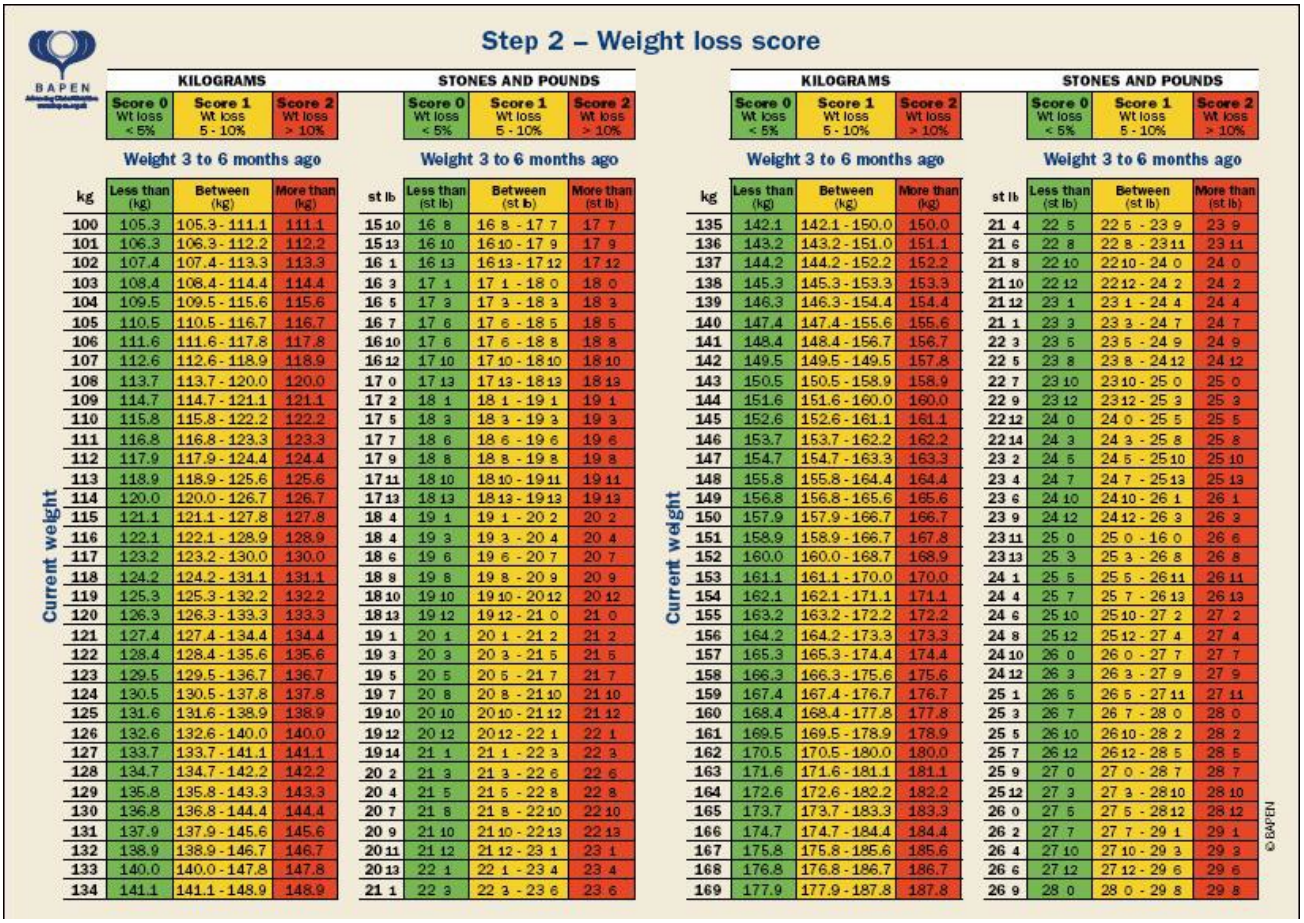

## Step 2 – Weight loss score

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Current weight

| KILOGRAMS | | | | STONES AND POUNDS | | | |
|---|---|---|---|---|---|---|---|
| | Score 0 Wt loss < 5% | Score 1 Wt loss 5 - 10% | Score 2 Wt loss > 10% | | Score 0 Wt loss < 5% | Score 1 Wt loss 5 - 10% | Score 2 Wt loss > 10% |
| | Weight 3 to 6 months ago | | | | Weight 3 to 6 months ago | | |
| kg | Less than (kg) | Between (kg) | More than (kg) | st lb | Less than (st lb) | Between (st lb) | More than (st lb) |
| 100 | 105.3 | 105.3 - 111.1 | 111.1 | 15 10 | 16 8 | 16 8 - 17 7 | 17 7 |
| 101 | 106.3 | 106.3 - 112.2 | 112.2 | 15 13 | 16 10 | 16 10 - 17 9 | 17 9 |
| 102 | 107.4 | 107.4 - 113.3 | 113.3 | 16 1 | 16 13 | 16 13 - 17 12 | 17 12 |
| 103 | 108.4 | 108.4 - 114.4 | 114.4 | 16 3 | 17 1 | 17 1 - 18 0 | 18 0 |
| 104 | 109.5 | 109.5 - 115.6 | 115.6 | 16 5 | 17 3 | 17 3 - 18 3 | 18 3 |
| 105 | 110.5 | 110.5 - 116.7 | 116.7 | 16 7 | 17 6 | 17 6 - 18 5 | 18 5 |
| 106 | 111.6 | 111.6 - 117.8 | 117.8 | 16 10 | 17 6 | 17 6 - 18 8 | 18 8 |
| 107 | 112.6 | 112.6 - 118.9 | 118.9 | 16 12 | 17 10 | 17 10 - 18 10 | 18 10 |
| 108 | 113.7 | 113.7 - 120.0 | 120.0 | 17 0 | 17 13 | 17 13 - 18 13 | 18 13 |
| 109 | 114.7 | 114.7 - 121.1 | 121.1 | 17 2 | 18 1 | 18 1 - 19 1 | 19 1 |
| 110 | 115.8 | 115.8 - 122.2 | 122.2 | 17 5 | 18 3 | 18 3 - 19 3 | 19 3 |
| 111 | 116.8 | 116.8 - 123.3 | 123.3 | 17 7 | 18 6 | 18 6 - 19 6 | 19 6 |
| 112 | 117.9 | 117.9 - 124.4 | 124.4 | 17 9 | 18 8 | 18 8 - 19 8 | 19 8 |
| 113 | 118.9 | 118.9 - 125.6 | 125.6 | 17 11 | 18 10 | 18 10 - 19 11 | 19 11 |
| 114 | 120.0 | 120.0 - 126.7 | 126.7 | 17 13 | 18 13 | 18 13 - 19 13 | 19 13 |
| 115 | 121.1 | 121.1 - 127.8 | 127.8 | 18 4 | 19 1 | 19 1 - 20 2 | 20 2 |
| 116 | 122.1 | 122.1 - 128.9 | 128.9 | 18 4 | 19 3 | 19 3 - 20 4 | 20 4 |
| 117 | 123.2 | 123.2 - 130.0 | 130.0 | 18 6 | 19 6 | 19 6 - 20 7 | 20 7 |
