Humber Teaching NHS Foundation Trust

STANDARD OPERATING PROCEDURE
EATING DISORDERS INTENSIVE TREATMENT TEAM (INSPIRE)

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Consultation:	Rachel Douglas, Inspire Nikki Titchener, Service Manager CAMHS Clinical Network Meeting Angie Ward and Nicola Green (PC) CAMHS Clinical Network Group
Ratified and Quality Checked by: **Date Ratified:**	CAMHS Clinical Governance Meeting 11 April 2024
Name of Trust Strategy / Policy / Guidelines this SOP refers to:	• Guideline for the Safe Insertion of Fine Bore Nasogastric Feeding Tubes for Young People Requiring Enteral Feeding as Part of the Eating Disorder Pathway (CAMHS Inpatient Unit) G396 • CAMHS Inpatient Service Eating Disorders SOP19-021 • Nutrition Guideline for the CAMHS Inpatient G397 • CAMHS Safety Pod SOP23-001 • Hull and East Riding CAMHS Eating Disorders Team Operational Guidance G394

VALIDITY – All local SOPS should be accessed via the Trust intranet

CHANGE RECORD

Version	Date	Change details
1.0	*11/04/24*	*New SOP.* *Approved at CAMHS Clinical Governance Meeting (11 April 2024).*

Contents

Please refer to the CAMHS inpatient document links CAMHS Nasogastric Feeding and Associated Documents including the CAMHS Inpatient Service Eating Disorders SOP (SOP19-021)

Please refer to the Hull and East Riding CAMHS Eating Disorders Team Operational Guidance (G394) for other relevant information, including Physical health risk rating table and management procedures, agreements and documentation (PAU discussion form).

1. Introduction and Local Context

Humber and North Yorkshire Specialised Mental Health, Learning Disability and Autism Provider Collaborative, as the provider of the CAMHS inpatient service, Inspire, have commissioned Humber Teaching NHS Foundation Trust to provide an Eating Disorder Intensive Treatment Team (EDITT) which aims to avoid CAMHS inpatient admissions and where avoidance cannot be achieved reduce the length of stay in a CAMHS inpatient bed. It will do this by increasing the options for young people and their families/ carers by offering a more intensive community/ home based service for those who require this as well as aligning closely with Inspire for those who require short term admission or supported step down from CAMHS inpatient services to support a whole pathway approach to care. This service aspires to offer a bespoke package of care with differing levels of support being available based on individual clinical need.

Where hospital admission is necessary EDITT will work with the hospital or inpatient CAMHS unit to reduce the duration of the admission. This will be achieved by the service offering in reach into hospitals, supporting home leave (so this can also be facilitated earlier in the admission) and supporting young people to remain connected to their communities and support networks. This supports a positive longer-term prognosis.

2. The Service

The service is available to young people who have a GP within the provider collaborative boundary, and are already supported by their local Community Eating Disorder Service (CEDS). (In relation to young people that reside in North Lincolnshire the service will support step down from Inspire in the first instance and the preventative role will be developed).

At full capacity, the service will offer support to young people and their families/ carers between the hours of 8am and 8pm, 7 days a week - led by the needs of the young people the team are supporting. EDITT will support a carefully considered amount of young people at any one time, the number of young people being supported will be based on patient safety and the level of intensity that is needed to support the young people on the EDITT case load. This will be reviewed on a regular basis in relation to the demands on the service and capacity across the whole of the eating disorder pathway for young people. The team will offer an initial 6-week period of enhanced intervention to support early discharge or to those young people who are at risk of admission; this can be extended if it is agreed by the MDT, including the CEDS keyworkers that this is clinically appropriate.

It is acknowledged that young people remain supported by their local CED service, who would retain responsibility and management should there be a delay to EDITT input due to capacity and demand.

3. Aims

- To work in partnership with CAMHS in-patient and the acute hospital teams to help facilitate and support home leave and safe, early discharge (Hull, ER and NL).
- To provide intensive home-based meal support to young people and their families who are at risk of requiring an inpatient psychiatric admission or are at risk of physical deterioration, which may require an acute admission because of their eating disorder (Hull and ER).
- To empower parents and carers to manage their child's eating disorder and learn new skills.
- To support young people and families to remain in their community, stabilise and improve physical health and restore more normal eating patterns.

- To aim to avoid or reduce NG feeding, restrictive practice and/ or admission to CAMHS inpatient services where possible.

4. Service Model

The EDITT usually operates within Phase 1 of treatment in relation to the Family Therapy-Anorexia Nervosa Maudsley Model, as an addition to normal family-based treatment sessions provided by the local CEDS. Phase 1 of the FT-AN Maudsley Model relates to weight restoration and in this phase the clinicians will offer education and guidance to the family to empower them to support safe refeeding of the young person. The team will establish which meals are most problematic and will offer support to the families to ensure they are able make appropriate choices for their young person to steer control away from the eating. It is important during this phase that the team role model meal support and support parents to take on the role of supporting their young person's recovery. There is a likelihood that the young person may not attend school for the duration of intensive home treatment, due to physical health risk. Other presentations and eating disorder diagnosis will be considered on an individual basis.

