NUTRITION AND HYDRATION POLICY

			POLICY
Reference	CPG-TW-N&HP		
Approving Body	Nutrition Steering Group		
Date Approved	7 th February 2023		
For publication to external SFH website	Positive confirmation received from the approving body that the content does not risk the safety of patients or the public:YESNON/A		
	X		
Issue Date	6 th March 2023		
Version	4.0		
Summary of Changes from Previous Version	 Planned review and update undertaken Section 4 (Roles and Responsibilities) – Governance structure updated Sections 7 & 8 (for paediatrics) – complete rewrite Section 9 (for neonates) – newly added Removed representational copy of Patient Special Diet Form Section 10 (Monitoring Compliance) – updated to current standards Section 11 (Training) – updated to reflect current practice Appendix E, Childrens appendix newly added Information for associated documents updated particularly where to order from for use/ complete. 		
Supersedes	v3.1 Issued 30 th June 2020 to Review Date February 2023 (ext2)		
Document Category	Clinical		
Consultation Undertaken	 Childrens – Women and Childrens Divisional Governance Group Neonates – Paediatric Clinical Governance Group Nutrition & Hydration Steering Group 		
Date of Completion of Equality Impact Assessment	February 2023		
Date of Environmental Impact Assessment (if applicable)	February 2023		
Legal and/or Accreditation Implications	This policy is required by the trust to help support the implementation of consistent evidence-based care		
Target Audience	All clinical trust staff who treat and care for adults, Infants, children, young people and Neonates Medirest staff involved in the delivery/service of patient meals		
Review Date	February 2026		
Sponsor (Position)	Chief Nurse, Medical I		
Lead Author (Position & Name)		pecialist, Jenna Pa	
Associate/ Supporting Author(s) (Position & Name):	 Advanced Dietetic Practitioner, Katie Townsend Paediatric Lead Dietitian, Katy Conchie Paediatric Practice Development Nurse, Kerry Morris NICU Practice Development Matron, Lynsey Lord 		

Sherwood Forest Hospitals NHS Foundation Trust

Lead Division/ Directorate Corporate				
Lead Specialty/ Service/ Department Nursing/ Nutrition Tea		Nursing/ Nutrition Tea	m	
	on of Person able to provide	 Clinical Lead f 	or Nutrition	
Further Guidance/Information • Nutrition Nurs		Nutrition Nurse	Specialist	
		 Advanced Die 	etic Practitioner	
		 Paediatric Lea 	d Dietitian	
			ctice Development Nurse	
		NICU Practice	Development Matron	
Associated Documents/ Information		Date Associated Documents/ Information was reviewed		
1. (Adult) Nutritional Needs Care Plan (available to order via Clinical Illustration)		Currently being reviewed		
2. (Adult) Nutritional intake chart (available to order via Forms Management, ref: FKIN030276)		May 2017		
 (Adult) Patient Special Diet Form (available to order via Clinical Illustration reference 001907) 		April 2021		
 Paediatric Yorkhill Malnutrition score (PYMS) (available to print from paediatric intranet) 		Sept 2022		
5.	Paediatric feed chart (On paediatric in	ntranet)	Feb 2022	
6. Paediatric fluid balance chart (on paediatric intranet)		October 2021		
7. Maintain fluids – parent plan (On paediatric intranet)		March 2022		
8. Push extra fluids – parent plan (On paediatric intranet)		March 2022		
9. <u>Paediatric nasogastric tube feeding integrated care</u> pathway (On PPG intranet)		23-01-2019		
10.	 Paediatric core care plan 6: Child or young person is dehydrated or at risk of dehydration (On intranet) 		January 2018	

CONTENTS

ltem	Title	Page
1.0		4-5
2.0	POLICY STATEMENT	5
3.0	DEFINITIONS/ ABBREVIATIONS	6
4.0	ROLES AND RESPONSIBILITIES	7-8
5.0	APPROVAL	8-13
6.0	ADULTS	
6	1 Consent	
6	2 Nutrition Screening	
6	3 Hydration Screening	
6	4 Nutrition Support, Supplements, Artificial Nutrition and Hydration	
6	5 Making Mealtimes Matter / Protected Mealtimes	
7.0	INFANTS, CHILDREN AND YOUNG PEOPLE	13-22
7	1 Consent	
7	2 Nutrition assessment	
7	3 Hydration assessment	
7	4 Documentation requirements	
7	5 The breast/chest feeding woman/birth parent	
7	6 The breast/chest-fed infant	
7	7 The formula fed infant	

Sherwood Forest Hospitals NHS Foundation Trust

7.8	The use of Seve formula	
	The use of Soya formula	
7.9	Inadequate hydration of Infants, Children and Young People PAEDIATRIC ROUTINE MAINTENANCE FLUID REQUIREMENTS	22-28
8.0 8.1	Nasogastric tube feeding	22-20
8.2	Weaning	
8.3	Nutrition in the older child	
8.4	Monitoring growth	
8.5	Standards for weighing and measuring infants	
8.6	Expected Growth	
8.7	Paediatric Yorkhill Malnutrition Score PYMS	
8.8	Help and Support	
8.9	Sharing information on discharge with the relevant services	
9.0	CARING FOR THE NEONATES	29-33
9.0	Consent	29-33
9.2	Nutritional Screening	
9.3	Hydration Screening	
9.3	Documentation of fluid requirements	
9.5	Breast/Chest feeding	
9.6	Donor breast milk (DBM).	
9.7	Formula Feeding	
9.8	Inadequate hydration of Infants	
9.9	Monitoring growth	
10.0	MONITORING COMPLIANCE AND EFFECTIVENESS	24
11.0	TRAINING AND IMPLEMENTATION	35
1120	IMPACT ASSESSMENTS	35
13.0	EVIDENCE BASE (Relevant Legislation/ National Guidance) and	35-36
10.0	RELATED SFHFT DOCUMENTS	00 00
14.0	KEYWORDS	36
15.0	APPENDICES	
Appendix A	MUST – Malnutrition Universal Screening Tool	38-43
	 <u>Step 1</u> – BMI Score (& BMI) 	
	<u>Step 2</u> – Weight loss score	
	Alternative measurements and considerations	
	Factors influencing body weight	
Appendix B	Red tray flow chart	44
Appendix C	Red lid jug flow chart	45
Appendix D	Adult inpatient dietetic referral guidance	46
Appendix E	Infant Feeding Leaflets	47
Appendix F	Equality Impact Assessment	48-49
<u>Appendix G</u>	Environment Impact Assessment	50

1.0 INTRODUCTION

Malnutrition and Dehydration

Malnutrition and dehydration is a common problem worldwide. At any point in time more than 3 million people in the UK are either malnourished or at risk of malnutrition (Patients Association 2011) and/or dehydrated or at risk of dehydration. (British Nutrition Foundation 2014). Providing patients with high quality nutrition and hydration is an integral part of their care. Provision of and access to appropriate food and fluids to meet their needs is essential to promote individual health outcomes.

There has been increasing concern over the incidence of malnutrition and dehydration (NHS England 2015) in particular under nutrition and dehydration that exists in the hospital population and a growing awareness of the need to improve the overall nutrition and hydration care experience for the patient to improve clinical outcomes. There are many reasons for this:

- Food and fluid intake may be reduced through the effects of illness or disability
- Metabolic requirements may be increased due to the effects of illness
- Food and fluid may be unpalatable as a result of the disease/ illness
- Poor nutritional intake prior to admission
- Poor fluid intake prior to admission
- Pain, depression, fear and or pathway, lead to decreased nutritional and fluid intake
- Multiple investgations, ward rounds and time away from the ward lead to meals and drinks being missed
- Inadequate supervision in supporting patients with eating and drinking at mealtimes and throughout the 24 hours period.

The under nutrition of children and young people is usually associated with poverty and poor food choices. Dehydration is also common although the overall numbers are less clear (NHS England: 2015). All children and young people admitted to hospital should:

- Have options available to allow them to eat a well-balanced diet of healthy food as outlined by national guidance.
- Have available sufficient food of good quality to meet their nutritional requirements.
- Sufficient fluid to ensure adequate hydration.

The focus of nutritional provision from hospital food should be on achievement of adequate energy intake to meet the estimated average requirement (EAR). The Association of UK Dietitians (2017).

Hospitals have a responsibility for ensuring that appropriate systems and processes are in place to both identify and manage patients who fall into these categories as well as ensuring that all patients have access to nutrition and hydration appropriate to their needs.

The delivery of excellent nutritional care in in-patients is a highly complex process which relies on a multi-disciplinary approach ensuring clinical and catering staff work together to meet the hydration and nutritional needs of patients. The amount of fluid an adult or child needs to drink to avoid dehydration varies depending on a range of factors e.g. size, temperature and how active they are. The Department of Health recommends that adults should drink approximately 1.5 - 2 litres of fluid each day. For recommendations for infant and young people's fluid requirements please refer to section 8.0.

The Patient Nutrition and Hydration expert reference group states that the recommended standards meet the requirements of patients who are at risk of malnutrition.

Obesity

Obesity is a major clinical and public health issue. For patients in hospital this can adversely affect clinical outcomes. Identifying individuals who fall into this category and providing them with help and support at an appropriate time in their clinical care is an important role of the healthcare professional. The Patient Nutrition and Hydration expert reference group states that the recommend standards meet the requirements of patients seeking to reduce calorie intake to manage obesity or related disorders.

There has been an increasing focus on the issues of childhood obesity in recent years. There are many health campaigns and resources available to support children, young people and their families. See section 7.2.1.

2.0 POLICY STATEMENT

The purpose and scope of this policy is to provide guidance to all healthcare professional who care for patients or have a responsibility for ensuring appropriate systems and processes are in place to identify and manage patients with existing needs and those who are at risk of developing nutritional or hydration problems and to ensure that all patients have access to food and hydration appropriate to their needs (Care Quality Commission)

The aim of this policy is to ensure that:

- Patients receive excellent nutritional care and appropriate assistance
- The nutritional needs of patients are accurately assessed
- Ward based teams are supported in the delivery of food at mealtimes
- Mealtimes are viewed as a fundamental part of the patient's treatment and that due regard and significance is given at these times
- Mealtimes are a key social activity for patients
- Standards of nutrition and hydration are proactively monitored and audited
- A framework exists to ensure appropriate and accurate documentation, enabling early identification of nutrition and hydration related issues that may include safeguarding concerns.
- There is a standardised approach to documentation of fluid/food intake.
- Where necessary staff can refer to other policies/ guidelines when specific nutritional needs are required (eg tube feeding and anorexia nervosa)

3.0 DEFINITIONS/ ABBREVIATIONS

AHP	Allied health professional
BAPEN	British association of parenteral and enteral nutrition
BMI	Body Mass Index
CQC	Care Quality Commission
CYP	Children and young people
EAR	Estimated Average Requirement
EN	Enteral nutrition
HCSW	Health care support workers
ICR	Inter Consultant Referral
IDDSI	International dysphagia diet standardisation initiative
IV	Intravenous
Malnutrition	A state of nutrition in which a deficiency, excess or imbalance of energy, protein and other nutrients causing measurable adverse effects on tissue, function and clinical outcome
MARSIPAN	Management of really sick patients with anorexia nervosa
MUST	Malnutrition Universal Screening Tool
NG	nasogastric
NJ	Nasojejunal
ONS	Oral nutritional supplements
PEG	Percutaneous endoscopic gastrostomy
PEG-J	Percutaneous endoscopic gastrojejunostomy
PLACE	Patient-led assessments of the care environment
PN	Parenteral nutrition
PYMS	Paediatric Yorkhill Malnutrition Score
RIG	Radiologically inserted gastrostomy
RIG-J	Radiologically inserted gastrojejunostomy
RN	Registered nurse
S/C	Subcutaneous
SLT	Speech and language therapy
Stadiometer	Device for measuring height that typically consists of a vertical ruler with a sliding horizontal rod or paddle which is adjusted to rest on the top of the head.
Staff	All employees of the Trust including those managed by a third party on behalf of the Trust
Trust	Sherwood Forest Hospitals NHS Foundation Trust

4.0 ROLES AND RESPONSIBILITIES

Key responsibilities and duties of staff

Delivering excellent nutritional care to patients that are being cared for is a complex process and relies on good co-ordination. Standards of care need to be set, acted upon, audited and monitored and all staff within the Organisation have some responsibility to ensure that this happens.

Nutritional support therefore needs to be delivered via catering, ward nurses and the patient's medical team, supported by specialist advice and an authoritative, specialist-derived management structure which fosters excellence and responsiveness to external drivers.

