Anorexia Nervosa/Eating Disorders – Adult Clinical Guideline

Reference no.: CG-T/2024/153

1. Introduction

Anorexia nervosa (AN) has one of the highest mortalities of any psychiatric condition. These patients can rapidly deteriorate due to their psychological and physical health and should be managed by a multidisciplinary team with expertise in managing eating disorders (ED) in order to minimize complications and reduce risk of mortality.

Patient with severe AN (BMI<15) may require admission to University Hospitals of Derby and Burton NHS Foundation Trust (UHDB) for medical stabilization of their condition. In-patient admissions should be supported by an eating disorders psychiatrist. Medical management should be provided by a physician and dietitian.

Patients can be admitted under Section 3 of the Mental Health Act (MHA) and treated against their will. For this a qualified psychiatrist, another mental health worker and another doctor are required.

Patients can be admitted under Sections 2 or 3 of the Mental Health Act (MHA) and treated without their agreement, through lack of capacity with presence of severe mental illness, significant risk to health and need for treatment in hospital to prevent deterioration. For this a MHA Section 12 Approved Doctor, second doctor and Approved Mental Health Practitioner (AMHP) assess and agree on the necessity for admission and treatment under the MHA.

Other eating disorders also pose significant health risks including bulimia nervosa, avoidant restrictive food intake disorder (ARFID) and binge eating disorder; plus, additional disordered eating behaviours that do not meet specific clinical diagnostic criteria. These diagnosis may lead to serious medical consequences requiring the application these guidelines.

This guideline is aimed for patients admitted to an adult medical ward and is based on the medical emergencies in eating disorders (MEED) 2022.

2. Aim and Purpose

This guideline aims to ensure safe management of patients with ED to reduce risk of complications and mortality. It is beyond the scope of this document to cover diagnosis of AN, or the management of other eating disorders.

For further information regarding the recognition and management of eating disorders including AN, consult the MEED (Medical Emergencies in Eating Disorders) guidance and NICE guideline (NG69): Eating disorders: recognition and treatment:

https://www.rcpsych.ac.uk/docs/default-source/improving-care/better-mh-policy/college-reports/college-report-cr189.pdf?sfvrsn=6c2e7ada_2 **Overview | Eating disorders: recognition and treatment | Guidance | NICE**

Contents:

1. Criteria for admission

2. In-Patient Management of medical emergencies in ED

3.1.Aims/Goals

3.2.Medical management

3.3.Dietetic management

3.4.Nursing management

3.5.Psychological management

3.6.Use of Mental Health Act

3.7.Behavioural management

4. Discharge planning

5. References

6. Document Controls

3. Definitions, Keywords

AN - anorexia nervosa

BMI - body mass index

CRP - C reactive protein

CVP - central venous pressure

ECG - electrocardiogram

ED - eating disorder

EDS - Eating Disorders Service

FBC - full blood count

IV - intravenous

kg - kilogram

LFT - liver function tests

MCA - Mental Capacity Act

MHA - Mental Health Act

ml - millilitre

MPAC's - Multi-Professional Approved Clinicians

NGT - naso-gastric tube

PN = parenteral nutrition

QHB - Queen's Hospital Burton

RDH - Royal Derby Hospital

SEDU - specialist eating disorder unit

SUSS - sit up squat stand

UHDB - University Hospitals of Derby and Burton NHS Foundation trust

U+E - urea and electrolytes

4. Main body of Guidelines

1. Criteria for Admission to UHDB

If an elective admission to hospital is being considered, this should be discussed with the Nutrition Team Consultant/gastroenterologist at UHDB and the consultant psychiatrist from the local Eating Disorders Service, who will determine the best course of action for the patient. Options for admission include:

- Admission to a Specialist Eating Disorder Units (SEDU)
- Admission to a general psychiatric unit
- Admission to the luminal gastroenterology ward (305 at RDH, ward 8 at QHB)

The decision depends on a number of factors including the physical state of the patient, their mental health presentation and associated treatment needs, the availability of beds and the services that can safely be provided by the units available.

In general, patients with severe ED should be managed by a SEDU unless they require

- medical services that the SEDU cannot provide.