5. Inclusion Criteria

- Young people between the ages of 13-18 with a severe eating disorder who are at risk of an acute medical or specialist inpatient admission or are preparing for discharge from a mental health or acute admission.
- When input from the CED team alone has not been sufficient to establish the young person on a meal plan that gets them into a pattern of healthy weight restoration and where parents/carers are struggling to implement the key principles of family-based treatment.

6. The Team

The team has a range of clinicians working within the service to allow for high quality service delivery.

Team leadership will be provided by the existing band 7 team lead for Hull and East Riding CED team.

Service manager will be the existing Service manager for the Hull and East Riding CED team.

The team will work closely with existing inpatient services as well as local paediatric wards including the Clinical Leads for both the paediatric in-reach and Inspire as well as maintaining links with other CAMHS teams.

7. Supervision

Staff will be offered a high level of clinical individual and team supervision as well as an annual appraisal. Managerial, professional and safeguarding supervision will be provided as per Trust policy. A supervision structure is in place within the team.

8. Referral Process

Referrals will be discussed with senior clinicians within the team and once agreed, a referral form will be completed by clinicians already involved in the young person's inpatient or community care and sent to the EDIT team inbox. Referrals will be logged on the EPR by EDITT administrator. There is a process map available to illustrate this process.

The EDITT will work closely with the CAMHS inpatient team and CEDS to identify young people who are at increased risk of requiring admission as early as possible and will work in partnership with the CEDS providing focused, additional support and intensive intervention to young people and families. This approach will ensure there is no unnecessary transition required or change of key worker due to a service boundary. This will maintain the therapeutic relationship, as continuity of care is a driver to improved outcomes. CEDS and EDITT will discuss any young people who will potentially meet the criteria for the EDITT service. See Appendix 2 to demonstrate the process from referral to discharge.

9. Interventions and Treatment

The EDITT focus will be on role modelling meal support, offering education and coping strategies to empower families and carers to support their young person in the community safely and more effectively. Within the community setting, the role of the team will focus on supporting young people at mealtimes and will include intensive work with young people and their parents or carers as informed by the formulation and understanding of the family. The level of intensity will be determined by need; this will be assessed through information provided by the keyworker and other members of the MDT as well as a joint visit with EDITT and the keyworker to the family home to establish where the main struggles are at that time.

The severity of the young person's condition both physically and mentally will need to be considered when determining the need of the young person and their family. Some families and young people will receive daily support where necessary with a visit spanning multiple meals to facilitate the change required to avoid admission to hospital. Staffing consistency will be strived for but due to shift patterns and frequency of visits this is not always possible.

Urgent pathway – 7 days of intensive support followed by review.

Routine pathway – 4 to 6 weeks support with usually 3-4 meal supports per week with frequent reviews of goals and progress. The care plan will be reviewed weekly in the MDT meeting to discuss progress and establish if there needs to be an extension of care or if the intensity of the visits can be reduced.

Step down of care from inpatients- For young people who are admitted to CAMHS Inpatient services the team will offer regular interventions and sessions at the inpatient unit up to 2 times per week to build up therapeutic relationships in an attempt to facilitate earlier discharge or step down to day care status if appropriate. Upon discharge the 4-6 weeks intervention from the routine pathway will begin.

Throughout all these pathways EDITT will continue to work closely with the CED keyworkers and MDT and if admission has been necessary, the inpatient service.

It is expected that the inpatient service will facilitate family meals with the young people and their carers/ families during the admission. If a young person is stepping out of the inpatient service, the EDITT will be involved during this process as part of the in-reach and will start supporting family meals in the unit to build up the therapeutic relationship and continue this in the home when the young person has been discharged. The EDITT staff will link in with the inpatient staff to gather information about how family meals have been progressing throughout the admission, they will also attend Care Programme Approach Meetings and Multi-Disciplinary Team meetings to ensure they are aware of care in the CAMHS Inpatient

service and be involved in planning for step down care. The service can also support meals at home with the family during leave periods from the unit. The family/ carers will be included in all aspects of the step-down process and treatment in the home unless there is a reason why this cannot be facilitated e.g., the young person is in the looked after system.

A care plan will be formulated with the young people and their families or carers. This will be created collaboratively and will inform the care of the young person for all professionals involved. The care plan should clearly indicate the identified goal for intensive interventions (e.g., to reduce time of eating/ to manage and remain with distress etc).

At the start of each shift the staff will be able to read a brief handover on the shared V drive which will have been filled in by the shift coordinator from the previous day. It is the responsibility of each staff member on duty to read clinical notes and the handover at the start of their shift and to familiarise themselves with the care plans for all young people the team are supporting to ensure they are up to date with any changes in care since their last shift. There is also a shared team calendar where visit can be planned around availability.

The handover should include:

- List of young people being supported by the team including pathway level and locality
- Chronology of visits from the previous shift
- Plan for visits on current shift, how often the team are seeing each young person and the plan for the next visit.
- Any young people at Inspire/ HUTH requiring in-reach.
- New referrals
- Any safeguarding concerns

The care plans will be checked on a weekly basis by shift leads to ensure they are fully up to date for staff delivering the treatment plans.

Visits to support eating will be at set times to maximise staff availability.

<u>Breakfast 8-9am, Lunchtime 12-1, Evening meal 5-6.</u>
It is generally anticipated that one specific meal will be the initial focus (often the most challenging for the young person or family).