| 118 | 124.2 | 124.2 - 131.1 | 131.1 | 18 8 | 19 8 | 19 8 - 20 9 | 20 9 |
| 119 | 125.3 | 125.3 - 132.2 | 132.2 | 18 10 | 19 10 | 19 10 - 20 12 | 20 12 |
| 120 | 126.3 | 126.3 - 133.3 | 133.3 | 18 13 | 19 12 | 19 12 - 21 0 | 21 0 |
| 121 | 127.4 | 127.4 - 134.4 | 134.4 | 19 1 | 20 1 | 20 1 - 21 2 | 21 2 |
| 122 | 128.4 | 128.4 - 135.6 | 135.6 | 19 3 | 20 3 | 20 3 - 21 5 | 21 5 |
| 123 | 129.5 | 129.5 - 136.7 | 136.7 | 19 5 | 20 5 | 20 5 - 21 7 | 21 7 |
| 124 | 130.5 | 130.5 - 137.8 | 137.8 | 19 7 | 20 8 | 20 8 - 21 10 | 21 10 |
| 125 | 131.6 | 131.6 - 138.9 | 138.9 | 19 10 | 20 10 | 20 10 - 21 12 | 21 12 |
| 126 | 132.6 | 132.6 - 140.0 | 140.0 | 19 12 | 20 12 | 20 12 - 22 1 | 22 1 |
| 127 | 133.7 | 133.7 - 141.1 | 141.1 | 19 14 | 21 1 | 21 1 - 22 3 | 22 3 |
| 128 | 134.7 | 134.7 - 142.2 | 142.2 | 20 2 | 21 3 | 21 3 - 22 6 | 22 6 |
| 129 | 135.8 | 135.8 - 143.3 | 143.3 | 20 4 | 21 5 | 21 5 - 22 8 | 22 8 |
| 130 | 136.8 | 136.8 - 144.4 | 144.4 | 20 7 | 21 8 | 21 8 - 22 10 | 22 10 |
| 131 | 137.9 | 137.9 - 145.6 | 145.6 | 20 9 | 21 10 | 21 10 - 22 13 | 22 13 |
| 132 | 138.9 | 138.9 - 146.7 | 146.7 | 20 11 | 21 12 | 21 12 - 23 1 | 23 1 |
| 133 | 140.0 | 140.0 - 147.8 | 147.8 | 20 13 | 22 1 | 22 1 - 23 4 | 23 4 |
| 134 | 141.1 | 141.1 - 148.9 | 148.9 | 21 1 | 22 3 | 22 3 - 23 6 | 23 6 |
| 135 | 142.1 | 142.1 - 150.0 | 150.0 | 21 4 | 22 5 | 22 5 - 23 9 | 23 9 |
| 136 | 143.2 | 143.2 - 151.0 | 151.1 | 21 6 | 22 8 | 22 8 - 23 11 | 23 11 |
| 137 | 144.2 | 144.2 - 152.2 | 152.2 | 21 8 | 22 10 | 22 10 - 24 0 | 24 0 |
| 138 | 145.3 | 145.3 - 153.3 | 153.3 | 21 10 | 22 12 | 22 12 - 24 2 | 24 2 |
| 139 | 146.3 | 146.3 - 154.4 | 154.4 | 21 12 | 23 1 | 23 1 - 24 4 | 24 4 |
| 140 | 147.4 | 147.4 - 155.6 | 155.6 | 21 1 | 23 3 | 23 3 - 24 7 | 24 7 |
| 141 | 148.4 | 148.4 - 156.7 | 156.7 | 22 3 | 23 5 | 23 5 - 24 9 | 24 9 |
| 142 | 149.5 | 149.5 - 149.5 | 157.8 | 22 5 | 23 8 | 23 8 - 24 12 | 24 12 |
| 143 | 150.5 | 150.5 - 158.9 | 158.9 | 22 7 | 23 10 | 23 10 - 25 0 | 25 0 |