Responsibly for ensuring the application of this policy lies with the Clinical Chair, Head of Nursing, Divisional Manager and Matron of each division

Summary of local key responsibilities relating to the organisation of the trusts nutritional services:

Nutrition and Hydration Steering Group

• The Nutrition and Hydration Steering Group is accountable to the Trust Board via the below structure:



Medical Staff

• Clinical chairs are responsible for ensuring the dissemination and implementation of this policy within Divisions and for demonstrating compliance with this policy staff competency through audit.

Matrons/ Sister/Charge Nurses

• Matrons/ Sister/Charge Nurses are responsible for ensuring the dissemination and implementation of this policy within their clinical ward areas and for demonstrating compliance of staff competency through audit.

Multidisciplinary team

• All those needed in the management of the patient. All members of the multi-disciplinary team (RNs, AHPs, HCSW, Pharmacists, Hosts/Hostesses, Catering, Domestic staff and mealtime volunteers) will be aware of this policy and all care will be documented in the patient's healthcare records.

Patients, parents and carers

• Patients, parents and carers will be involved in shared decision-making about the management of nutrition and hydration. Patients, parents and carers should be encouraged to take a positive approach to improving nutrition and hydration and have a responsibility to respond to the advice given to them.

Soft Facilities Management Provider

The soft facilities management provider are responsible for ensuring:

- Meals provided are nutritionally balanced, imaginative and well presented
- Food and drink is varied to meet the needs of all patient groups.
- Adherence to current legislation, recommendations and core principles as detailed in Nutritional Guidelines for Hospital Catering.
- Any breast-feeding mothers must have access to appropriate diet and fluid throughout the admission (including during admission of siblings)

5.0 APPROVAL

Following appropriate consultation this policy has been approved by the trust's Nutrition and Hydration Steering Group alongside Women and Childrens Divisional Governance Group and the Paediatric Clinical Governance Group.

6.0 ADULTS

6.1 Consent

• Where a patient's capacity is in doubt the mental capacity 2 stage assessment and best interest checklist should be completed and an individualised plan of care implemented.

6.2 Nutrition Screening

- Nutritional screening is the first step in identifying patients who may be at nutritional risk or potentially at risk and benefit from appropriate nutritional intervention. It is a rapid, simple and general procedure used by a registered health care professional at first contact with the patient (excluding maternity patients) so that clear guidelines for action can be implemented. The 'Malnutrition Universal Screening Tool' ('MUST') is used across the Trust for adults. This initial assessment must be completed within 24 hours of admission.
- Documentation of patients' nutritional, dietary and fluid intake requirements and preferences will form part of the initial assessment of all patients using the nursing assessment document (eating and drinking): where appropriate this will involve seeking information from patients' relatives and/or carers.

- The Nutritional Screening should be re-evaluated by a registered health care professional in the following circumstances:
 - Upon internal transfer within 24 hours
 - Following a significant change in the patient's overall condition (improvement or deterioration)
 - o Every week
 - The 'Malnutrition Universal Screening Tool' (MUST) will be utilised to identify the levels of the patient's nutritional risk. Patients are categorised as low, medium or high. The management guidelines associated with the tool are used to develop a nutritional care plan dependent upon the risk.
 - For patients assessed as requiring a referral and treatment plan from the dietitians, refer to the MUST and Management Guidelines (<u>Appendix A</u>) and the Adult inpatient dietetic referral guidance (<u>Appendix D</u>).
- Patients at risk of refeeding syndrome will be taken into account prior to commencing nutritional supplements.

6.3 Hydration Screening

Hydration of the patient is as important as ensuring adequate food intake and the Trust is committed to ensuring that where appropriate patients are encouraged to take a range of fluids through the day and intake is documented if required.

- On admission to hospital the patient's fluid intake is assessed using the trusts adult hydration risk assessment tool, referring to the risk assessment actions.
- Adult fluid balance charts are now completed on Nervecentre.

6.4 Nutrition Support, supplements, artificial nutrition and hydration

Most patients coming into hospital are able to drink normally and manage a normal diet and fluids during their hospital stay. Some patients however need additional nutrition and hydration support to help meet their requirements.

- A nutritional care plan will be implemented, actioned, updated and evaluated for patients identified as medium risk (care plan A) or high risk (care plan B) (available to order through the trusts forms management system FKIN030348)
- The Red Tray (<u>Appendix B</u>) and Red Lid Jug system (<u>Appendix C</u>) will be implemented for patients identified as requiring assistance to eat and drink.
- Patients unable to meet their nutrition and/or hydration needs by oral routes may require additional nutrition and/or fluids.



6.4.1 Food fortification/food enrichment /artificial nutrition

- Use of snacks and /or oral nutritional supplements (ONS)
- Enteral tube feeds (refer to PEG/RIG policy and NG/NJ Policy)
- Parenteral nutrition (Parenteral Nutrition (PN) Administration Policy for Adult Patients)

None is exclusive and more than one approach may be needed.

Patients' risk of refeeding syndrome will be taken into account prior to commencing nutritional supplements. Refer to Re-feeding syndrome – guidelines for the prevention and management in adult patients.

Patients identified as having a swallowing problem must be referred to speech and language therapy for assessment in order for the correct diet and/or fluids to be prescribed to ensure the patients nutrition and hydration requirements are met. Wards can refer via JONAH, critical care and EAU can refer on ext: 3320/3016)

6.4.2 Supplementary/Additional fluids

- Subcutaneous fluids (hypodermoclysis)
- Intravenous fluids
- Enteral fluids

Refer to:

- Adult Hydration Risk Assessment Tool / Hydration Chart
- Subcutaneous infusions (hypodermoclysis) (pharmacy information)
- Intravenous Fluid Therapy Management for Adult Patients in Hospital Policy

Wherever possible the aim is to re-establish the patient back onto oral diet and fluids

6.4.3 Anorexia Nervosa

- Adult patients admitted to the Trust with Anorexia Nervosa are assessed appropriately using the **MARSIPAN** checklist which is included in the:
 - Anorexia Nervosa (AN) management guideline for adult patients on medical wards at SFHFT
- In addition, there is guidance for younger patients via the paediatric intranet at:
 - Junior MARSIPAN Checklist
 - The Junior MARSIPAN Table for Assessment of Physical and Psychological status (supporting information)

6.5 Making Mealtimes Matter / Protected Mealtimes

The therapeutic role of food within the healing process cannot be underestimated and food and the service of food are an essential part of a patient's treatment.

Making mealtimes matter/protected mealtimes is a period of time when all non-essential activities on the ward will stop, thus preventing unnecessary interruptions at mealtimes. Friends and relatives will be welcomed to the wards to give assistance or encouragement at mealtimes. Communication will be displayed informing staff and visitors of the mealtimes.

The privacy and dignity of patients at mealtimes should also be considered. There are patients who may feel uncomfortable eating and drinking in the presence of others (e.g. they have functional disabilities) and where this is the case this should be reflected in the patients care plan so that all staff involved at mealtimes are aware of the support required for that individual.

6.5.1 Catering

To help ensure a consistent approach for mealtimes:

- Patients should be offered a choice of all suitable food items from the menu no more than 2 meals in advance.
- The choice of menu available should include a healthy eating option, high energy food, soft diet, and sandwiches for both lunch and evening meal.
- A special menu will be available for patients with special requirements, e.g. patients requiring specific textured food. Speech and language therapists advise on the safest viscosity of food and/or drink for a patient with dysphagia using the International Dysphagia Diet Standardisation initiative (IDDSI) IDDSI diet sheet training presentation This will be recorded on the patient special diet sheet and above the patient's bedhead as well as medical and nursing documentation. over bed swallowing assessment sign
 For use in practice, the patient special diet sheet is available to order though Clinical Illustration reference 001907. But to view, see a copy on the Nutrition and Hydration Intranet Site at this link
- Cultural, religious and ethnic meals appropriate for the local population will be available and the menu available to read in other languages.
- All food preparation shall comply with food safety legislation.

There will be an out-of-hour's availability of both hot food and snacks across all 3 sites.

6.5.2 Meal Environment/Food Service

- To help ensure a consistent approach at mealtimes: All staff will be informed of individual patient's nutritional needs including food allergies at the beginning of their shift.
- All clinical staff should finish off tasks and where required be available to help with the mealtime service
- Identify patients who require a red tray/red lid jug
- Know which patients need assistance with feeding and allocate someone to assist
- If patients require help only serve meals when assistance is ready
- Ensure patients have the opportunity to visit the toilet prior to the mealtime service
- Sit patients up in bed, in chair or take to dining room, if appropriate to do so, ensuring patients privacy and dignity.
- Offer patients the opportunity to wash their hands or use hand wipes and help them to use
- Clear patients' tables and wipe clean
- Ensure patients have serviette, appropriate drink, correct cutlery, condiments, eating aids if required
- Open packets, cut up food and provide assistance if required
- Check patients are happy with their choice of meal and have everything they need
- Complete food, hydration and fluid balance charts
- Ask the patients "how was your meal?" and act on patient's response

6.5.3 Beverages

- Water will be provided for hospital inpatients at the bedside in individual refillable water jugs and also from trolleys during ward drinks rounds. Patients requiring thickened fluids must be supervised unless assessed as competent to thicken own fluids by speech and language therapist or the nurse responsible for their care.
- Individual water jugs will be refilled throughout the day to ensure water is clean and cool.

- A minimum of 7 beverages (both hot and cold) from the trolley will be offered throughout each day. In addition to this, drinking water throughout the day is encouraged and assistance will be given to those patients unable to do this independently (unless clinically contraindicated) and this will be documented within the food, hydration, and fluid balance charts.
- Appropriate drinking vessels will be offered and supplied to all patients.
- Guidance to enable staff to assess the volume of fluid patients are drinking will be provided and displayed in the clinical areas.

7.0 INFANTS, CHILDREN AND YOUNG PEOPLE

All infants, children and young people being cared for on ward 25 should expect to have an individualised assessment of their nutrition and hydration needs, with the aim of ensuring optimal nutrition and hydration throughout their inpatient stay. Infants, children, young people and their parents and carers, where necessary, will also be provided with information to support optimal nutrition and hydration beyond discharge. To ensure this, the ward team will, where appropriate, liaise with the wider health and care team to support individualised plans of care, and to signpost parents/carers to evidence based information and support.

To support a family centred approach to care, in addition to the meal provision for infants, children and young people, parents/carers who have been resident with their child overnight can access breakfast on the ward.

Breast/chest feeding parents will have access to meals, snacks and drinks throughout the hospital stay.

If specific and individualised patient requirements cannot be met through hospital menu provision, then Ward 25 will contact the diet chef or the dietitian as appropriate.

7.0.1 Fluid/drinks provision on ward 25

On ward 25 there will be a supply of sugar free drinks and water (accessible on the main ward corridor A side) cow's milk and "from concentrate" fruit drinks located in the ward kitchen.

Ward 25 will provide sugar-containing soft drinks for the purpose of management of hypoglycaemia and for use in children and young people requiring a glucose tolerance test. These will be supplied via the inpatients kitchen and additional supplies can be obtained via the diet chef.

It is the responsibility of the nurse in charge of the shift to ensure timely communication with the ward hostess, regarding individualised dietary needs, using the appropriate documentation <u>Patient Special Diet Form</u>

7.1 Consent

On admission to the ward/attendance to children's outpatient's department, verbal consent should be sought and documented from the person accompanying the infant, child or young person, (who has parental responsibility), and the young person themselves where able, to be weighed and have their height/length measured.

Weight and height or length should be completed by two members of staff, one of whom must be a Registered Nurse/Nursing Associate. This will support the early identification of possible pre-existing feeding issues which may impact on patient condition and recovery. Measurement can be delayed if the infant, child or young person is critically unwell.

7.2 Nutrition assessment

As part of the nursing admission process, it is vital that nursing staff establish how the infant, child or young person's nutritional needs are met normally. This is to establish a baseline, to assess and document the infant, child or young person's individual needs, and to support in the provision of individualised care.

For children who are aged 1 year and above on ward 25, the Paediatric Yorkhill Malnutrition Score (PYMS) must be completed within 24 hours of admission and appropriate actions undertaken as identified within the tool.

Nursing and/or medical staff must liaise with the dietetic team, at the earliest opportunity when dietetic input is required. This enables specific needs/requirements to be addressed in a timely manner.

(All inpatient referrals to the infant, children and young person's Dietitian must be completed on ICE).

Assessment of an infant, child or young person's usual eating, drinking and/or chest/breast feeding routine at the point of admission, or where reasonably practical, will enable staff to identify opportunities to provide advice and guidance, and may highlight opportunities to support parents/carers through signposting to appropriate information resources:

7.2.1 Useful resources:

- Change for Life Campaign
- Change for Life resources
- The Eatwell Guide
- The Eatwell Guide Booklet
- First Steps Nutrition

7.3 Hydration assessment

On admission to ward 25 the infant, child or young person's pre-admission fluid intake/feeding history will be assessed and documented, and an assessment of hydration status will be undertaken. This assessment will form part of a broader, holistic assessment of the infant, child or young person, and will support in developing an individualised plan of care in collaboration with the paediatric medical team and nursing team in the first instance.