Staff should follow the lone working policy to ensure their safety on visits and ensure that the shift lead knows when visits are completed for the day and that they are safe at the end of each shift.

The team will be trained and competent in monitoring physical observations and phlebotomy to allow quicker and more frequent assessment of physical wellbeing for young people most at risk of hospital admission in the community.

10. Monitoring of Physical Health

10.1. MEED Guidelines

Young people who are referred through to EDITT will be at higher risk of potential admission to inpatient setting, the referral may be due to the young person deteriorating physically, however this will not always be the case as there are a number of reasons why a young person maybe referred to EDITT. Therefore, physical health monitoring will be more prevalent in some care plans than others. The level of monitoring will be determined through discussion with the CEDs keyworker and joint assessment with the young person and their family. The monitoring may be increased if concerns are raised during visits, however all

young people under EDITT should have physical observations monitored at least once a week. They should be screened using the MEED risk-assessment framework (Appendix 3).

Any previous physical health concerns or results of note should be shared with EDITT to ensure safety of the young person is maintained. Each domain of the risk assessment is rated using a traffic light system, indicating risk to life. The risk assessment is to be used to aid decisions relating to the young person's plan of care such as level of monitoring required and refeeding risk.

Assessment of young person's physical health will continue throughout EDITT interventions and physical observations should be taken as per the individual's care plan. If one red flag or two amber flags are noted when assessing the young person's physical observations; or if the young person appears medically unstable or acutely unwell, a discussion with the Paediatric Assessment Unit (PAU) or team Medic should take place to establish if a medical assessment is needed or if EDITT can manage the situation through increased physical monitoring (Appendix 4). Should the young person continue to persistently present similarly with no sign of improvement over a prolonged period of time this should again be escalated to PAU/team Medic with potential need for assessment at PAU or admission to Woodland Ward for assessment/ treatment/ stabilisation.

Physical observations that the team can assess are:

- Sit/stand blood pressure noting postural drop (repeating stand after 2 minutes).
- Sit/stand heart rate noting postural increase.
- No urine output for 24 hours.
- Low temperature.
- SUSS test.
- Blood sugar level of under 3- or showing symptoms of hypoglycaemia, feeling sweaty, confused, nausea, dizzy, headache, blurred vision, trembling/ shaking, pale, palpitations.
- Ketone level of over 3 (and they continue to refuse oral fluid intake).

It is also important to identify and inform medical staff of any purging as this increases the risk of physical decline due to electrolyte imbalances.

Physical observations should be clearly documented on the Physical health recording note on Lorenzo by EDITT and the number of red or amber flags should then be documented clearly to help determine the level of physical instability and required monitoring. This information should be handed over to PAU staff during consultation or if admission takes place.

10.2. Refeeding Guidance

Refeeding syndrome is a potentially serious complication in the nutritional management of young people with eating disorders and close consideration of the risk should be performed. The initial refeeding assessment should be conducted by a dietitian or a medic to assess the level of risk. Dietetic assessment should be sought as soon as possible prior to implementing a meal plan during EDITT interventions. The young person may not need a full dietetic assessment if one has been completed recently this will be determined through discussion between the CEDs keyworker and Dietitian. If one or more of the following factors is present, high risk of refeeding syndrome is indicated, see appendix 5:

- Extremely low weight (%mBMI <70%).
- Little/ no oral intake (<500Kcal) intake for >4 days
- Weight loss of over 15% in the past 3 months.

- Abnormal electrolytes (K, Na, Phos, Mg), low white blood cell count or vitamins such as thiamine prior to refeeding- need GP bloods results alongside referral.
- Medical comorbidities and/or complications.

Pharmacy
A complete multivitamin and mineral supplement such as Forceval should be prescribed for young people, one capsule daily (Forceval soluble is available for those young people with swallowing difficulties), regardless of assessed refeeding risk. If assessed to be at risk, oral Thiamine must also be started and continued for 10 days. If the young person is under 75% weight for height this may be continued for longer and this will be established in dietetic review. The MEED recommends 50mg QDS, although in young people they can be prescribed as 100mg BD to aide compliance. Vitamin B compound strong 1-2 tablets TDS should also be prescribed. There are several routes that can be taken to have the medications prescribed for families; the paediatrician or psychiatrist can prescribe refeeding medications using an FP10 which can then be given to the families, and they can collect the medication from a local community pharmacy. Alternatively, the GP can also prescribe these medications and again the family can collect from a local pharmacy. The GP option will potentially result in a delay in obtaining these medications. Therefore, if there is a high risk of refeeding an FP10 will be required as soon as possible to ensure timely treatment.

Monitoring
If a high risk of refeeding syndrome is evident the following should be considered:

- Weight - To be taken twice during the first two weeks of treatment in EDITT. Continued monitoring to be agreed in discussion with CEDs keyworker, taking into account young person and family's preferences.
- Bloods – Taken once per day for the first 5-7days if scoring red, twice weekly if Amber.
- Blood glucose – If presenting with symptoms of hypoglycaemia, including - feeling sweaty, confused, nausea, dizzy, headache, blurred vision, trembling/ shaking, pale, palpitations, consider blood glucose test.
- Fluid balance – Families to be made aware of amount of fluids needed in dietetic assessment. A fluid intake record may be advised (recognising this may not be totally accurate in the community).
- Dietetic assessment – Initial full assessment to assess if medical intervention is needed, regular dietetic monitoring for the first 2 weeks.