| 144 | 151.6 | 151.6 - 160.0 | 160.0 | 22 9 | 23 12 | 23 12 - 25 3 | 25 3 |
| 145 | 152.6 | 152.6 - 161.1 | 161.1 | 22 12 | 24 0 | 24 0 - 25 5 | 25 5 |
| 146 | 153.7 | 153.7 - 162.2 | 162.2 | 22 14 | 24 3 | 24 3 - 25 8 | 25 8 |
| 147 | 154.7 | 154.7 - 163.3 | 163.3 | 23 2 | 24 5 | 24 5 - 25 10 | 25 10 |
| 148 | 155.8 | 155.8 - 164.4 | 164.4 | 23 4 | 24 7 | 24 7 - 25 13 | 25 13 |
| 149 | 156.8 | 156.8 - 165.6 | 165.6 | 23 6 | 24 10 | 24 10 - 26 1 | 26 1 |
| 150 | 157.9 | 157.9 - 166.7 | 166.7 | 23 9 | 24 12 | 24 12 - 26 3 | 26 3 |
| 151 | 158.9 | 158.9 - 166.7 | 167.8 | 23 11 | 25 0 | 25 0 - 16 0 | 26 6 |
| 152 | 160.0 | 160.0 - 168.7 | 168.9 | 23 13 | 25 3 | 25 3 - 26 8 | 26 8 |
| 153 | 161.1 | 161.1 - 170.0 | 170.0 | 24 1 | 25 5 | 25 5 - 26 11 | 26 11 |
| 154 | 162.1 | 162.1 - 171.1 | 171.1 | 24 4 | 25 7 | 25 7 - 26 13 | 26 13 |
| 155 | 163.2 | 163.2 - 172.2 | 172.2 | 24 6 | 25 10 | 25 10 - 27 2 | 27 2 |
| 156 | 164.2 | 164.2 - 173.3 | 173.3 | 24 8 | 25 12 | 25 12 - 27 4 | 27 4 |
| 157 | 165.3 | 165.3 - 174.4 | 174.4 | 24 10 | 26 0 | 26 0 - 27 7 | 27 7 |
| 158 | 166.3 | 166.3 - 175.6 | 175.6 | 24 12 | 26 3 | 26 3 - 27 9 | 27 9 |
| 159 | 167.4 | 167.4 - 176.7 | 176.7 | 25 1 | 26 5 | 26 5 - 27 11 | 27 11 |
| 160 | 168.4 | 168.4 - 177.8 | 177.8 | 25 3 | 26 7 | 26 7 - 28 0 | 28 0 |
| 161 | 169.5 | 169.5 - 178.9 | 178.9 | 25 5 | 26 10 | 26 10 - 28 2 | 28 2 |
| 162 | 170.5 | 170.5 - 180.0 | 180.0 | 25 7 | 26 12 | 26 12 - 28 5 | 28 5 |
| 163 | 171.6 | 171.6 - 181.1 | 181.1 | 25 9 | 27 0 | 27 0 - 28 7 | 28 7 |
| 164 | 172.6 | 172.6 - 182.2 | 182.2 | 25 12 | 27 3 | 27 3 - 28 10 | 28 10 |
| 165 | 173.7 | 173.7 - 183.3 | 183.3 | 26 0 | 27 5 | 27 5 - 28 12 | 28 12 |
| 166 | 174.7 | 174.7 - 184.4 | 184.4 | 26 2 | 27 7 | 27 7 - 29 1 | 29 1 |
| 167 | 175.8 | 175.8 - 185.6 | 185.6 | 26 4 | 27 10 | 27 10 - 29 3 | 29 3 |
| 168 | 176.8 | 176.8 - 186.7 | 186.7 | 26 6 | 27 12 | 27 12 - 29 6 | 29 6 |
| 169 | 177.9 | 177.9 - 187.8 | 187.8 | 26 9 | 28 0 | 28 0 - 29 8 | 29 8 |