Early liaison with the wider multi-disciplinary team members, in accordance with referral pathways, (e.g.: Paediatric Dietitians, Specialist Midwife for Infant Feeding, Lime Green Feeding Team (LGT) may support in the development and implementation of an individualised plan of care.

The Infant Feeding Team can support feeding for babies who have lost over 12.1% of their birth weight – referral can be made via Specialist Midwife for Infant Feeding (6575) or LGT team members can be contacted via the Midwives Advice Line (01623 676170). Ward 25 staff can provide feeding support in other clinical situations, but referral to the Specialist Midwife is appropriate for complex feeding issues.

For healthy, term, breast/chest fed babies, who are admitted with weight loss/reduced stools/jaundice/poor feeding, a breast/chest feeding assessment should be undertaken using the Breast Feeding Assessment Tool. The Specialist Midwife for Infant Feeding or the Lime Green Feeding Team should be contacted to support with the care of infants demonstrating large weight losses.

All infants should always be weighed on Day 5 and a percentage of weight loss must be calculated compared to their birth weight, and must be documented in the red book and included on the discharge to home to ensure community midwives are aware of recent weights

7.4 Documentation requirements

Registered Nurses, Nursing Associates and Health Care Support Workers on ward 25 must ensure that all fluid and food intake/feeding history is accurately documented and monitored.

Where infants and young children are breast/chest fed, a feeding history (which includes type of birth, number of feeds in last 24 hours, nappy output, if feeding is painful for woman/birthing parent etc) should be recorded on admission to support continued and effective breastfeeding wherever possible (UNICEF & BFI, 2020).

Every infant, child and young person must have a paediatric feed chart incorporated into their bedside care records, regardless of their reason for admission/underlying condition, and whether or not fluid/food intake or feeding history is a concern. This will support in the early identification of any nutrition and hydration related issues. Similarly, accurate documentation provides a record that adequate fluid and food has been offered, and that adequate food and fluid intake/individualised feeding plan requirements have been achieved.

Where Infants, children & young people who are deemed medically well enough to spend long periods at home, (home leave) or, whom are "chair patients" on Nervecentre, the need for a paediatric feed chart to be maintained should be discussed and agreed with the paediatric medical team.

For infants, children and young people who are unwell, dehydrated, or at risk of dehydration, thorough documentation of fluid and food intake/feeding history and "output" (urine, stools, vomit, number of wet and soiled nappies etc,) is necessary. This will compliment assessments of hydration, and support in evaluating the effectiveness of individualised plans of care.

It is important that staff identify individual nutrition and hydration requirements, and where volume specific fluid intake is necessary, a calculated daily minimum fluid total should be documented on paediatric feed charts. This is of particular importance when caring for infants, children and young people who are at risk of dehydration or who are dehydrated, as this will support in accurately monitoring and managing fluid intake.

Clinical guidelines will be utilised to support care delivery and as such, volume specific fluid requirements may vary, based upon clinical guidance, individual patient need, and context.

Where infants, children and young people have a plan of care which requires specific fluid volumes to be achieved via the oral route, "Maintain fluid" and "Push fluid" parent/carer held plans should be utilised. The plans can be used to empower and inform parents/carers to be participant in care through clearly outlining minimum oral fluid requirements and are key in ensuring a clear and well communicated plan.

The Nurse/Nursing Associate responsible for the infant, child or young person's care should regularly monitor the maintain fluid/push fluid plan to ensure that fluid volumes are achieved. The information recorded by the parent/carer (as this is a parent/carer-held record) should be subsequently documented on the paediatric feed chart, to ensure accurate records are maintained and to ensure that the allocated nurse/nursing associate has oversight of the infant, child or young person's progress with their plan of care.

7.5 The breast/chest feeding woman/birth parent:

Sherwood Forest Hospitals NHS Foundation Trust will advocate breast/chest feeding and support families to achieve this. Breast/chest feeding is a Public Health England priority, and as a UNICEF Baby Friendly accredited Trust, Sherwood Forest Hospitals NHS Foundation Trust is dedicated to supporting breast/chest feeding and breast/chest feeding parents.

In accordance with proposed UNICEF and Baby Friendly Initiative (BFI) standards for children's hospital settings, ward will 25 will strive to:

- Enable babies to continue to breast [chest] feed and/or to receive breastmilk when possible.
- Implement evidence-based practices related to giving food/fluids other than breastmilk.
- Support close and loving relationships whilst valuing parents [carers] as partners in care. (UNICEF UK & BFI, 2020)

Please follow this link for more information on the UNICEF UK & BFI proposed standards for children's hospital settings

Additional resources and QR codes for patient information leaflets can be located in Appendix E.

7.5.1 Responsive breast/chest feeding

Responsive feeding involves a mother [birth parent] being able to recognise and respond to their babies cues as well as their own need to feed their baby. Crucially, responsive feeding recognises that feeds are not just for nutrition, but also for love comfort and reassurance between baby and mother [birth parent] (UNICEF UK, 2016)

Staff should support parents and carers in recognising that feeding is the first, and usually most successful action when responding to their baby's needs, and that breast feeds can vary in length, and at varying times throughout the day. Staff should also support parents/carers through providing reassurance that their baby cannot be over-fed or "spoiled" by breast feeding, particularly where there is a perception that a baby has breast fed for "too long" (UNICEF UK, 2016).

7.5.2 Breast/chest feeding support and information

Breast/chest feeding parents will be supported in continuing to breast/chest feed wherever possible. This will include ensuring that all breast/chest feeding parents are offered food and fluid throughout their child's period of hospitalisation. Food and fluid will be offered in alignment with current ward meal and snack times. Food and fluid should also be offered to breast/chest feeding parents who are currently breast/chest feeding the siblings of hospitalised children, to promote continuity. Dietary requirements of breast/chest feeding parents should be communicated to the ward Hostess/Host.

If parents express difficulties around breast/chest feeding, the Specialist Midwife for infant feeding advisor and/or the Lime Green Feeding Team should be contacted for advice and support.

Any information, support strategies or feeding plans suggested should be clearly documented within the infant's records, to ensure that all staff can support in implementation of advice and evaluate accordingly.

If there is a provisional diagnosis of a cow's milk protein allergy, parents should be supported in continuation of breast/chest feeding, with advice provided on calcium supplementation for the parent, and milk free diet where required.

7.6 The breast/chest-fed infant

For unwell, breast/chest fed infants and young children, the importance of breastmilk should not be under-estimated, and as such, mothers/birth parents and families should be supported to breast feed when possible, and where it is not possible, should be supported to effectively express their milk. Pumps should be provided, alongside appropriate storage containers, and a suitable place to express. There should be an aim to return to full breast feeding as soon as possible (UNICEF UK & BFI, 2020), a multi-disciplinary approach may be required to achieve this.

7.6.1 Supplementation

Where an infant requires supplementation of feeds, expressed human milk (EBM) should be the first choice, however where this is not yet available, rationale should be fully discussed with the family before the use of formula supplementation, and this should be clearly documented. The options for infant feed should be explained and parent/carer choice of feed encouraged where appropriate. Parents/carers can be signposted to the First Steps Nutrition Website: Infant milks for parents & carers — First Steps Nutrition Trust to gain information regarding infant formulas. If required, support from the Dietitian should be sought (E.G, support in formula selection, advice on breast/chest milk fortification)

NICE guideline (NG75) states that tube feeding should only be considered when there are:

*Serious concerns about weight gain and

- an appropriate specialist multidisciplinary assessment for possible causes and contributory factors has been completed and
- other interventions have been tried without improvement.

If enteral tube feeding is to be used in an infant or child with faltering growth, make a plan with appropriate multidisciplinary involvement for:

- the goals of the treatment (for example, reaching a specific weight target)
- the strategy for its withdrawal once the goal is reached (for example, progressive reduction together with strategies to promote oral intake).

The infant feeding Midwife should be contacted via email in these cases to ensure an MDT approach (Natalie.boxall1@nhs.net)

7.6.2 Average intake of colostrum/breast milk

The information below demonstrates average intake of colostrum/breast milk in **healthy babies.** The average colostrum intake increases from 2 - 10 ml per feed in the first 24 hours to 30-60 ml per feed by the end of day three – This information is reflected in the Weight loss management of newborn babies (after 37 weeks) guideline (Sherwood Forest Hospitals, 2022) and is intended as a guide to support decision making regarding supplementation volumes within this clinical context.

Baby's age	Per feed	Per 24 hours
Day 1 (0-24 hours)	2-10 ml	30 ml
Day 2 (24-48 hours)	5-15 ml	
Day 3 (48-72 hours)	15-30 ml	
By day 7	30-60 ml	300 – 600 ml
Week 2 & 3	60-90 ml	450 – 750 ml
1-6 month	90-120ml	750 – 1035ml

(Academy

of Breastfeeding Medicine Protocol Committee 2009; Mannel, Martens & Walker 2013; Mohrbacher, 2010)

For breast/chest feeding infants, a 1 ml purple feeding syringe (up to 5 ml during a feed) or feeding cup should be the first choice for supplementation – teats should be avoided.

Where an infant is readmitted to ward 25 following a very recent discharge from maternity services, the <u>Reluctant to feed – management of healthy newborn babies at term guideline</u> should be consulted to support in care delivery.

For guidance on the storage of expressed breast/chest milk, please refer to the following guideline: Breast/chest milk expressing and handling guideline

Important Information

- All expressed breast milk must be appropriately labelled with the child's name and date of birth and D number. It should also be dated and timed. Labels must be hand-written printed addressograph labels must not be used.
- *Verify it is the correct milk for the correct infant before administration with a twoperson check. The first checker must be a registered practitioner; the second checker can be another member of staff or the parent/carer. The name and DOB on the EBM label should be checked against the infant's identity bracelet
- The milk should be signed for on the paediatric feed chart by the member(s) of staff checking the EBM and where appropriate documented as checked with parent/carer on the paediatric feed chart.
- Bottles of EBM must be stored in patient specific crates in the fridge ensuring each bottle is individually labelled with a hand-written label printed addressograph labels must not be used.

7.7 The formula fed infant:

When infants are admitted as an emergency, the ward has a limited supply of ready to feed 1st milk formula available. Ready to feed formula is supplied to reduce the risk of bacterial growth associated with making up powdered infant formula. For patients who are resident for more than 24 hours parents/carers should be encouraged where possible to access their own usual formula.

For infants aged under 1 year on ward 25, (and for those children and young people with specific health needs requiring sterilisation of feeding equipment beyond 1 year of age), there will be provision of equipment to ensure adequate sterilisation of feeding equipment.

parents/carers will be supported, where required, in the preparation of feeds in the baby food preparation room, and staff must ensure that parents/carers are aware of current guidance on safe preparation of formula feed (NHS, 2019).

7.7.1 Responsive bottle feeding

Although it is recognised that true responsive feeding is not possible when bottle feeding, due to the risks of overfeeding, staff at Sherwood Forest Hospitals can support parents/carers who are bottle feeding to enhance parent/carer and infant relationships when feeding. This can be encouraged through supporting parents/carers to:

- Give most feeds themselves, wherever possible, particularly during the first days and weeks
- Recognise their babies' feeding cues
- Hold their babies close during feeding
- Gently invite their baby to take the bottle teat
- Pace feeds video SFH | Responsive bottle feeding and Paced feeding -YouTube
- Avoid forcing a baby to finish a feed to promote a stress-free feeding experience

(UNICEF UK & The BFI, 2016)

7.7.2 National guidance – supporting evidence-based practice on ward 25

It is recommended that parents/carers are advised not to give orange (fruit) juice to any babies under one year of age (Public Health England: Start For Life – supporting information available at Safe weaning - drinks to avoid)

It is not advisable to give water to any baby before the age of six months as there is no calorific content and no evidence base to support this practice (NHS, 2022 – supporting information available at Drinks and cups for babies and young children)

First infant formulas are nutritionally adequate, in an infant who is weaning normally, and follow-on formulas are not necessary (UNICEF UK and the Baby Friendly Initiate, 2019). Comprehensive information on infant formulas can be found at The First Steps Nutrition Trust Website.

All staff should implement standards outlined within the International Code of Marketing Breast-milk Substitutes <u>Health-Professionals-Guide-to-the-Code.pdf (unicef.org.uk)</u>

7.7.3 Powdered milk feeds will be supplied as follows:

Prescription only powdered formula – not patient specific:

Ward 25 hold a supply of powdered prescription formula. This is to ensure timely access to prescription only formula if required for hospitalised patients. The preference would be that as soon as is practical, patients own stock will be ordered from pharmacy following medical prescription. In the interim, ward stock tins of powdered prescription formula must be used for one patient only, must be labelled accordingly and must be stored in a locked cupboard in the ward feed preparation area or in the patient's room. Opened tins must be labelled with the patient's name, date of birth, and the date and time of opening. Any opened, unlabelled tins of formula must be disposed of immediately.