It is important that all staff are aware of the signs and symptoms of refeeding syndrome due to the severity of this condition if refeeding syndrome is suspected immediate medical attention needs to be sought so treatment can begin. Monitoring for the following signs of symptoms needs to be assessed on each visit whilst the risk remains high - fatigue, weakness, confusion, difficulty breathing, high blood pressure, seizures, irregular heartbeat, oedema. Please also refer to MEED guidance.

Management
Once refeeding risk is established, a nutritional plan will be formulated to slowly build up the diet by the dietitian. During this period, close monitoring and correction of individual electrolyte abnormalities through supplementation is required. Appendix 6 provides guidance on administration of individual supplements.

If one or more of the above criteria for refeeding risk is met, a 1400kcal should be implemented to account for refeeding risk. The meal plan should then be increased by 200kcal every day, ensuring close monitoring and correction, if required, of refeeding biochemistry. In the first stage potential weight loss or maintenance may occur, once a weight gain has occurred the meal plan can increase by 200kcal per day. The dietitian will

review and agree the plan for continued increases in calories, only the dietitian should amend the dietary intake for the young people.

To avoid underfeeding syndrome, the young person should never be started on a meal plan which will provide less calories than was being consuming before EDITT treatment. This information should be obtained through discussion with the young person, with a family member or carer present to aid reliability or via handover from the CAMHS ED team or HUTH or Inspire. If the young person has already been established on a meal plan and is understood to be compliant, this should be continued. However staff are required to be hypervigilant around exercise as this can increase the risk of underfeeding- exercise levels should be reviewed regularly with the young person and their family/ carer to ensure they are not participating in strenuous exercise whilst at risk of underfeeding syndrome.

If all oral intake is declined persistently and there is significant concern regarding their physical wellbeing (taking into account their weight for height, blood results, ECG results, physical observations) and whether it is felt there is a significant risk of harm should they be without oral intake for a further period of time consider medical attention and discussions around need for potential admission should take place with PAU or Inspire dependent on which is most appropriate- please see MEED guidelines, step up/ step down procedure for guidance of this process.

11. Documentation

The team uses the following CAMHS documentation directly onto the electronic patient record (EPR):

- The first face to face EDITT session/assessment will be recorded on an intervention note. It may be that the Young Persons FACE (risk assessment) is also updated at this stage (either by the ED key worker or EDITT practitioner).
- A care plan will be formulated with the family and ED key worker. This will be reviewed and updated within the agreed timescales using the care plan review form. It should be clearly recorded who is going to review and update the care plan.
- Planned interventions are recorded on an Intervention sheet and any other communication (phone calls etc.) is recorded on an ED communication sheet.
- Height, weight, BP and pulse are recorded as required on the physical health recording sheet located in the care plan tab. – ‘notes’ on the EPR.
- On completion of EDITT involvement a summary letter will be sent to the family (GP copied in).

12. Outcomes and Evaluation

The following outcome measures will be routinely used:

Goal Based Outcomes (GBO) – The GBO tool is a way of evaluating progress towards goals. The GBO monitors the progress of a young person as they work towards the goal, evaluated by themselves or a carer.

Accommodating and Enabling scale (AES) – This scale is used to help carers reflect on whether or how they accommodate or enable the eating disorder.

Experience of service questionnaire (ESQ) – This will be used to determine how satisfied and supported families feel by the EDITT involvement.

13. Consent, Capacity and Confidentiality

Consent from the young person is essential where the young person is 16 or above as per the Mental Capacity Act 2005. There is no formal lower age limit for Gillick competency and so the guidance set out by the Department of Health (DoH 2001) and the National Institute for Health and Care Excellence (NICE 2020) should be followed when assessing competency and consent for under 16's. Consent can be given verbally or in writing and should be reviewed and revisited regularly.

Despite the obvious severity of an eating disorder, many young people are reluctant to engage in treatment, especially if treatment entails a focus on increased food intake and weight gain.

There may be times where it is unclear if the young person has capacity to consent to a referral to, or intervention with our team and in these instances it is the responsibility of the qualified practitioner to assess this as required.

If a child or young person lacks capacity, their physical health is at serious risk and they do not consent to treatment, parents or carers will be encouraged to consent on their behalf and if necessary, use an appropriate legal framework for treatment (such as the Mental Health Act 1983/2007 or the Children Act 1989).