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| Patient Label |
|---|
| **Name:** |
| **NHS No:** |

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## APPENDIX 4 – FLUID BALANCE CHART

| Date | | | | | Sheet number | | | | |
|---|---|---|---|---|---|---|---|---|---|
| One hour period up to | Volume of Intake | | | | | Volume of Output | | | |
| | As water | As electrolytes in solution | | | | Urine | Drainage and sputum | Diarrhoea | Naso-gastric or vomit |
| | Mouth or stomach tube | Batch number | Type of fluid | Volume | Additives | | | | |
| 12.00 | | | | | | | | | |
| 01.00 | | | | | | | | | |
| 02.00 | | | | | | | | | |
| 03.00 | | | | | | | | | |
| 04.00 | | | | | | | | | |
| 05.00 | | | | | | | | | |
| 06.00 | | | | | | | | | |
| 07.00 | | | | | | | | | |
| 08.00 | | | | | | | | | |
| 09.00 | | | | | | | | | |
| 10.00 | | | | | | | | | |
| 11.00 | | | | | | | | | |
| 12.00 | | | | | | | | | |
| 13.00 | | | | | | | | | |
| 14.00 | | | | | | | | | |
| 15.00 | | | | | | | | | |
| 16.00 | | | | | | | | | |
| 17.00 | | | | | | | | | |
| 18.00 | | | | | | | | | |
| 19.00 | | | | | | | | | |
| 20.00 | | | | | | | | | |
| 21.00 | | | | | | | | | |
| 22.00 | | | | | | | | | |
| 23.00 | | | | | | | | | |
| Total for period am to am pm pm | | | | | | | | | |
| Total for 24 hours | | | | | | | | | |
| Balance for 24 hours: | | | | | | Body Weight: | | | |

**Please photocopy double-sided**

## APPENDIX 5 – GULP DEHYDRATION RISK SCREENING TOOL

To complete **GULP**, tick the boxes which represent your findings. Add up the total tick scores and follow the risk care plan accordingly. **GULP** is to be completed at initial contact and as and when circumstances change, e.g. following illness. **For service users on a fluid restriction seek medical advice before making or suggesting any changes to fluid intake.**