Prescription only formula – patient specific:

As indicated, prescription only patient specific formula must **only** be given to the patient for whom the formula is prescribed. Opened tins must be labelled with the date they have been opened and must be discarded as per manufacturer's instructions. They must be used as per dietitian plan/medical prescription and stored in a locked cupboard in the ward feed preparation area or in the patient's room.

Prescription only liquid feeds can be stored in the clean utility area.

All prescription milks and formulas should be administered in accordance with the patient's drug prescription record and in accordance with standards outlined in the medicines policy. This should incorporate two – nurse checking and positive identification of the patient.

7.8 The use of Soya formula

The Committee on Toxicity of Chemicals in Food, Consumer Products and the Environment, (COT, 2013) has undertaken a review of soya phytoestrogens and their conclusions are included in the most recent publication "Feeding in the first year of life" from the Scientific Advisory Committee on Nutrition (SACN, 2018).

Soya – There is some uncertainty about the safety of soya-based formula and there is no scientific basis for a change in the current government advice: there is neither substantive medical need for, nor health benefit arising from the use of soya-based infant formula, and it should only be used in exceptional circumstances to ensure adequate nutrition.

Infant formula based on either cows or goats' milk is the only suitable alternative for breast [chest] milk for babies who are under 12 months old.

The use of soya-based formula should only be on medical advice and the possible health effects of soya-based formula should be kept under review.

7.9 Inadequate hydration of Infants, Children and Young People:

If an unwell infant, child, or young person is unable to maintain adequate oral fluid intake to maintain hydration, this should be escalated to the paediatric medical team to assess. The nurse responsible for the infant or young person should implement nursing care actions as identified in *Paediatric Core Care Plan 006*

Oral rehydration solution will be promoted as the fluid of choice for the unwell child who is not eating and not in receipt of milk for both maintenance and rehydration in the absence of sugar containing fluids

Push Extra Fluids - Parent Plan

This plan would be implemented where the infant, child or young person is dehydrated.

Maintain Fluids- Parent Plan

This plan would be implemented where an infant, child or young person is not dehydrated but is at risk of dehydration

For infants, children & young people where adequate hydration cannot be maintained orally, an appropriate and timely escalation to the paediatric medical team should occur, so an appropriate pathway of care can be implemented, this may require maintenance of hydration via the NG or IV route

8.0 PAEDIATRIC ROUTINE MAINTENANCE FLUID REQUIREMENTS

This information is a guide to support the calculation of IV maintenance fluid requirements and could be used to calculate maintenance fluid being delivered orally/enterally. Specific clinical guidelines should also be consulted, dependent on clinical need, medical requirements and an individualised patient assessment:

< 10 kg	100ml/kg/day
11 – 20 kg	100ml/kg for the first 10 kg
	+ 50ml/kg for the next 10kg
20kg and above	100ml/kg for the first 10 kg
	+ 50ml/kg for the next 10kg
	+ 20ml/kg thereafter up to 2500mls/day maximum
	(MALE), 2000mls/day (FEMALE)

(National Institute for Health and Care Excellence, 2015; Paediatric Essential Flip Cards – updated December 2021).

8.1 Nasogastric tube feeding

Where nasogastric tube insertion is being considered for supplementation of feeding, especially when there is a likelihood that the infant, child, or young person may require a nasogastric tube upon discharge, nursing and medical staff must liaise with the paediatric dietitian. For further information and guidance please refer to the associated resource Paediatric Nasogastric Tube Feeding Integrated Care Pathway

8.2 Weaning

For nutritional reasons, most infants need complementary foods from around the age of six months, although each individual's infant's characteristics and development will determine their ideal age. (European Food Safety Authority, 2019). Weaning, or the introduction of complimentary foods, should be encouraged from 6 months of age (ESPGHAN, 2017). The World Health Organisation (WHO) recommends exclusive breastfeeding for the infants first six months, after which parents/carers should give nutritious complementary foods and can continue to breast/chest feed their child up to the age of 2 years and beyond (WHO, 2011).

If parents/carers wish to wean earlier then they should be encouraged to wait until the infant has reached seventeen weeks of age. Health professionals should support the weaning process, and this should be done in consultation with the Dietitian. It is important to assess for signs of readiness to wean (Shaw, 2020), and the weaning pathway should include initial introduction to pureed food progressing to foods of a lumpy texture (The Department of Health, 1994) If parents/carers choose to adopt a "Baby-led weaning" approach, they should be supported through the provision of appropriate food.

8.3 Nutrition in the older child

In 2016, Public Health England launched their Making Every Contact Count approach to public health. This evidence-based approach aims to improve health and wellbeing by helping them to make appropriate choices in order to change long term behaviour (PHE, 2016).

For patients within Sherwood Forest Hospitals Trust this includes supporting children, young people, and parents/carers to make appropriate food and drink choices and signposting to other services or supporting resources whenever possible. <u>The Eatwell Guide Booklet</u> shows the five food groups and the balance to aim for throughout the day. Although this does not apply to children under the age of two years as they have different nutritional needs, children between the ages of two and five years should gradually move towards eating the same foods as the rest of the family, in proportions as shown in The Eatwell Guide.

For hospitalised children and young people, the relative proportions of the food groups in The Eatwell Guide may not be appropriate (as they may require a greater reliance on energy dense foods and snacks – high in fat and/or sugar). The focus of nutritional provision from hospital food should be on achievement of an adequate energy intake. An average day's intake from breakfast, two main meals, two to three snacks and milk (or a suitable alternative), should meet the Estimated Average Requirement (EAR).

8.4 Monitoring growth

All babies should be referred to the infant feeding lead midwife if faltering growth within the first six weeks. Any baby who is not at birth weight by 3 weeks of age needs a prompt review in ambulatory clinic.

Faltering growth can occur at any time during childhood although is most common during the first two to three years of life. Faltering growth can have many causes including medical and/or social factors. Guidance on the identification and management of faltering growth can be accessed via the link: <u>https://www.nice.org.uk/guidance/ng75</u>

The NICE Guideline on Faltering Growth suggests the following thresholds are used to define faltering growth:

- A fall across 1 or more weight centile spaces, if birthweight was below the 9th centile
- A fall across 2 or more weight centile spaces, if birthweight was between the 9th and 91st centiles
- A fall across 3 or more weight centile spaces, if birthweight was above the 91st centile
- When current weight is below the 2nd centile for age, whatever the birthweight.

Anthropometric measurements are used to identify infants, children and young people with faltering growth. Accurate serial measurements of weight, height or length and head circumference should be plotted on the appropriate growth chart:

https://www.rcpch.ac.uk/resources/growth-charts

- Neonatal close monitoring charts
- WHO UK 0-4 years old
- UK Standard for 2-18 years old

Any infant or young person who is identified as having faltering growth should be referred to the dietitian

8.5 Standards for weighing and measuring infants

8.5.1 Measuring weight

- The appropriate weighing device must be selected: 0-2 years baby scales.
- Infants must be weighed on the same scales on each occasion a weight is checked. Nursing staff should document the MEMD number of the scales used to ensure consistency
- The infant should be weighed naked (0–2 years) with appropriate explanations provided for parents/carers regarding why this is necessary. Appropriate arrangements must be made to ensure privacy and dignity. Any marks to the skin that are identified during this process should be clearly documented on a body

map which should be placed in the patient records and the red book if appropriate and available.

- The infant must be weighed in metric measurements.
- Two members of staff must weigh the infant (one of which must be a Registered Nurse/Nursing Associate)
- The weight should be documented in baby's red book to ensure appropriate information sharing with other health professionals
- Where there are concerns regarding a weight measurement, the parent/carer should be consulted regarding any history of changes in appetite and/or feeding patterns. A previous weight measurement should be obtained for comparative purposes.

If there are concerns regarding weight measurement, the concerns must be escalated to the medical team, to ensure weight is plotted on the appropriate growth chart.

8.5.2 Measuring length

The infant should be measured naked (0-2 years). Measuring infants with any clothing including a nappy can distort the hips and shorten the length. Any marks to the skin that are identified during this process, should be clearly documented.

Two people are required to obtain an accurate length measurement. One to support the child's head against the headboard of the device and one to gently flatten the knees and flex the ankles of the infant to 90 degrees and bring the footboard up to the flat soles of the flexed feet.

Further Information on Weighing and measuring children can be found here:

Infant and Toddler Forum Growth Measurement Resources

8.5.3 Rate of expected weight gain in infants

0-3 months	200 grams per week
4-6 months	150 grams per week
7-9 months	100 grams per week
10-12 months	50 – 75 grams per week

(Shaw, 2020)

8.5.4 Weighing the Older Child

Children over two years should be weighed in light clothing without shoes. If this is not possible it must be recorded whether the child is weighed wearing a nappy and the type of clothing worn by the child. Toddlers who are unsettled or distracted can be held by a parent/carer and both weighed together. The parent's/carer's weight is then taken separately and subtracted from the total weight to calculate the child's approximate weight.

8.5.5 Measuring the Older Child

For children over two years or whenever the child can stand straight and unsupported, standing height is measured using a stadiometer. Shoes must be removed and the child's back and legs must be straight, the heels, buttocks, shoulder blades, and back of head touching the measuring board and the child should be looking straight ahead. The measurement should be taken on expiration.

8.6 Expected Growth

1 st year	25 cm per year
2 nd year	12 cm per year
3 rd year	6-10 cm per year until growth spurt at puberty.
(Iriah Nutritian and Di	station Institute 2015)

(Irish Nutrition and Dietetics Institute, 2015).

8.7 PYMS

The Paediatric Yorkhill Malnutrition Score PYMS must be completed on all children over 1 year of age within 24 hours of admission. The score will then be actioned appropriately:

Score	Action
0	Repeat PYMS Score in 1 week
1	Repeat PYMS Score in 3 days
2 or above	Request Dietitian Review and Repeat PYMS Score in 1 week

8.8 Help and Support

If there are on-going, non-acute concerns other sources of help available are:

- Healthy Families Teams advice line: 03001235436
- Self-referral to CAMHS (12–18-year-olds) 0115 854 2299 or via online form at <u>www.nottinghamshirehealthcare.nhs.uk/camhs</u>
- For advice regarding weight reduction <u>Nottinghamshire's Wellbeing Service | Your</u> <u>Health Your Way (yourhealthnotts.co.uk)</u>
- Eating Disorders Beat Youth line 0808 801 0711

8.9 Sharing information on discharge with the relevant services

Dietetic referral for paediatric patients requiring outpatient support should be referred via ICR (Inter-consultant referral) The patient pathway coordinators (PPC's) and clinical typists can assist with this.

Email the infant feeding midwife about any baby admitted for feeding issues or weight loss in the first 6 weeks to ensure ongoing feeding support – Natalie.boxall1@nhs.net

Any supplements or specialist feeds started in hospital should be communicated to the GP for ongoing prescription post discharge by the discharging clinician if required.

Any relevant information should be provided to the healthy families team to allow access to appropriate support post discharge - Healthy Families Team advice line: 03001235436

Any information that would be useful for community teams or the family should be included in the red book which should be updated if available prior to discharge.

If any safeguarding concerns have been identified or actioned during the hospital stay it is essential that the relevant social care team is informed of patient discharge.

Evidence base and references:

- Committee on Toxicity of Chemicals in Food, Consumer Products, and the Environment (2013) Statement on the Potential Risks from High Levels of soya phytoestrogens in the infant diet – cited in the British Dietetic Association Paediatric Specialist Group (2019) Position statement – Use of Infant Formulas Based on Soy Protein [Accessed online: 16-8-2022].
- European Food Standards Agency (2019) appropriate age range for introduction of complementary feeding into an infant's diet. **EFSA Journal.** <u>Appropriate age range for introduction of complementary feeding into an infant's diet | EFSA (europa.eu)</u>
- Irish Nutrition & Dietetics institute (2015) Nutrition Support reference Guide
- Mannel R, Martens PJ, Walker M (2013) 3rd Edition. Core Curriculum for Lactation Consultant Practice. Jones & Bartlett Publishers.
- Mohrbacher N (2010) **Breastfeeding Answers Made Simple A Guide for Helping Mothers.** Hale Publications.
- National Health Service England (2015) Guidance Commissioning excellent nutrition and hydration. NHSE.
- National Health Service England, UNICEF & the Baby Friendly Initiative (2015) Off to the best start Important information about feeding your baby. NHSE.
- National Institute for Health and Care Excellence (2015) NICE guideline [NG29] Intravenous fluid therapy for children and young people in hospital. NICE.
- NICE (2016)
- National Institute of Health and Care Excellence (2017) NICE guideline [NG75]
 Faltering growth: recognition and management of faltering growth in children. NICE
- National Health Service (2019) **How to make up baby formula**] <u>How to make up baby formula NHS (www.nhs.uk)</u>
- National Health Service (2022) **Drinks and cups for babies and young children**. Drinks and cups for babies and young children - NHS (www.nhs.uk)
- Nursing and Midwifery Council (2018) Standards of Proficiency for Nursing Associates. London. NMC. https://www.nmc.org.uk/globalassets/sitedocuments/standards-of-proficiency/nursingassociates/nursing-associates-proficiency-standards.pdf
- Public Health England (2018) **The eat well guide Helping you to eat a healthy, balanced diet.** Public Health England.