Services that patients may require include:

- Nasogastric insertion and feeding
- Daily biochemical tests
- Frequent nursing observations
- Prevention of symptomatic behaviours (e.g. water drinking, absconding,

- exercising etc)
- Daily ECG
- Sedation of a resisting patient
- Use and management of mental health legislation
- Treatment of pressure sores
- Cardiac resuscitation
- Intravenous fluids (not usually provided by SEDUs)
- Artificial ventilation (not usually provided by SEDUs)
- Cardiac monitoring (not usually provided by SEDUs)
- Central venous pressure (CVP) lines (not usually provided by SEDUs)
- Parenteral nutrition (PN) (not usually provided by SEDUs)
- Treatment of serious medical complications (not usually provided by
- SEDUs)

The needs of the patient must be matched with what the unit can provide.

Reasons for admission to UHDB include:

- medical stabilisation and treatments that SEDU cannot provide
    - e.g. severe electrolyte imbalance, severe malnutrition, severe dehydration, signs of incipient organ failure
- urgent treatment required and no SEDU bed available.
- Admission should be direct to UHDB ideally during working hours
- Admissions following an agreement between eating disorder service and UHDB

2. In-Patient Management of medical emergencies in ED

Patients with medical emergencies in ED should be managed on the luminal gastroenterology ward

(305/ward 8) and be under the care of the ward consultant.

Immediate referrals should be made to:

- Nutrition team consultant (if not already aware)
- The Eating Disorders Service for patients open to the service
- The liaison psychiatry team who can liaise with the Eating Disorders Service for patients not known/open to the Derbyshire ED service
- Ward dietitians

The aim of admission is to:

- Safely re-feed the patient
- Avoid re-feeding syndrome caused by too rapid re-feeding
- Avoid underfeeding syndrome caused by too cautious rates of re-feeding
- Manage, with the help of psychiatric staff, the behavioural problems common in patients with anorexia nervosa/eating disorder, such as sabotaging nutrition
- Occasionally to treat patients under compulsion (using sections 2 or 3 of The Mental Health Act)
- Manage family concerns

- Arrange safe discharge with appropriate follow up or transfer for further treatment as needed

3.1 Aims/Goals

Early in the admission agreement should be documented between the medical and EDS for expectation of admission. This should be communicated to the patient. Relevant multi-disciplinary meetings may be required more frequently, depending on the severity of the presentation.

Regular reviews should be scheduled to review progress against set aims and to discuss discharge plans. Patients should not be managed as in-patients for any longer than is absolutely necessary.

3.2 Medical Management

Patients with medical emergencies in eating disorders can seem deceptively well which can falsely reassure clinicians.

The MEED risk assessment framework for assessing impending risk to life can be used to aid decisions on treatment and the clinical management of patients (p 31 college-report-cr233-medical-emergencies-in-eating-disorders-(meed)-guidance.pdf (rcpsych.ac.uk))

The following baseline assessments should be undertaken and documented in the medical notes:

- **BMI (weight kg/height m^2):** Low risk >15
Medium risk 13–14.9
High risk <13
- **History of weight loss:** Recent weight loss over 2 consecutive weeks
- **Blood Tests:**
  - FBC
  - U&Es
    - Low sodium: suspect water loading (<130 mmol/l high risk) or occult chest infection with associated SIADH
    - Low potassium: vomiting or laxative abuse (<2.5 mmol/l high risk)
    - NB. Low sodium and potassium can occur in malnutrition with or without water loading or purging
    - Raised urea or creatinine: the presence of any degree of renal impairment vastly increases the risks of electrolyte disturbances during re-feeding and rehydration (although both are difficult to interpret when protein intake is negligible and muscle mass is low)
  - Magnesium
  - Phosphate
  - Calcium
  - Albumin
  - CRP
  - LFTs (Raised transaminases >3x normal range)
  - Glucose
    - hypoglycaemia: blood glucose <3.0 mmol/l. If present suspect occult infection, especially with low albumin or raised CRP
    - patients with diabetes mellitus HbA1C (>10%; 86mmol/mol)
    - ketones if type 1 diabetes mellitus