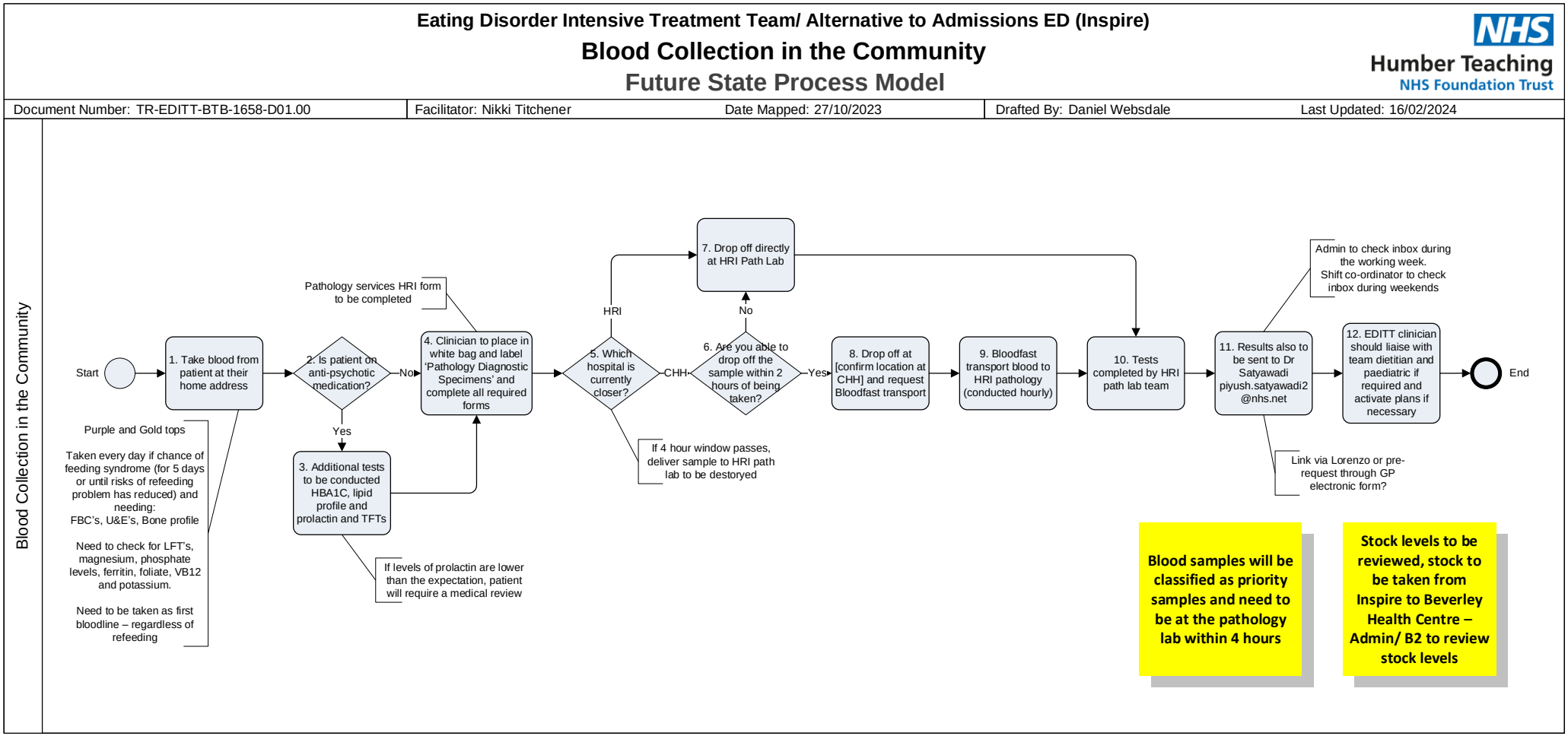
If a mental health act assessment is indicated, then the relevant Trust procedure and policy will be followed.

In accordance with the Trusts Confidentiality Code of Conduct (N061) all staff must adhere to the Code of Conduct issued by the professional body to which they are affiliated. All staff have a duty of confidentiality to all those who are receiving care. This includes making sure that they are informed about their care and that information about them is shared appropriately (NMC 2015).