- Public Health England: **Better health Start for Life: Safe Weaning** Safe Weaning | Drinks To Avoid | Start for Life (www.nhs.uk)
- Royal College of Psychiatrists (2022) Medical Emergencies in Eating Disorders: Guidance on Recognition and Management. College Report CR233.
- SACN (2018) Feeding in the First Year of Life SACN_report_on_Feeding_in_the_First_Year_of_Life.pdf (publishing.service.gov.uk)
- Scientific Advisory Committee on Nutrition (2003) Response to the COT working group on Phytoestrogen's draft report on phytoestrogens & health.
- Shaw V (Ed) 5th edition (2020) Clinical Paediatric Dietetics. Wiley-Blackwell science. UK.
- Testa I, Salvatori C and Dicara G et al (2018) Soy Based Infant Formula: Are phytoestrogens still in doubt? **Frontiers in Nutrition.** 5:110,1-8.
- The Academy of Breastfeeding Medicine Protocol Committee (2009) **Breastfeeding Medicine**. ABM. Pages 175 – 182.
- The Association of UK dietitians (2017) 2nd Ed: The Nutrition and Hydration Digest: Improving outcomes for food and food beverage services. BDA food services specialist group.
- The Department of Health (1994) **Report on Health and Social Subjects – Weaning and the Weaning Diet.** HMSO. London.
- The European Society for Paediatric Gastroenterology & Nutrition committee on Nutrition (2017) Complimentary feeding – A position paper. Journal of Paediatric Gastroenterology & Nutrition. Vol 64 Issue 1.
- UNICEF UK & BFI (2016) Initiative info sheet. Responsive feeding supporting close and loving relationships <u>Responsive Feeding Info sheet (unicef.org.uk)</u>
- UNICEF UK & BFI (2019) Working within the international code of marketing of breast-milk substitutes <u>Health-Professionals-Guide-to-the-Code.pdf (unicef.org.uk)</u>
- UNICEF UK & BFI (2020) Guide to the UNICEF UK and Baby Friendly Initiative standards for children's hospital settings. <u>UNICEF UK Baby Friendly Initiative</u> Guide to Children's Hospital Standards
- UNICEF UK & BFI (2020) Working within the international code of marketing of breastmilk substitutes – a guide for health workers <u>Health-Professionals-Guide-</u> <u>to-the-Code.pdf (unicef.org.uk)</u>
- UNICEF UK & BFI Breast Feeding Assessment Tools <u>Breastfeeding Assessment</u> <u>Tools - Baby Friendly Initiative (unicef.org.uk)</u>
- World Health Organisation (2011) Exclusive breastfeeding for six months best for babies everywhere. Exclusive breast feeding for six months
- World Health Organisation (2021) Infant and Young Child Feeding Key Facts. Infant and young child feeding (who.int)
- Public Health England (2016) Making Every Contact Count (MECC) Consensus statement. Produced in collaboration with NHS Employers, NICE, Association of Directors of Public Health, Local Government Association, Royal College of Nursing, Care Quality Commission and The Royal Society for Public Health. UK. PHE. Making Every Contact Count (MECC): practical resources - GOV.UK (www.gov.uk)

9.0 CARING FOR THE NEONATES

9.1 Consent.

On admission to the neonatal unit each infant will be weighed and assessed individually by the nursing and medical team. The infant's weight should be obtained and recorded by two members of staff, one of whom must be a registered nurse. Nutritional requirements will vary according to clinical condition, gestation, birth weight and weight appropriate for gestational age. Taking this into account, along with the parent/carer's choice of feeding, the team will commence an appropriate nutrition/hydration plan.

9.2 Nutritional Screening.

Nutritional requirements of infants born at term are based on nutrition provided by human milk to the breast/chest fed infant. Infants born prematurely have an increased need for nutrition because they are born with low nutritional reserves at a time when their expected growth in utero would have been 2-3 times greater than that of a baby born at term during the first months of life. For term infants, these nutrients can be achieved by 150ml/kg/day breast/chest milk or first term formula. Whilst some of the requirements of preterm infants can be met simply by giving a larger volume of breast/chest milk or first term formula, this provides all nutrients in the same proportion. Thus, for example 180-200ml/kg of mature preterm expressed breast milk (EBM) or first term formula could meet energy requirements of preterm infants but will not provide adequate protein. Conversely, the volumes required to achieve ideal protein intake would not be tolerated and provide too much energy. In order to overcome these issues, a range of breast/chest milk fortifiers and preterm formulas are available. Further information is available on the Neonatal Enteral Nutrition and Feeding Guideline. If further support/advice is required liaise with the units infant feeding matron and/or dietitian.

Nutrition Screening ensures the safe delivery of nutrition which is tailored to the individual needs of the infant. Nursing and medical staff must liaise with the infant's parents/carers continuously to ensure effective family integrated care.

Health care staff on the neonatal unit must ensure that all fluid/feed intake is accurately documented and monitored. Every infant must have a NICU feed chart regardless of underlying condition, whether or not fluid intake is a concern. This will allow the early identification of any concerns and will support healthcare staff in identifying toleration of fluids/feeds.

9.3 Hydration Screening.

On admission to the neonatal unit all infant's fluid intake will be assessed and documented. Fluid requirements will be assessed as per the Neonatal fluid requirements table below.

	Term (>37weeks)	Preterm (<37week)
Day 0	40ml/kg	60ml/kg
Day 1	60ml/kg	70ml/kg
Day 2	80ml/kg	80ml/kg
Day 3	110ml/kg	90ml/kg
Day 4	150ml/kg	120ml/kg
Day 5	150ml/kg or on demand	150ml/kg
	uomanu	

Thereafter on demand 165-180ml/kg may be required

Concerns regarding fluid intake will be discussed with the medical team and the appropriate care plan implemented. Please refer to the Neonatal Enteral Nutrition and Feeding Guideline for further guidance.

9.4 Documentation of fluid requirements.

All infants on the neonatal unit will have a feed chart. The fluid requirements must be calculated and written on the neonatal feed chart. Any fluids/feeds given must be documented on the feed chart, and where expressed breast/chest milk is given, there should be evidence of double checking to ensure correct milk is given to the correct infant. The nurse responsible for the infant's care must regularly review their fluid requirement to ensure that correct feed/fluid volumes are being achieved.

9.5 Breast/Chest feeding.

Sherwood Forest Hospitals NHS Foundation Trust will advocate breast/chest feeding and support families to achieve this. Breast/chest feeding is a Public Health England priority, and as a UNICEF Baby Friendly accredited trust, Sherwood Forest Hospitals NHS Foundation Trust is dedicated to supporting breast/chest feeding. Human milk is the gold standard and the best nutrition for infants, but the decision to breast/chest feed is a matter of individual choice. Maternal breast/chest milk is first choice for all infants and breast/chest feeding/milk is encouraged as soon as possible after birth, together with an environment and support that facilitates expressing of breastmilk.

Further information can be found on the Neonatal Enteral Nutrition and Feeding Guideline.

9.6 Donor breast milk (DBM).

Donor breast milk (DBM) is the next best alternative following a parents own breast milk when they are too ill or do not have the supply to meet their infant's demand. Full support for lactation should be on-going to enable sufficient milk production. DBM should not be used in place of effective support to establish lactation but to complement skilled help from staff. Donated milk is screened before and after treatment in accordance with NICE guidance. A copy of these guidelines can be found at www.nice.org.uk, and the nutritional analysis is available on each unit of donor breast milk. If maternal milk is not available or if it is insufficient to meet requirements the use of Donor milk should be considered. Refer to the Donor Breast Milk Use on NICU SOP.

9.7 Formula Feeding.

For preterm babies, where breast/chest milk is not available, and no consent or criteria met for the use of donor milk, preterm formulas are to be used. These have been designed to meet the basic nutritional requirements of most preterm infants when fed at 150-165ml/kg. It can be used as soon as the medical team recommends enteral feeds, though breast/chest milk should always be used if available.

Where families choose to formula feed term infants, the neonatal unit has a limited supply of ready to feed formula available. Ready to feed formula is supplied to reduce the risk of bacterial growth associated with making up powdered infant formula. The neonatal unit will provide a provision of equipment to ensure adequate sterilisation of feeding equipment.

9.8 Inadequate hydration of Infants.

In the event where adequate hydration cannot be maintained orally, an appropriate and timely escalation to the paediatric medical team should occur, so an appropriate pathway of care can be implemented. This may require maintenance of hydration via the NG or IV route.

Naso/oro gastric tube feeding.

The provision of adequate and optimal nutrition to support term and preterm infants in the neonatal unit is fundamental in the support of gastrointestinal (GI) development, somatic growth, metabolic homeostasis, prevention of infection, neurodevelopment and future health. Within neonatal care, Naso/oro gastric tubes are used to give nutrition enterally to preterm and/or sick infants who have a poor suck/swallow reflex or because illness prevents the infant from taking feeds by breast/chest, cup or bottle.

Short term nasogastric tube feeding at home can be supported by the units Home Care Team and facilitates safe earlier discharge of infants from the neonatal setting. Parents can be taught to give nasogastric tube feeds and pass the nasogastric tubes at home if required. If infants require long term nasogastric tube feeds post discharge home, a referral to the dietitian will be required.

For further information see the <u>Naso/oro Gastric Tube Feeding in Neonates Policy</u>.

9.9 Monitoring growth.

Infants should be weighed at birth and it should be noted if the infant is oedematous. Head circumference should also be measured on the day of birth. These figures should be plotted on the individual centile chart and within their health record. For the purposes of assessing growth, weight should be measured at least twice weekly and recorded on the infant's weight chart.

On its own, weight is a poor measure of growth as it is affected by many other factors such as fluid status and will vary according to whether before or after feeds, before or after opening bowels, etc. However, it is the only practical day-to-day method of recording growth and is used for calculation of feed and medications. As such, it is an important measure and is an indicator to parents/carers of progress, so should be carried out as accurately as possible making a note of variables such as ET tubes, leads, splints, etc. and consistently using the same weighing scale whenever possible. Weight should be measured daily only when fluid balance is critical and not used for reviewing feeds, medication or monitoring growth.

Further information can be found on the Neonatal Enteral Nutrition and Feeding Guideline.

Standards for weighing and measuring infants.

Measuring weight-

- Weigh the infant on the neonatal infant scales. Ensure the scales are covered with a clean sheet to ensure the infant is not placed onto a hard cold surface.
- The infant should be weighed naked with appropriate explanations provided for parents/carers regarding why this is necessary. Appropriate arrangements must be made to ensure privacy and dignity. Any marks to the skin that are identified during this process should be clearly documented.
- The infant must be weighed in metric measurements.
- Two members of staff must weigh the infant (one of which must be a qualified nurse).
- Where there are concerns regarding a weight measurement, the parent/carer should be consulted regarding any history of changes in feeding patterns. A previous weight measurement should be obtained for comparative purposes.
- Record the weight on the infants feed chart and weight chart.
- Where possible ensure parents/carers are present (to enhance family integrated care).
- If there are concerns regarding weight measurement, the concerns must be escalated to the medical team.

Measuring length-

- The infant should be measured naked. Measuring infants with any clothing including a nappy can distort the hips and shorten the length.
- Any marks to the skin that are identified during this process should be clearly documented.
- Two people are required to obtain an accurate length measurement. One to support the child's head against the headboard of the device and one to gently flatten the knees and flex the ankles of the infant to 90 degrees and bring the footboard up to the flat soles of the flexed feet.
- Record the infant's length in the nursing records.