Name: _____ D.O.B: __ / __ / ____ NHS no: ___ - ____ - ____

Date of assessment: __ / __ / ____ Initials of assessor _____

| GULP | Score 0 | Score 1 | Score 2 |
|---|---|---|---|
| **Gauge 24hr fluid intake** Tick one box | Intake greater than 1600ml ☐ | Unable to assess intake or Intake between 1200ml - 1600ml ☐ | Intake less than 1200ml ☐ |
| **Urine colour** (use pee chart) Tick one box | Urine colour score 1-3 ☐ | Unable to assess urine colour ☐ | Urine colour score 4-8 ☐ |
| **Look for signs, symptoms and risk factors for dehydration** Tick all boxes that apply | No signs of dehydration ☐ | If any of below reported: Repeated UTIs Frequent falls Postural hypotension Dizziness or light-headedness Taking diuretics Open or weeping wound Hyperglycaemia ☐ | If any of below reported: Drowsiness Low blood pressure Weak pulse Sunken eyes Increased confusion or sudden change in mental state Diarrhoea and/or vomiting Fever ☐ |
| | Total score: _____ | | |
| **Plan** **For plan add tick scores together: G+U+L=Plan** Tick risk care plan to follow | ☐ | ☐ | ☐ |

Low risk
= score 0

- Encourage service user to continue with current fluid intake
- Place “Keeping Hydrated” leaflet in care plan

Medium risk
= score 1-3

- Encourage service user to increase frequency or size of drinks
- Discuss “Keeping Hydrated” leaflet
- Ask service user to self-monitor urine colour and aim for urine colour 1-3

## APPENDIX 6 – DIETARY NEEDS COMMUNICATION FORM

Humber Teaching NHS Foundation Trust

### Dietary Needs Communication for catering staff

**Patient Name:** _____ **NHS No:**_____-_____ - _____

**This information is for:** **new admission** ☐ **update** ☐

**Cultural dietary requirements:** **Halal** ☐ **Kosher** ☐ **Vegetarian** ☐

| **Special dietary needs:** | | **Medical Conditions requiring special diet:** | |
|---|---|---|---|
| **Wheat-free** | | **Diabetes** | |
| **Lactose-free** | | **Coeliac disease** | |
| **Vegetarian** | | **Obesity** | |
| **Vegan** | | **Cardio-vascular disease** | |
| | | **Malnutrition** | |
| **Other (please specify):** | | **Other (please specify):** | |

| **Foods to avoid due to medical treatment:** | **Food allergies:** |
|---|---|
| | |

| **Portion sizes:** | | | |
|---|---|---|---|
| **Regular** | | **Weight loss** | |
| **Large** | | **Weight gain** | |

| **Patient's food preferences (where possible):** |
|---|
| |

**Signed:** _____ **(Patient)**

**Signed:** _____

**Print:** _____

**On behalf of the clinical team on** _____ **ward.**

## APPENDIX 7 – EAST RIDING COMMUNITY WARDS HOME ENTERAL TUBE FEEDING DISCHARGE SUMMARY

| **PATIENT DETAILS:** | **FEED DETAILS:** |
|---|---|
| Name: | Name and Volume of Feed: |
| Address: | |
| | Addition Water (if any): mls/day |
| Tel No: | Feeding Regimen: |
| Date of Birth: | |
| NHS No: | |
| Male / Female (circle) | |
| Other Contact: | 10 days feed/equipment given on discharge: **YES / NO** |
| Relationship: | First delivery of feed required: / / |
| Tel No: | Pump Training/Stoma Care: **Arranged/Completed** |
| GP | Feeding Route: |
| GP Address | Date current tube place: / / |
| | Make of Tube and size: |
| Consultant: | Site of distal tip of tube: |
| Discharged Consultant: **YES / NO / DON'T KNOW** | No per 28 days: |
| Home Visit Required: **YES / NO** | Date of Discharge: / / |
| Discharged Dietitian: **YES / NO** | |

Weight: Height: BMI: (date: / / )

Weight Change (last three months):

Diagnosis:

Past Medical History:

Any Oral Diet or Fluids, please state type and amount:

Current Medication:

Additional Information/Any relevant Blood Results:

**PUMP DETAILS**

Type of Pump:

Serial Number:

Drip Stand Supplied: **YES / NO** (see circle)