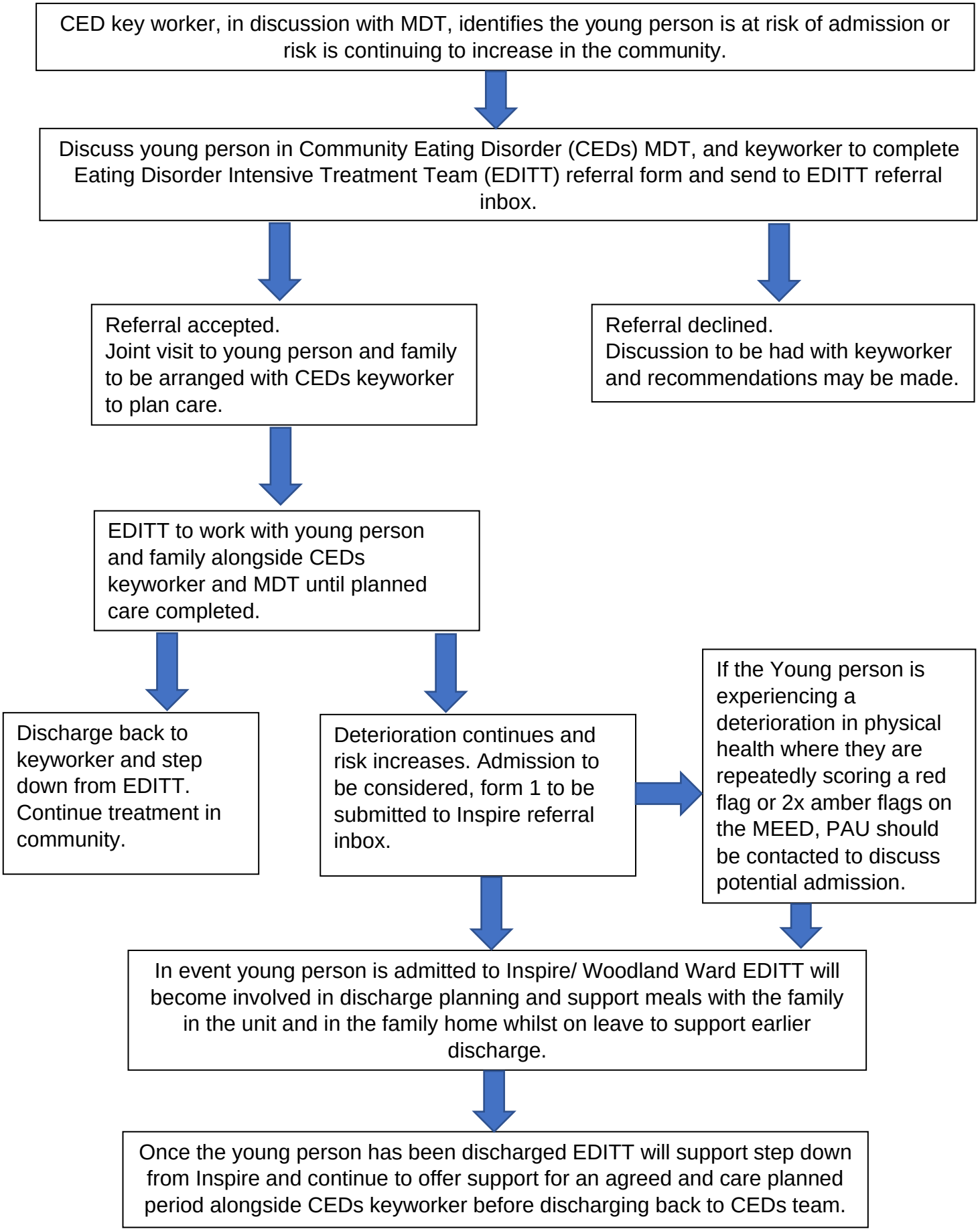
14. KPIs

	Performance Indicator
1	Number of CYP receiving treatment under alternatives to admission funding
2	Length of treatment (days)
3	Place Area CYP originate from
4	Age on referral
5	Male/Female
6	Would this YP have been admitted as an inpatient without this service?
7	Has CYP stepped down from inpatient stay?
8	No. of CYP admitted as an inpatient from the alternative to admissions service

Appendix 1 - Phlebotomy Process



Appendix 2 - Step Up, Step Down Procedure



Appendix 3 - MEED Risk Assessment Framework

	Red: High impending risk to life	Amber: Alert to high concern for impending risk to life	Green: Low impending risk to life
Engagement with management plan	• Physical struggles with staff or parents/carers over nutrition or reduction of exercise • Harm to self • Poor insight or motivation • Fear leading to resistance to weight gain • Staff or parents/carers unable to implement meal plan prescribed	• Poor insight or motivation • Resistance to weight gain • Staff or parents/carers unable to implement meal plan prescribed • Some insight and motivation to tackle eating problems • Fear leading to some ambivalence but not actively resisting	• Some insight and motivation to tackle eating problems • May be ambivalent but not actively resisting
Activity and exercise	High levels of dysfunctional exercise in the context of malnutrition (>2h/day)	Moderate levels of dysfunctional exercise in the context of malnutrition (>1h/day)	Mild levels of or no dysfunctional exercise in the context of malnutrition (<1h/day)
Purging behaviours	Multiple daily episodes of vomiting and/or laxative abuse	Regular (=>3x per week) vomiting and/or laxative abuse	
Self-harm and suicide	Self-poisoning, suicidal ideas with moderate to high risk of completed suicide	Cutting or similar behaviours, suicidal ideas with low risk of completed suicide	

Key: °C = degrees Celsius; ARFID = avoidant restrictive food intake disorder; BMI = body mass index; BP = blood pressure; bpm = beats per minute; cm = centimetre; ECG = electrocardiogram; g = grams; h = hour; HR = heart rate; kcal = kilocalories; kg = kilogram; L = litre; mmHg = millimetres of mercury; mmol = millimole; mol = mole; ms = millisecond; QTc = corrected QT interval; SUSS Test = Sit Up-Stand-Squat Test.

	Red: High impending risk to life	Amber: Alert to high concern for impending risk to life	Green: Low impending risk to life
ECG abnormalities	• **<18 years:** QTc >460ms (female), 450ms (male) • **18+ years:** QTc >450ms (females), 430ms (males) • And any other significant ECG abnormality	• **<18 years:** QTc >460ms (female), 450ms (male) • **18+ years:** QTc >450ms (females), >430ms (males). • And no other ECG anomaly • Taking medication known to prolong QTc interval	• **<18 years:** QTc <460ms (female), 450ms (male) • **18+ years:** QTc <450ms (females), <430ms (males)
Biochemical abnormalities[42]	• Hypophosphataemia and falling phosphate • Hypokalaemia (<2.5mmol/L) • Hypoalbuminaemia • Hypoglycaemia (<3mmol/L) • Hyponatraemia • Hypocalcaemia • Transaminases >3x normal range • Inpatients with diabetes mellitus: HbA1C >10% (86mmol/mol)		
Haematology	• Low white cell count • Haemoglobin <10g/L		
Disordered eating behaviours	Acute food refusal or estimated calorie intake <500kcal/day for 2+ days		