References

- Agostoni, C. et al., (2010) Enteral Nutrient Supply for Preterm Infants: Commentary From the European Society for Paediatric Gastroenterology, Hepatology, and Nutrition Committee on Nutrition. JPGN, 50(1), pp. 1-9
- Breastfeeding. World Health Organization. World Health Organization. Available at: https://www.who.int/health-topics/breastfeeding
- Koletzko, B., Poindexter, A. & Uauy, R., 2003. Nutritional Care of Preterm Infants: Scientific Basis and Practical Guidelines. Karger, Volume 110
- NICE (2022) Donor milk banks: service operation. NICE. England
- UNICEF (2017) Guide to the UNICEF UK Baby Friendly Initiative Standards. UNICEF. England
- Wight, N,E. (2001) Donor human milk for preterm infants. Journal of Perinatology; 21(4): 249

9.0 MONITORING COMPLIANCE AND EFFECTIVENESS

Minimum Requirement to be Monitored (WHAT – element of compliance or effectiveness within the document will be monitored)	Responsible Individual (WHO – is going to monitor this element)	Process for Monitoring e.g. Audit (HOW – will this element be monitored (method used))	Frequency of Monitoring (WHEN – will this element be monitored (frequency/ how often))	Responsible Individual or Committee/ Group for Review of Results (WHERE – Which individual/ committee or group will this be reported to, in what format (eg verbal, formal report etc) and by who)
PLACE AUDIT	Medirest/Compass Group/Trust	Prospective audit	yearly	Nutrition and Hydration Steering Group - report. Infection Prevention & Control (IPC) meeting – report. Estate and Facilities Governance meeting – report Patient Safety & Quality Group meeting – report.
Perfect Ward	Divisional matrons and individual ward/departments	Electronic audit	See results column	Nutrition and Hydration Steering Group – report (annual) Ward assurance – report, verbal by ward leaders (monthly) NM&AHP and divisions (monthly)
MUST- Assessment data	Nutrition CNS	Electronic audit data from nerve centre	Monthly	Nutrition and Hydration Steering Group - report
Incident reporting	Nutrition Nurse Specialist Ward Sister – Ward 25 Practice Development Matrons Relevant divisions	Datix reporting	See results column	Nutrition and Hydration Steering Group - report Harms Free Operational Group - report
Friends and Family Test	Patient experience team	Friends and Family Test	monthly	Nutrition and Hydration Steering Group – report.

10.0 TRAINING AND IMPLEMENTATION

The contents of this policy will be integrated into training programmes provided across the Trust. Training includes:

- Trust/local Induction training for Healthcare Support workers (monitored by Training and Development Department).
- Trust Preceptorship training for newly qualified Nurses (Monitored by Nutrition CNS and Preceptorship Support Nurse.
- Nutrition Link champion training
- Each ward/team there will be a nutrition and hydration champion, who has participated in more detailed training and network events. They will support local training and advice for their local immediate team and be responsible for local resources.
- Catering/hostess/hosts involved in the regeneration (cook/chill) of food at ward level will receive specific training on how to do this safely
- E-Learning competencies for enteral feeding tubes Adult
- Local infant feeding update/training programme for paediatric Nurses
- Local training session on Paediatric nasogastric tube competency-based training for nursing staff manage and insert

11.0 IMPACT ASSESSMENTS

- This document has been subject to an Equality Impact Assessment, see completed form at <u>Appendix F</u>
- This document has been subject to an Environmental Impact Assessment, see completed form at <u>Appendix G</u>

12.0 EVIDENCE BASE (Relevant Legislation/ National Guidance) AND RELATED SFHFT DOCUMENTS

Addressing poor nutritional care of patients is highlighted as a priority in several key documents and the Trust is committed to ensuring that all the recommended standards and guidance are addressed. The following documents provide the framework within which the Trust is working to improve the nutritional care of its patients.

- NICE Guidance on Nutrition Support in adults: oral nutrition support, enteral tube feeding and parenteral nutrition (2006)
- NICE Quality standard 24: Quality standard for nutrition support in adults (2012)
- Care Quality Commission (CQC): Outcome 5 Nutrition
- Essence of Care: Nutrition Benchmark (2010)
- 10 key characteristics of good nutritional care in hospitals. Council of Europe Resolution on Food and Nutritional Care in Hospitals (2007)
- NHS Kidney Care Hydration Matters (2012)
- PLACE (2018). Assessments relate to provision of safe and appropriate food and drink for patients and assistance when required at mealtimes within an environment conducive to eating and drinking
- Obesity www.nhs.co.uk/conditions/obesity (2016)
- International Dysphagia Diet Standardisation Initiative (IDDSI)

Evidence Base:

- The Association of UK dietitians (2017) 2nd Ed: The Nutrition and Hydration Digest: Improving outcomes for food and food beverage services. BDA food services specialist group.
- National Health Service England (2015) Guidance Commissioning excellent nutrition and hydration. NHSE.
- Great Ormond Street Hospital (2015) 6th Ed: Nutritional requirements for children in health and disease. GOSH NHSFT.
- National Health Service England, Unicef & the Baby Friendly Initiative (2015): Off to the best start Important information about feeding your baby. NHSE.
- The European Society for Paediatric Gastroenterology & Nutrition committee on Nutrition (2017) Complimentary feeding – A position paper. Journal of Paediatric Gastroenterology & Nutrition. Vol 64 Issue 1.
- COMA (1994)
- Scientific advisory committee on Nutrition(2003) Response to the COT working group on Phytoestrogens draft report on phytoestrogens & health
- Shaw V (Ed) 4th edition (2014) Clinical Paediatric dietetics. Blackwell science. Oxford.
- Irish Nutrition & Dietetics institute (2015) Nutrition Support reference Guide
- National Institute for Health and Care Excellence (2015) Intravenous fluid therapy for children and young people in hospital. NICE.
- National Institute of Health and care excellence (2017) NICE guideline [NG75] Faltering growth: recognition and management of faltering growth in children. NICE
- Public Health England (2019) **The eat well guide Helping you to eat a health**, **balanced diet.** Public Health England.

Related SFHFT Documents:

- CCU Nutrition Support Guideline
- IV Policy IV Medication and Fluid Therapy Administration Through a Peripheral Venous Cannula Policy
- Intravenous fluid therapy management in adult patients in hospital policy
- Anorexia Nervosa (NA) management guideline for adult patients on medical wards at SFHFT (MARSIPAN)
- Parenteral Nutrition (PN) Administration Policy for Adult Patients
- NG and NJ Feeding Tubes Policy (including enteral feeding starter regimen)
- PEG; PEG-J; RIG; RIG-J Policy
- Refeeding syndrome guidelines for the prevention and management in adult patients
- The Food and Drink Strategy
- Reluctant to feed Management of healthy new born babies at term guidance.
- Medicines Policy
- Breastmilk expressing and handling guideline.
- Subcutaneous infusions (hypodermoclysis) (pharmacy information)

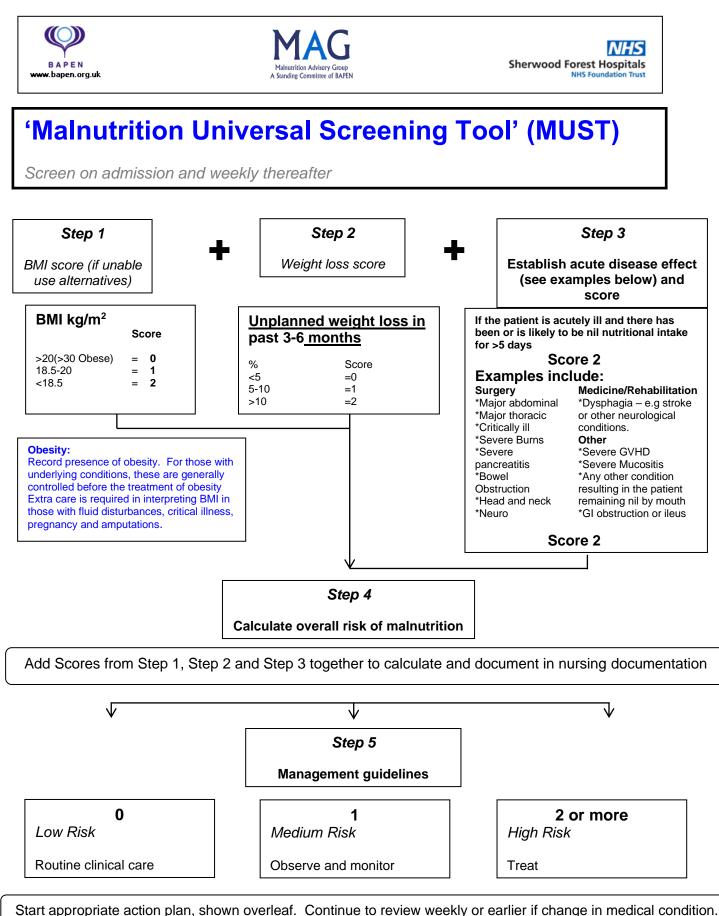
13.0 KEYWORDS

 dehydration MUST PYMS malnutrition universal screening tool paediatric Yorkhill Malnutrition score malnourish dehydrating food dietetic referral dietetics dietician adult protected meal times mealtimes oral adult support guideline screening artificial food beverages catering environment making mealtimes matter red tray lid jug flowchart MARSIPAN

14.0 APPENDICES

- Appendix A MUST Malnutrition Universal Screening Tool
 - <u>Step 1</u> BMI Score (& BMI)
 - Step 2 Weight loss score
 - o Alternative measurements and considerations
 - Factors influencing body weight
- <u>Appendix B</u> Red tray flow chart
- <u>Appendix C</u> Red lid jug flowchart
- Appendix D Adult inpatient dietetic referral guidance
- Appendix E Infant Feeding Leaflets
- Appendix F Equality impact assessment form
- Appendix G Environmental impact assessment

Appendix A – Malnutrition Universal Screening Tool (MUST)



Step 1 - BMI score (& BMI)