- Amylase
- Iron
- Ferritin
- Vitamin B12
- Folate
- Vitamin D
- Thyroid function

- **ECG:**
  - Bradycardia
  - Raised QTc (>450 ms female, > 430 ms male)
  - Non-specific T-wave changes
  - Hypokalaemic changes

- **Physical Examination, measure vital signs (increased risk levels in brackets):**
  - Heart rate (<40 bpm high risk, 40-50 bpm medium risk)
  - Blood pressure (systolic <90 mmHg or postural drop >20mmHg in systolic)
  - Core temp (<35.5 ºC high risk, <36 ºC medium risk)
  - Check for signs of hepatomegaly
  - Assessment of hydration status (5-10%) and document if drinking fluids
  - Sit-Up-Squat-Stand (SUSS) test: scores of 2 or less, especially if scores falling (see below for details of assessment and scoring)

SUSS (Sit-Up-Squat-Stand) test

1. Sit-up: patient lies down flat on the floor and sits up without, if possible, using their hands.
2. Squat– Stand: patient squats down and rises without, if possible, using their hands.
3. Scoring (score SUSS tests separately):

	Score
Unable	0
Able only using hands to help	1
Able with noticeable difficulty	2
Able with no difficulty	3

High risk score:0-1

Medium risk score:2

Low risk score: 3 and above

Further guidance on SUSS can be found on MEED guideline.

Monitoring

Once baseline investigations are documented, they should be repeated as follows:

Daily	U+Es, phosphate, calcium, magnesium (***daily for 7 days, twice weekly thereafter if normal)*** Glucose by BM stix before main meals
Twice weekly*	Weight, FBC, LFTs, U+Es, phosphate, calcium, magnesium
Monthly*	ECG Copper, Zinc (if required)

*or more frequently if abnormal

IV infusions

IV fluid replacement may be necessary but be careful to avoid fluid overload. Beware of the possibility of renal impairment with urea and creatinine which appear to be only modestly elevated, and the danger of serious electrolyte disturbance during rehydration.

Carbohydrates in intravenous fluids need taking into consideration.

Refeeding Syndrome

Refeeding syndrome is a potentially fatal condition and can occur in patients who have severely restricted their intake, and who then go on to have large amounts of oral, enteral or parenteral nutrition administered. It is characterized by rapid reductions in phosphate, potassium and magnesium. Its resulting effects include cardiac compromise, respiratory failure, liver dysfunction, central nervous system abnormalities, myopathy and rhabdomyolysis.

Avoidance of the syndrome can be achieved by assessing all patients with ED for refeeding syndrome using the Trust's refeeding syndrome guideline (Reference No: CG-T/2013/032 v 3.0.0).

Treatment will involve:

- administering supplementary thiamine/B vitamins (PO or IV according to risk
- level)
- monitoring and replacement of electrolytes as indicated
- gradually increasing nutritional intake as directed by the dietitian

Sedation

Use only where absolutely essential. Use oral or parenteral benzodiazepines at the lowest effective dose for the shortest possible period of time and should be done in consultation with senior clinical decision maker.

All sedatives risk causing complications including hypotension and respiratory arrest, in a profoundly malnourished patient.

ITU

Frequent monitoring in ITU/HDU for the most severely compromised patients may be required. Escalation to ICU: an escalation decision should be clearly documented in the medical notes

3.3 Dietetic Management

Referral should be made to ward dietitians to provide a nutrition care plan, which may include oral nutritional supplementation and/or naso-gastric tube (NGT) feeding.

Patients may be accepting of an NGT if its indication is clearly explained. However, some patients may lack capacity, resist weight gain by any means, and compulsory treatment may be required under the Mental Health Act.

Dietetic Assessment

Food and fluid charts should be completed to assess adequacy of intake. Consider keeping any paper nursing forms outside of the bay/room in order that patients cannot amend the documentation.