	Red: High impending risk to life	Amber: Alert to high concern for impending risk to life	Green: Low impending risk to life
Assessment of hydration status	• Fluid refusal • Severe dehydration (10%): reduced urine output, dry mouth, postural BP drop (see above), decreased skin turgor, sunken eyes, tachypnoea, tachycardia	• Severe fluid restriction • Moderate dehydration (5–10%): reduced urine output, dry mouth, postural BP drop (see above), normal skin turgor, some tachypnoea, some tachycardia, peripheral oedema	• Minimal fluid restriction • No more than mild dehydration (<5%): may have dry mouth or concerns about risk of dehydration with negative fluid balance
Temperature	<35.5°C tympanic or 35.0°C axillary	<36°C	>36°C
Muscular function[39]: SUSS Test	Unable to sit up from lying flat, or to get up from squat at all or only by using upper limbs to help (Score 0 or 1)	Unable to sit up or stand from squat without noticeable difficulty (Score 2)	Able to sit up from lying flat and stand from squat with no difficulty (Score 3)
Muscular function: Hand grip strength[40]	Male <30.5kg, Female <17.5kg (3rd percentile)	Male <38kg, Female <23kg (5th percentile)	Male >38kg, Female >23kg
Muscular function: MUAC[41]	<18cm (approx. BMI<13)	18–20cm (approx. BMI<15.5)	>20cm (approx. BMI >15.5)
Other clinical state	Life-threatening medical condition, e.g. severe haematemesis, acute confusion, severe cognitive slowing, diabetic ketoacidosis, upper gastrointestinal perforation, significant alcohol consumption	Non-life-threatening physical compromise, e.g. mild haematemesis, pressure sores	Evidence of physical compromise, e.g. poor cognitive flexibility, poor concentration

[39] No muscle function test has been researched in patients <18 years.
[40] https://pubmed.ncbi.nlm.nih.gov/19129352/
[41] https://pubmed.ncbi.nlm.nih.gov/12765671/

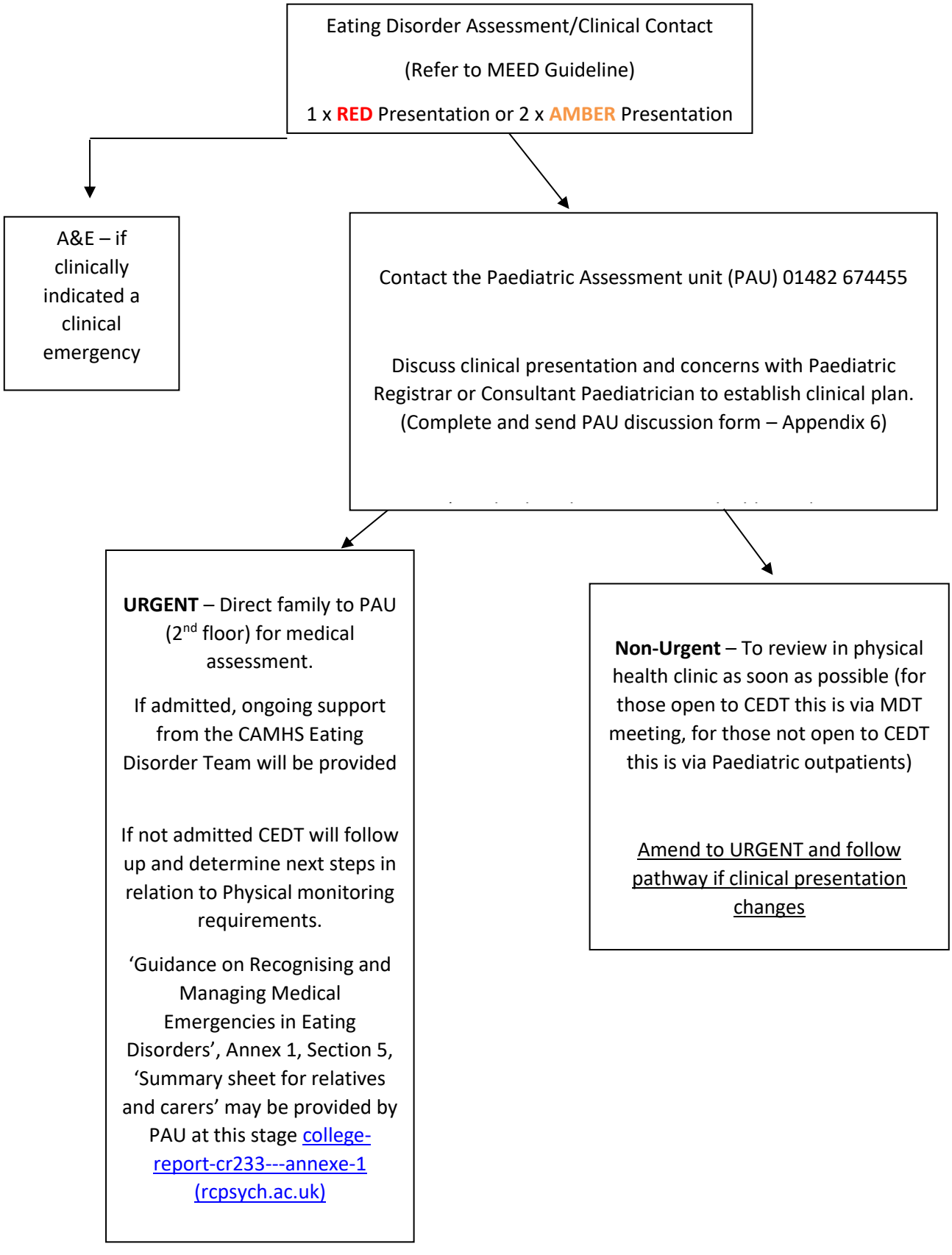
Table 1: Risk assessment framework for assessing impending risk to life