Carry Pack Supplied: **YES / NO** (see circle)

**Giving Sets**:

Name & Type:

No per 28 days:

**Extension Sets**:

Name, Type & Size:

No per 28 days:

**Dressings**:

Name & Size:

No per 28 days:

Name & Size:

No per 28 days:

**Other items:** (specify, including no. per 28 days)

**ANCILLARY REQUIREMENTS**

| Syringe | No. per 28 days |
|---|---|
| 60ml 7 day ENFIT | |
| 60ml single use ENFIT | |

| **Balloon Requirements** | |
|---|---|
| 5ml Luer Slip Syringes | |
| 5ml Sterile Water Ampoules | |

**BANS INFORMATION**

**Primary Reason for Home Enteral Tube Feeding** (Please tick one box)

| | | | |
|---|---|---|---|
| Swallowing Disorder | | Failure to Thrive | |
| GIT Obstruction | | Unpalatibility of Specialised Feeds | |
| Short Bowel | | Improve/Maintain Nutritional Status | |
| Malabsorption | | Other (please specify) | |
| Fistula | | | |
| Anorexia | | | |

**Functional Status** (please tick one box)

| | |
|---|---|
| Full Normal Activity | |
| Limited Activity | |
| Housebound | |
| Bedbound | |
| Unconscious | |

Ability to Manage Nutritional Support (please tick one box)

| | |
|---|---|
| Independent | |
| Requires Some Help | |
| Requires Total Help | |
| Child | |

**I CONFIRM** (please tick as appropriate)

The patient wants to get feed from local chemist ☐

The patient wishes Homeward to dispense and deliver ☐

The patient authorises Homeward to contact GP for RX ☐

**Discharging Staff:** **Signature:**

**Discharging Hospital**: **Ward:**

**Tel No:** **Date Completed: / /** **Date Received: / /**

## APPENDIX 8 – FOOD CHARTS

| Patient Label |
|---|
| Name: |
| NHS No: |

Humber NHS
NHS Foundation Trust

### FOOD RECORD CHART

Please record ALL food and drinks taking including supplements and snacks as part portions (½, ¼ etc) or household measures (desert spoon etc)

| | Day One | | | Day Two | | |
|---|---|---|---|---|---|---|
| | Date: | | | Date: | | |
| Time of day | Food/Drink/ Supplements Offered | Amount Given | Amount Remaining | Food/Drink/ Supplements Offered | Amount Given | Amount Remaining |
| Breakfast | | | | | | |
| Mid-morning | | | | | | |
| Lunch | | | | | | |
| Mid-afternoon | | | | | | |
| Evening Meal | | | | | | |
| Supper | | | | | | |
| Example | Beef casserole<br>Potatoes mashed<br>Carrots<br>Semolina | | ½ portion<br>1 scoop<br>1 tblespoon<br>all | | | ½ portion<br>1 scoop<br>1 tblespoon<br>all |



Food Record Chart – October 2012
Review Date: October 2013

| Patient Label |
|---|
| **Name:** |
| **NHS No:** |

Humber NHS
NHS Foundation Trust

| | Day Three | | |
|---|---|---|---|
| | **Date:** | | |
| **Time of day** | **Food/Drink/ Supplements Offered** | **Amount Given** | **Amount Remaining** |
| Breakfast | | | |
| Mid-morning | | | |
| Lunch | | | |
| Mid-afternoon | | | |
| Evening Meal | | | |
| Supper | | | |
| Example | Beef casserole<br>Potatoes mashed<br>Carrots<br>Semolina | | ½ portion<br>1 scoop<br>1 tblespoon<br>all |