											Hei	ght	(fee	et ai	nd i	nch	es)									www.b	aberroid ne	
	100	4'9%	410%	4'11 44	5'0 43	5'0% 42	51w	52 40	5'3 39	5'4 38	5'4w	5'54 38	5% 35	5'7 35	57% 34	5'84 33	5'8% 32	5'10 32	5°11 31	511 _%	6'04 30	6'1 29	6'2 28	63 28	6'3 ₁₆	6'4 _%	15 10	
	88	48	45	44	43	42	41	40	30	38	37	38	35	34	33	33	32	31	31	26	29	28	28	27	27	28	15 8	
	88	48	45	44	42	41	40	39	38	37	38	38	35	34	33	32	32	31	39⁄	30	29	28	28	27	27	28	156	
	97 96	48 45	44 44	43 43	42 42	41 40	40 39	39 38	38 38	37 37	38 38	35 35	34 34	34 33	33 32	32 32	31 31	31 30/	30	29 29	29 28	28 28	27 27	27 27	28 28	28 28	154 152	
	85	45	43	42	41	40	39	38	37	38	35	34	34	33	32	31	31	76	29	29	28	27	27	26	26	25	14 13	
	84	44	43	42	41	40	39	38	37	38	35	34	33	33	32	31	30	30	29	28	28	27	27	28	25	25	14 11	
	83 82	44 43	42 42	41 41	40 40	30 30	38 (38	37 37	38 38	35 35	35 34	34 33	33 33	32 32	31 31	31 30	30	28	29	28	27 27	27	28	28	25	25 24	149 147	
	81	43	42	40	38	38	5	38	36	35	34	33	32	31	31	30	28	28	28	27	27	28	28	25	25	24	145	
	90	42	41	40	30	3 8	37	38	35	34	33	33	32	31	30	/30	29	28	28	27	27	28	25	25	24	24	14 2	
	89 88	42 41	41 40	40 39	de la compañía de la	38 37	37	38	35 34	34 34	33 33	32 32	32 31	31 30	2	29	28	28 28	27 27	27 27	28 28	28 25	25	25 24	24 24	24 23	140 1312	
	87	41	40	39	38		236	35	34	33	32	32	31	30	29	29	28	27	27	28	28	25	25	24	24	23	13 10	
	86	40	39	38	37	38	35	34	34	33	32	31	30	/30	29	28	28	27	27	28	25	25	24	24	23	23	138	
	85	40	39	38	37	38	35	34	33	32	32	31	32	28	28	28 28	27	27	28	28 25	25 25	25 24	24	24	23 23	23	135	
	84 83	30 30	38	37 37	36 36	35 35	35 34	34 33	33 32	32 32	31 31	30 39	30 28	28	28	28	27 27	27 28	28 28	25	25	24	23	23 23	23	22 22	133 131	
	82	38	37	38	35	35	34	33	32	31	30	/30	28	28	28	27	26	28	25	25	24	24	23	23	22	22	12 13	
	81	38	37	38	35	34	33	32	32	31	2	29	28	28	27	27	28	28	25	24	24	23	23	22	22	22	12 11	
	80 79	38 37	37 38	38 35	35 34	34 33	33 32	32 32	31 31	30 32	/30 29	29	28 28	28 27	27 27	28 28	26	25 25	25	24 24	24 23	23	23	22	22 21	21 21	128 126	
	78	37	38	35	34	33	32	31	30	130	29	28	28	27	28	28	25	25	24	24	23	23	22	22	21	21	12 4	
	77	38	35	34	33	32	32	31	20	28	29	28	27	27	28	25	25	24	24	23	23	22	22	21	21	20	122	
	78 75	36 35	35 34	34 33	33 32	32 32	31 31	30	/30 29	28	28	28 27	27 27	28	28 25	25 25	25 24	24 24	23	23 23	22	22 22	22	21 21	21 20	20	120 1111	
	74	35	34	33	32	31	30	30	28	28	28	27	26	26	25	24	24	23	23	22	22	21	21	20	29	20		5
	73	34	33	32	32	31	×	29	28	28	27	28	26	25	25	24	24	23	23	22	22	21	21	20	20	19	117 d	N _P
	72 71	34 33	33 32	32 32	31 31	30	30 29	29 28	28 28	27 27	27	28 28	26 25	25	24	24 23	23 23	23 22	22	22 21	21	21 21	20	20	20 19	19 19	115 g	4
_	70	33	32	31	30	30	29	28	27	27	28	25	25	20	24	23	23	22	22	21	21	20	20	19	18	18		
(Kg)	69	32	32	31	æ	28	28	28	27	28	28	25	19 ¹⁶	24	23	23	22	22	21	21	20	کھر	20	19	18	18	10 12 10 10 10 8	4
-	68	32 31	31 31	30	28	28	28 28	27 27	27 28	28	25	<u></u>	24 24	24 23	23 23	22 22	22 22	21 21	21 21	21	20	20 19	19 19	19	18	18 18	10 10 10 10 10 10 10 10 10 10 10 10 10 1	2
bt.	67 68	31	34	29	28	28	28	26	26	25	25	24	23	23	22	22	21	21	20	to	19	19	18	18	18	18	106 0	
Weight	65	30	/30	29	28	27	27	28	25	25	24	24	23	22	22	21	21	21	30	20	19	19	18	18	18	17	10.3	2
Ň	64	30	29	28 28	28 27	27 27	28	28 25	25 25	24	24	23	23	22	22 21	21	21 20	20	20 19	19 19	19	18	18	18 17	17	17 17	101	
	63 62	28	28	28	27	28	25	25	25	24	23	22	22	22	21	20	20	20	19	18	18	18	18	17	17 17	18	913 911 98 96	5
	61	28	28	27	28	28	25	24	24	23	23	22	22	21	21	29	20	19	19	18	18	18	17	17	17	18	98	ŝ.
	60 59	28 28	27 27	27 28	28	25 25	25 24	24 24	23 23	23	22	22 21	21 21	21 20	20	20	22	18	18	18 18	18 17	17 17	17 17	17 18	18 18	18 18	96 g 94 g	6
	58	27	28	28	25	24	24	23	23	22	22	21	21	22	20	6	18	18	18	18	17	17	18	18	18	15	92	-
	57	27	28	25	25	24	23	23	22	22	21	21	29	20	18	19	18	18	18	17	17	18	18	18	15	15	90	
	58	28 28	28 25	25 24	24 24	24	23	22 22	22 21	21 21	21 20	20	20	19	19	18	18	18 17	17 17	17 17	17	18	18	18	15 15	15 15	811 89	
	55 54	25	25	24	23	23	22	22	21	21	22	20	19	18	18	18	18 17	17	17	18	18 18	16	15	15	15	14	87	
	53	25	24	24	23	22	22	21	21	20	20	19	18	18	18	18	17	17	18	18	18	15	15	15	14	14	85	
	52 51	24 24	24 23	23 23	23	22 22	21 21	21 20	20	20	19 19	19	18	18 18	18 17	17 17	17 18	18 18	18	18 15	15 15	15 15	15 14	14 14	14 14	14 14	83 80	
	50	23	23	22	22	21	21	20	20	19	19	18	18	17	17	17	18	18	15	15	15	14	14	14	14	13	7 12	
	49	23	22	22	21	21	39	20	19	18	18	18	17	17	17	18	18	15	15	15	14	14	14	14	13	13	7 10	
	48 47	23 22	22 21	21	21 20	20	20	19 19	18	18	18 17	17	17	17 18	18 18	18 18	15 15	15 15	15 15	14	14 14	-16	14	13	13 13	13	78 76	
	48	22	21	20	, and	19	19	1º	18	18	17	17	18	18	18	15	15	15	14	14		ايتم		13	12	12	73	
	45	21	21	20	19	19	28	18	18	17	17	18	18	18	15	15	15	14	14	14	చో	13	13	12	12	12	71	
	44	21	20	20	19	18	18	18	17	17	18	18	18	15	15	15	14	14	14	20		13	12	12	12	12	613	
	43 42	20	20 19	18	18	18 18	18 17	17 17	17 18	18 18	18 18	18 15	15 15	15 15	15 14	14 14	14 14	14 13	13	~	12	12 12	12 12	12 12	12 11	11	611 69	
	41	19	18	18	18	17	17	16	18	18	15	15	15	14	14	14	13	13	13	12	12	12	12	11	11	11	66	
	40	18	18	18	17	17	18	16	18	15	15	15	14	14	14	13	13	13	12	12	12	12	11	11	11	11	64	
	30 38	18	18 17	17	17 18	18 18	18 18	18 15	15 15	15 14	15 14	14 14	14 13	13 13	13 13	13	13 12	12 12	12 12	12	12	11	11	11	11 10	10 10	62 60	
	37	17	17	18	16	18	15	15	14	14	14	13	13	13	13	12	12	12	11	11	11	11	10	10	10	10	5 12	
	38	17	18	18	18	15	15	14	14	14	13	13	13	12	12	12	12	11	11	11	11	10	10	10	10	10	59	
	35 34	18	18 18	18 15	15 15	15 14	14 14	14 14	14 13	13	13	13 12	12 12	12 12	12 11	12	11	11	11 10	11 10	10 10	10 10	10 10	10	9	9	57 55	
	33	15	15	15	14	14	14	13	13	13	12	12	12	11	11	11	11	10	10	10	10	10	9			8	53	
	32	15	15	14	14	13	13	13	13	12	12	12	11	11	11	11	10	10	10	10	9	9	9	9	9	9	51	
	31 30	15 14	14 14	14 13	13	13 13	13 12	12 12	12 12	12 11	12 11	11	11	11 10	10 10	10 10	10 10	10 9	10 9	9	8	9	9 8	9	8	8	4 12 4 10	
		1.48																									4 10	
	No	te : Ti	he bie	ck line	es de	note t	he ex	ect cu	toffs	ointa	(30,2			_		urea (on the	char	t heve	beer	roun	ded t	o the I	neare	at who		O BAPEN	

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.

Step 2 – Weight loss score (BAPEN 2008)

Step 2 – Weight loss score

		Score 0 Wt loss < 5%	Score 1 Wt loss 5 - 10%	Score 2 Wt loss > 10%		
			ght loss in			
			to 6 monti			
	kg	Less than (kg)	Between (kg)	More than (kg)		
	30	1.6	1.6 - 3.3	3.3		
	31	1.6	1.6 - 3.4	3.4		
_	32	1.7	1.7 - 3.6	3.6		
	33	1.7	1.7 - 3.7	3.7		
	34	1.8	1.8 - 3.8	3.8		
	35	1.8	1.8 - 3.9	3.9		
	36	1.9	1.9 - 4.0	4.0		
	37	1.9	1.9 - 4.1	4.1		
_	38	2.0	2.0 - 4.2	4.2		
	39	2.1	2.1 - 4.3	4.3		
	40	2.1	2.1 - 4.4	4.4		
_	41	2.2	2.2 - 4.6	4.6		
	42	2.2	2.2 - 4.7	4.7		
Ę.	43	2.3	2.3 - 4.8	4.8		
80- 10-	44	2.3	2.3 - 4.9	4.9		
Š.	45	2.4	2.4 - 5.0	5.0		
뉟.	46	2.4	2.4 - 5.1	5.1		
ē.	47	2.5	2.5 - 5.2	5.2		
Current weight	48	2.5	2.5 - 5.3	5.3		
υ.	49	2.6	2.6 - 5.4	5.4		
	50	2.6	2.6 - 5.6	5.6		
-	51	2.7	2.7 - 5.7	5.7		
	52	2.7	2.7 - 5.8	5.8		
	53	2.8	2.8 - 5.9	5.9		
	54	2.8	2.8 - 6.0	6.0		
-	55	2.9	2.9-6.1	6.1		
-	56	2.9	2.9 - 6.2	6.2		
-	57	3.0	3.0 - 6.3	6.3		
	58	3.1	3.1 - 6.4	6.4		
-	59	3.1	3.1 - 6.6	6.6		
	60	3.2	3.2 - 6.7	6.7		
	61	3.2	3.2 - 6.8	6.8		
	62	3.3	3.3 - 6.9	6.9		
	63	3.3	3.3 - 7.0	7.0		
-	64	3.4	3.4 - 7.1	7.1		



	Score 0 Wt loss < 5%	Score 1 Wt loss 5 - 10%	Score 2 Wt loss > 10%
		ght loss in	
		to 6 mont	
ker	Less than	Between	More than
kg	(kg)	(kg)	(kg)
65	3.4	3.4 - 7.2	7.2
66	3.5	3.5 - 7.3	7.3
67	3.5	3.5 - 7.4	7.4
68	3.6	3.6 - 7.6	7.6
69	3.6	3.6 - 7.7	7.7
70	3.7	3.7 - 7.8	7.8
71	3.7	3.7 - 7.9	7.9
72	3.8	3.8 - 8.0	8.0
73	3.8	3.8 - 8.1	8.1
74	3.9	3.9 - 8.2	8.2
75	3.9	3.9 - 8.3	8.3
76	4.0	4.0 - 8.4	8.4
77	4.1	4.1 - 8.6	8.6
78	4.1	4.1 - 8.6	8.7
79	4.2	4.2 - 8.7	8.8
80	4.2	4.2 - 8.9	8.9
81	4.3	4.3 - 9.0	9.0
82	4.3	4.3 - 9.1	9.1
83	4.4	4.4 - 9.2	9.2
84	4.4	4.4 - 9.3	9.3
85	4.5	4.5 - 9.4	9.4
86	4.5	4.5 - 9.6	9.6
87	4.6	4.6 - 9.7	9.7
88	4.6	4.6 - 9.8	9.8
89	4.7	4.7 - 9.9	9.9
90	4.7	4.7 - 10.0	10.0
91	4.8	4.8 - 10.1	10.1
92	4.8	4.8 - 10.2	10.2
93	4.9	4.9 - 10.3	10.3
94	4.9	4.9 - 10.4	10.4
95	5.0	5.0 - 10.6	10.6
96	5.1	5.1 - 10.7	10.7
97	5.1	5.1 - 10.8	10.8
98	5.2	5.2 - 10.9	10.9
99	5.2	5.2 - 11.0	11.0

© BAPEN

Alternative measurements and considerations

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, Studiey Road, Redditch, Worcs, B88 7LC. Tel: 01527 457 850. Fax: 01527 458 718. bapen@ sovereignconference.co.uk BAPEN is registered charity number 1023827. www.bapen.org.uk

BAPEN 2003 ISBN 1 898467 80 4 Price £2.00 All rights reserved. This document may be photocopied for dissemination and training purposes as long as the source is credited and recognised.

Copy may be reproduced for the purposes of publicity and promotion. Written permission must be sought from BAPEN if reproduction or adaptation is required. If used for commercial gain a licence fee may be required.



© BAPEN. First published May 2003 by MAG the Mainutrition Advisory Group, a Standing Committee of BAPEN. Reviewed and reprinted with minor changes March 2008, September 2010 and August 2011. 'MUST' is supported by the British Dietetic Association, the Royal College of Nursing and the Registered Nursing Home Association.

© BAPEN

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).

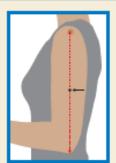
Estimating height from ulna length



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).

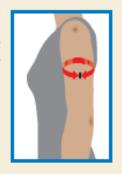
Haight (m)	men (<85 years)	1.94	1.93	1.91	1.89	1.87	1.85	1.84	1.82	1.80	1.78	1.76	1.75	1.73	1.71
Ξ÷	men (≥85 years)	1.87	1.86	1.84	1.82	1.81	1.79	1.78	1.76	1.75	1.73	1.71	1.70	1.68	1.67
	Uina length (cm)	32.0	31.5	31.0	30.5	30.0	29.5	29.0	28.5	28.0	27.5	27.0	26.5	26.0	25.5
분 승	Women (<65 years)	1.84	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
Height (m)	Women (≥85 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
tin (men (<85 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
Height (m)	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
(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
ΞĒ	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*.