	Red: High impending risk to life	Amber: Alert to high concern for impending risk to life	Green: Low impending risk to life
Medical history and examination			
Weight loss	Recent loss of weight of ≥1kg/week for 2 weeks (consecutive) in an undernourished patient[34] Rapid weight loss at any weight, e.g. in obesity or ARFID	Recent loss of weight of 500–999g/week for 2 consecutive weeks in an undernourished patient[126]	Recent weight loss of <500g/week or fluctuating weight
BMI and weight	• Under 18 years: m%BMI[35] <70% • Over 18: BMI <13	• Under 18: m%BMI 70–80% • Over 18: BMI 13–14.9	• Under 18: m%BMI >80%[36] • Over 18: BMI >15
HR (awake)	<40	40–50	>50
Cardio-vascular health[37] [38]	Standing systolic BP below 0.4th centile for age or less than 90 if 18+, associated with recurrent syncope and postural drop in systolic BP of >20mmHg or increase in HR of over 30bpm (35bpm in <16 years)	Standing systolic BP <0.4th centile or <90 if 18+ associated with occasional syncope; postural drop in systolic BP of >15mmHg or increase in HR of up to 30bpm (35bpm in <16 years)	• Normal standing systolic BP for age and gender with reference to centile charts • Normal orthostatic cardiovascular changes • Normal heart rhythm

[34] Patients losing weight at higher BMI should be assessed for other signs of medical instability and weight loss strategies to determine risk.
[35] Also known as weight for height percentage.
[36] Note these do not denote a healthy weight but rather a weight above which other parameters in this risk framework may better reflect risk.
[37] https://pubmed.ncbi.nlm.nih.gov/24067349/
[38] https://www.nhlbi.nih.gov/files/docs/guidelines/child_tbl.pdf

Appendix 4 - Flowchart to Indicate Process of Referral for Physical Risk Management

(Agreed June 2018 between CAMHS ED team and HUTH Paediatric team, reviewed July 2022)



Appendix 5 - Factors Associated with the Risk of Refeeding Syndrome

Clinical feature	High risk level	Management
Extremely low weight	m%BMI <70% BMI <13[173]	Cautious refeeding
Prolonged low intake	Little or no intake for >4 days	Cautious refeeding
Deranged baseline electrolytes	Low potassium, phosphorus, magnesium	Measure levels up to twice per day initially and supplement as needed
Low white blood cell count	<3.8	Monitor
At risk for low thiamine The precise requirement for thiamine is not known.	Low thiamine and other vitamins	Pabrinex, oral thiamine. and multivitamins.

Appendix 6 - Micronutrient Replacement in Severe Anorexia Nervosa and Other Restrictive Eating Disorders

Supplementation	**Administration**
Pabrinex	Ampoules 1+2 by infusion202 over 30 minutes or Intramuscular203 administration
Thiamine (NICE 2006)	50mg four times daily
Vitamin B Co-Strong (NICE 2006)	1–2 tablets, three times daily
Balanced Multivitamin/Trace Element Preparation (e.g. Forceval) (NICE, 2004)	One capsule daily
Phosphate	500mg twice daily orally/via NGT (see text for <18s advice)

As per the table above the phosphate dose is dependent on age – see MEED guidelines for further details for prescribing.

Appendix 7 - Pathogenesis of Refeeding Syndrome

In Starvation
Insulin concentrations decrease and glucagon levels rise. As a consequence, glycogen stores are rapidly converted to glucose and gluconeogenesis is activated resulting in glucose synthesis from protein and lipid breakdown products.

The adipose tissue lipase is activated releasing large amounts of fatty acids and glycerol. Free fatty acids and ketone bodies replace glucose as the major energy source in starvation. In the starved state the catabolism of fat and muscle leads to loss of lean body mass, water and minerals.

During Re-feeding
There is a switch in metabolism from fat to carbohydrate with consequent insulin release, stimulated by the glucose load. With carbohydrate repletion and increased insulin production there is an increased uptake of glucose, phosphorus, potassium and water into cells, and a stimulation of anabolic protein synthesis. This can lead to marked hypophosphatemia, hypokalaemia and hypoglycaemia. If these occur, supplementation is required. Since these are predictable, close monitoring should prevent severe or unexpected results. Fluid overload can also occur, with peripheral oedema noticeable.

The only way to achieve medical stability is by giving nutrition. If symptoms of re-feeding occur, do not stop or reduce the feeds. Give supplements as needed and monitor slowly. There is a risk of underfeeding if feeds are stopped or reduced.