**Food Record Chart – October 2012**
**Review Date: October 2013**

| Patient Label |
|---|
| **Name:** |
| **NHS No:** |

Humber NHS
NHS Foundation Trust

# FLUID BALANCE CHART

| Date | | | | | Sheet number | | | | |
|---|---|---|---|---|---|---|---|---|---|
| One hour period up to | Volume of Intake | | | | | Volume of Output | | | |
| | As water | As electrolytes in solution | | | | Urine | Drainage and sputum | Diarrhoea | Naso-gastric or vomit |
| | Mouth or stomach tube | Batch number | Type of fluid | Volume | Additives | | | | |
| 12.00 | | | | | | | | | |
| 01.00 | | | | | | | | | |
| 02.00 | | | | | | | | | |
| 03.00 | | | | | | | | | |
| 04.00 | | | | | | | | | |
| 05.00 | | | | | | | | | |
| 06.00 | | | | | | | | | |
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| 18.00 | | | | | | | | | |
| 19.00 | | | | | | | | | |
| 20.00 | | | | | | | | | |
| 21.00 | | | | | | | | | |
| 22.00 | | | | | | | | | |
| 23.00 | | | | | | | | | |
| Total for period<br><br>am to am<br>pm pm | | | | | | | | | |
| Total for 24 hours | | | | | | | | | |
| Balance for 24 hours: | | | | | | Body Weight: | | | |

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Fluid Balance Chart ) – October 2012
Review Date: October 2013

## APPENDIX 9 – EQUALITY IMPACT ASSESSMENT

For strategies, policies, procedures, processes, guidelines, protocols, tenders, services

1. Document or Process or Service Name: Nutrition and Hydration Guideline for Adults in Inpatient Units
2. EIA Reviewer (name, job title, base and contact details) Vanessa Smith, Professional Lead Dietetics, East Riding Community Hospital, vsmith18@nhs.net
3. Is it a Policy, Strategy, Procedure, Process, Tender, Service or Other? Guideline

**Main Aims of the Document, Process or Service**

To highlight procedures and methods for nutrition and hydration screening and implementation of plans to ensure optimal nutrition and hydration is provided on the wards. It also provides some guidance around nutrition and hydration for staff.

The document provides forms and templates for recording and referring to appropriate services.

Please indicate in the table that follows whether the document or process has the potential to impact adversely, intentionally or unwittingly on the equality target groups contained in the pro forma

| Equality Target Group | Is the document or process likely to have a potential or actual differential impact with regards to the equality target groups listed? | How have you arrived at the equality impact score? |
|---|---|---|
| 1. Age<br>2. Disability<br>3. Sex<br>4. Marriage/Civil Partnership<br>5. Pregnancy/Maternity<br>6. Race<br>7. Religion/Belief<br>8. Sexual Orientation<br>9. Gender re-assignment | Equality Impact Score<br>Low = Little or No evidence or concern (Green)<br>Medium = some evidence or concern(Amber)<br>High = significant evidence or concern (Red) | a) who have you consulted with<br>b) what have they said<br>c) what information or data have you used<br>d) where are the gaps in your analysis<br>e) how will your document/process or service promote equality and diversity good practice |

| Equality Target Group | Definitions | Equality Impact Score | Evidence to support Equality Impact Score |
|---|---|---|---|
| **Age** | Including specific ages and age groups:<br><br>Older people<br>Young people<br>Children<br>Early years | Medium | The service is adults' inpatient on wards for community and mental health patients. Medium impact as most of these measures are in place. |
| **Disability** | Where the impairment has a substantial and long term adverse effect on the ability of the person to carry out their day to day activities:<br><br>Sensory<br>Physical<br>Learning<br>Mental health<br><br>(including cancer, HIV, multiple sclerosis) | Low | The policy applies to all groups equally. |
| **Sex** | Men/Male<br>Women/Female | Low | |
| **Marriage/Civil partnership** | | Low | |
| **Pregnancy/ Maternity** | | Low | |

| | | | |
|---|---|---|---|
| **Race** | Colour<br>Nationality<br>Ethnic/national origins | Low | |
| **Religion or belief** | All religions<br>Including lack of religion or belief and where belief includes any religious or philosophical belief | Low | All religions and beliefs will be taken into account individually. |
| **Sexual orientation** | Lesbian<br>Gay men<br>Bisexual | Low | |
| **Gender reassignment** | Where people are proposing to undergo, or have undergone a process (or part of a process) for the purpose of reassigning the person's sex by changing physiological or other attribute of sex | Low | |

**Summary**

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|---|---|
| Please describe the main points/actions arising from your assessment that supports your decision.<br><br>There will be a low impact on these target groups. Most procedures are in place and just need to be reinforced and new staff aware off these. Some wards may need to alter paperwork to ensure we are all using the same. There is no negative impact from this; it can only improve our care for patients in terms of hydration and nutrition. | |
| EIA Reviewer: Vanessa Smith | |
| Date completed: 7 March 2018 | Signature: Vanessa Smith |