© BAPEN

Factors influencing body weight (The MUST report)

Care should be taken when interpreting the patient's BMI or percentage weight loss if any of the following are present

Fluid Disturbances

OEDEMA

MILD	MODERATE	SEVERE
1kg	5kg	10kg

ASCITIES

MILD	MODERATE	SEVERE
2.2kg	6kg	14kg

(The Parenteral and Enteral Nutrition Group of the British Dietetic Association)

Plaster Casts

UPPER LIMB CAST <1kg

LOWER LEG AND BACK = 0.9 – 4.5kg, depending on material and site

Pregnancy

Early Pregnancy – use self-reported or documented weight and height

Weight change: Weight gain <1kg or >3kg per month during 2nd and 3rd trimester generally require further evaluation

Lactation

Use measured BMI Weight change – as for oedema

Amputations

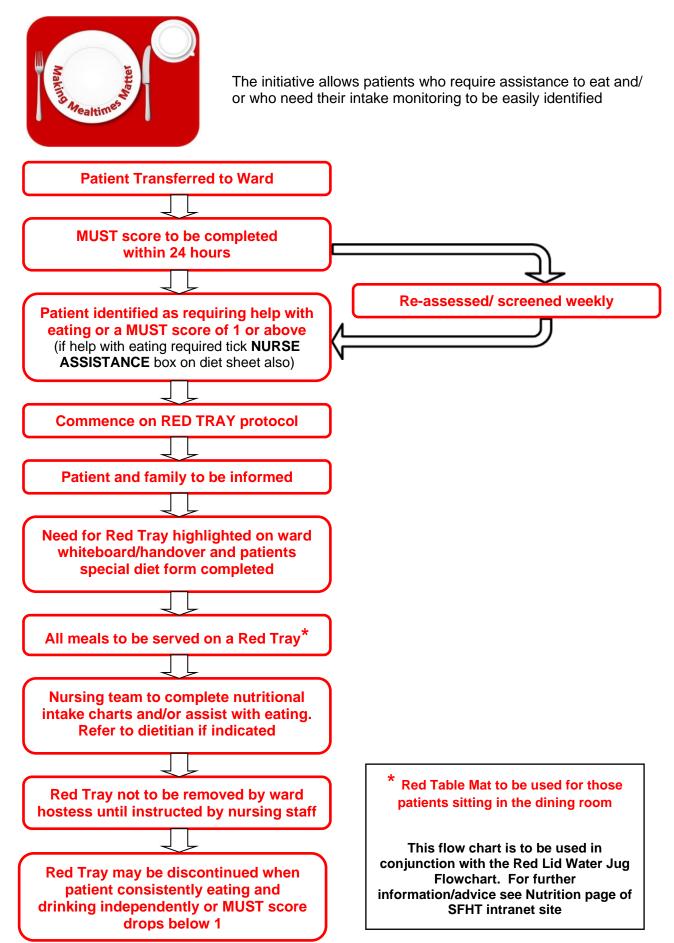
BMI:

If using estimated or recalled weight adjustments of body weight can be made from knowledge of missing limb segments

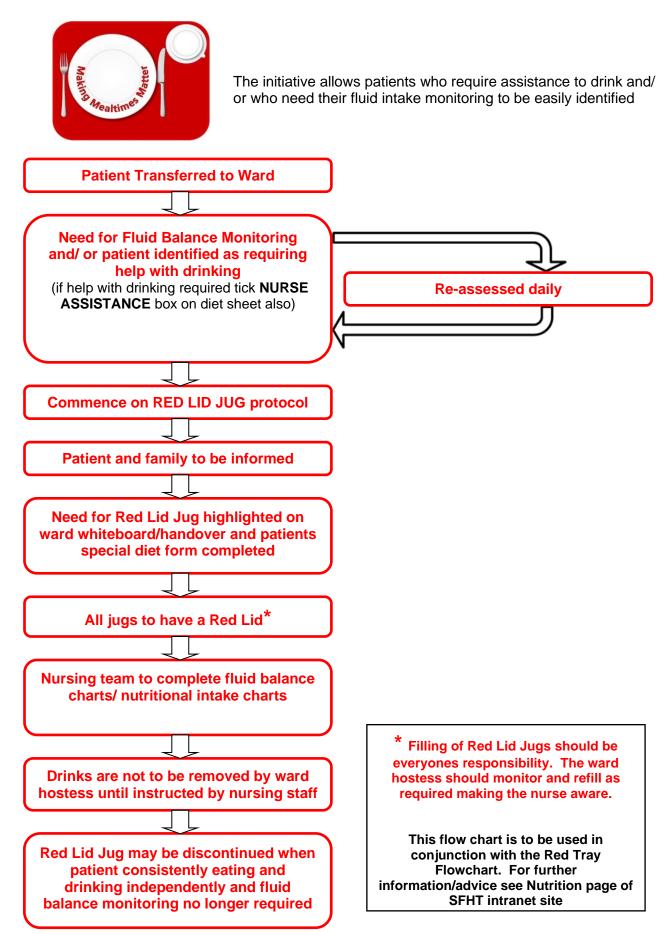
Upper limb 4.9% (upper arm 2.7%, forearm 1.6%, hand 0.6%

Lower limb 15.6% (thigh 9.7%, lower leg 4.5%, foot 1.4%

Appendix B – Red Tray Flowchart



Appendix C - Red lid jug flowchart





Appendix D – Adult Inpatient Dietetic Referral Guidance

All dietetic referrals must be completed on ICE

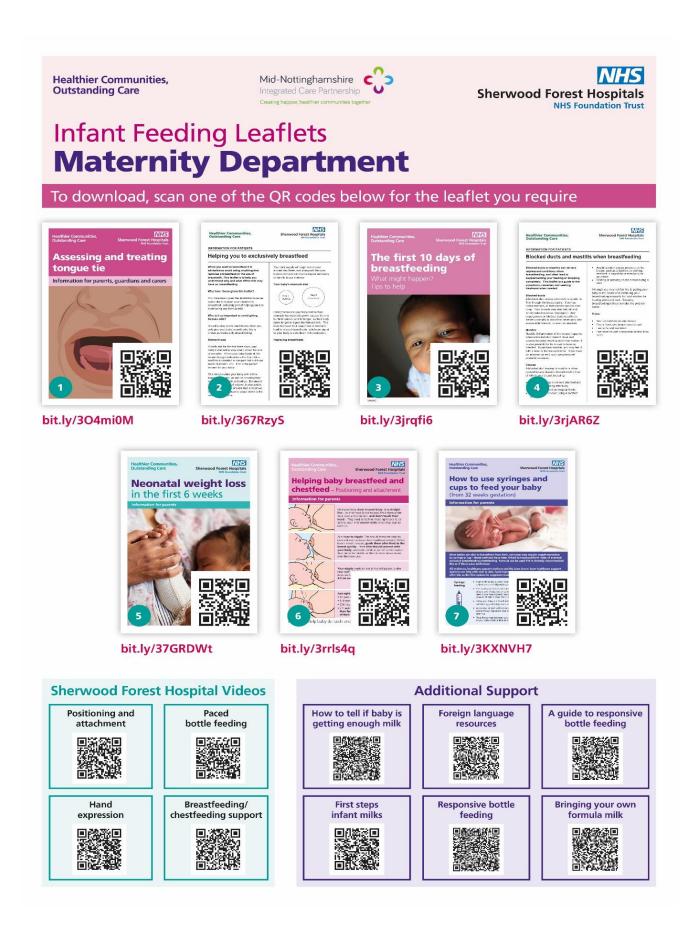
Reasons for Referral

The dietetic department can accept the following reasons for referral:

- 1) Enteral feeds: Naso Gastric (NG) / PEG or Gastrostomy / Naso Jejunal (NJ) / Jejunostomy
- 2) Parenteral feed: PN or TPN
- 3) Gastro: Elemental Feed Exclusion / Elimination Diet IBS dietary advice IBD dietary advice Constipation Coeliac Disease Liver disease dietary advice Pancreatitis dietary advice
- 4) Diabetes: Newly diagnosed Dietary review
- 5) Renal: Low Potassium Low Sodium Low Phosphate
- 6) Food allergy
- 7) Texture modification dietary advice
- 8) Nutrition Support: Poor intake MUST score 1+ and no improvement with Care Plan B MUST score 3+ Oral nutritional supplements
- 9) Pressure Ulcers grade 3 or 4



Appendix E – Infant Feeding Leaflets



<u>APPENDIX F – EQUALITY IMPACT ASSESSMENT FORM (EQIA)</u>

Name of service/policy/pr	ocedure being reviewed: Nutrition and	d Hydration Policy	
New or existing service/pe	olicy/procedure: Existing		
Date of Assessment: Feb	ruary 2023		
	ocedure and its implementation and its implementation and its implementation down into area	swer the questions a – c below against each is)	n characteristic (if relevant
Protected Characteristic	a) Using data and supporting information, what issues, needs or barriers could the protected characteristic groups' experience? For example, are there any known health inequality or access issues to consider?	b) What is already in place in the policy or its implementation to address any inequalities or barriers to access including under representation at clinics, screening?	c) Please state any barriers that still need to be addressed and any proposed actions to eliminate inequality
The area of policy or its in	nplementation being assessed:		
Race and Ethnicity	No direct impact identified	Appropriate menu options available	None identified
Gender	No direct impact identified	Not applicable	None identified
Age	This policy covers adults and infants, children, young people and neonates	References and links to age specific information	None identified
Religion	No direct impact identified	Appropriate menu options and facilities available	None identified
Disability	The policy promotes mandatory safe practice for all adults, infants, children, young people and neonates. Patients are assessed on admission with regards to their individual nutrition and hydration requirements including physical disability, learning disability and cognitive impairment.	 Appropriate menu options available – written and picture menus large print menu braille menu modified texture diet and fluids are available adapted cutlery and crockery available appropriate seating and environment Traffic light documents are available for patients with learning disabilities. Allied health professional assessments of patients requirements. Patients with cognitive impairment through acute delirium or dementia are assessed where required using the two stage capacity assessment and best interest check list. 	None identified

		All of these help to determine what reasonable adjustments may be required to meet nutrition and hydration requirements.	
Sexuality	No direct impact identified	Not applicable	None identified
Pregnancy and Maternity	No direct impact identified	Breast/ chest feeding women/ birth parent are included within the trusts nutrition and hydration provision	None identified
Gender Reassignment	No direct impact identified	Not applicable	None identified
Marriage and Civil Partnership	No direct impact identified	Not applicable	None identified
Socio-Economic Factors (i.e. living in a poorer neighbourhood / social deprivation)	No direct impact identified	Not applicable	None identified

What consultation with protected characteristic groups including patient groups have you carried out?

No direct consultation undertaken as no specific barriers identified

What data or information did you use in support of this EqIA?

• Review of evidence base

As far as you are aware are there any Human Rights issues be taken into account such as arising from surveys, questionnaires, comments, concerns, complaints or compliments?

None identified

Level of impact

From the information provided above and following EQIA guidance document Guidance on how to complete an EIA (<u>click here</u>), please indicate the perceived level of impact:

Low Level of Impact

For high or medium levels of impact, please forward a copy of this form to the HR Secretaries for inclusion at the next Diversity and Inclusivity meeting.

Name of Responsible Person undertaking this assessment: Jenna Parson, Nutrition Specialist Nurse

Signature:

Date: Feb 2023

APPENDIX G – ENVIRONMENTAL IMPACT ASSESSMENT

The purpose of an environmental impact assessment is to identify the environmental impact, assess the significance of the consequences and, if required, reduce and mitigate the effect by either, a) amend the policy b) implement mitigating actions.

Area of impact	Environmental Risk/Impacts to consider	Yes/No	Action Taken (where necessary)
Waste and materials	 Is the policy encouraging using more materials/supplies? Is the policy likely to increase the waste produced? Does the policy fail to utilise opportunities for introduction/replacement of materials that can be recycled? 	No	
Soil/Land	 Is the policy likely to promote the use of substances dangerous to the land if released? (e.g. lubricants, liquid chemicals) Does the policy fail to consider the need to provide adequate containment for these substances? (For example bunded containers, etc.) 	No	
Water	 Is the policy likely to result in an increase of water usage? (estimate quantities) Is the policy likely to result in water being polluted? (e.g. dangerous chemicals being introduced in the water) Does the policy fail to include a mitigating procedure? (e.g. modify procedure to prevent water from being polluted; polluted water containment for adequate disposal) 	No	
Air	 Is the policy likely to result in the introduction of procedures and equipment with resulting emissions to air? (For example use of a furnaces; combustion of fuels, emission or particles to the atmosphere, etc.) Does the policy fail to include a procedure to mitigate the effects? Does the policy fail to require compliance with the limits of emission imposed by the relevant regulations? 	No	
Energy	 Does the policy result in an increase in energy consumption levels in the Trust? (estimate quantities) 	No	
Nuisances	• Would the policy result in the creation of nuisances such as noise or odour (for staff, patients, visitors, neighbours and other relevant stakeholders)?	No	