Nasogastric tube (NGT) feeding

This may be required if oral intake is inadequate and should not be delayed. NGT feeding should be considered if the patient:

- Is unable to achieve orally adequate food and fluid intake to stabilise and restore physical health
- Is unable to eat at all but is accepting of NGT
- Has life-threatening weight loss (BMI <13) or is in immediate danger due to physical deterioration
- Has clinical or biochemical instability (including those associated with refeeding syndrome)

Insertion against the will of the patient should be done using the least restraint possible. This may require the presence of mental health nurses trained in safe control and restraint techniques, and psychiatric advice. Tampering with NGT feeding is common in the attempt to avoid nutritional intake. Patients should be adequately monitored for behaviours such as:

- Tube removal/displacement/cutting
- Disconnecting giving sets or cross threading connections
- Letting feed run into toilet, sink, bed sheets etc
- Tampering with feeding pump rates or pump locks

Nasal retention devises should not be used as standard practice and require careful clinical consideration if used in this patient group.

Other feeding routes such as naso-jejunal tube (NJT), percutaneous endoscopic gastroscopy (PEG) and Parenteral Nutrition (PN) should only be considered if there is clear clinical indication for these and are not typically used in the nutritional management of medical emergencies in eating disorders.

Nutritional Requirements

Nutritional requirements will vary depending on the patient's intake prior to admission and the severity of malnutrition. Medical inpatients can be very unwell and may be at greater risk of refeeding syndrome. A more cautious calorie intake may therefore be required; however, 'underfeeding' should be avoided as it will prolong the acute risk of potentially life-threatening undernutrition.

Low carbohydrate and high phosphate feeding may be of benefit to meet calorie requirements without inducing refeeding syndrome.

The risk of refeeding syndrome should be assessed and feeding commenced according to this. High risk patients include:

- Extremely low body weight (BMI <13)
- Prolonged low intake (>4 days little or no intake)
- Substantial abnormalities in baseline electrolytes
- Significant ECG abnormalities
- Active comorbidities, infections etc
- Significant comorbidities especially cardiac, including heart failure

High risk patients should start refeeding 10-20kcal/kg/day and medium to low risk patients 30-35kcal/kg.

All patients should have feed increased by 5kcal/kg every 2 days to 60kcal/kg or more and weight gain (0.5 -1kg/week) is achieved.

Feeding may need to consider specific dietary needs such as veganism. It is recognised that this may be part of the eating disorder pathology, but the dietitian can advise on suitable feed products available for use.

Fluid requirements

The total fluid intake can easily exceed safe levels, and the recommendation is 25-30ml/kg/24 h of fluid from all source's as re-feeding oedema is well recognised. Strict fluid monitoring is required. (NICE CG 174)

3.4 Nursing Management

Avoid placing patients in side rooms to ensure adequate supervision and safe nursing environment.

Staff should ensure that if there is more than one patient with an ED on the ward, they should not be placed in the same bay as this can lead to collusive & competitive behaviour.

Additional 1:1 nursing support is often required in the following situations where the patient is:

- Tampering with feed or infusion
- Self-harming
- Extremely distressed
- Aggressive
- Undertaking excessive exercise (including covert behaviour and 'microexercising').

Exercise/activity

Enforced total bed rest is no longer felt to be helpful and therefore not necessary. Risks relating to enforced bed rest include psychological distress and physical complications such as pressure sores, infections, deep vein thrombosis, muscular atrophy and increased bone absorption.

Restriction of excessive activity with an explanation of the rationale and offering alternatives is helpful. It is important to keep the patient warm and supervised to prevent dysfunctional exercise. Assessment of functional abilities, transfers and mobility are required to ensure the individual is safe to engage in functional tasks and the level of support or assistance required. For example, an individual may be at risk of falls, having reduced balance and stability and may therefore require assistance to mobilise within the bed space or to the bathroom.

Arrangements for toileting and washing will need to be considered to prevent excessive exercise, such as supervised bath or shower/ unlocked bathroom or toilet doors, but with provisions for privacy. These interventions are intrusive and need to be explained, documented, and maintained with consistency if necessary.

Weight monitoring

The recommendation for weighing a patient successfully is twice a week and preferably before breakfast, after the toilet and in light clothing. Recognise the patient may not want to know.

3.5 Psychological Management

On admission, assessment of mental state is required, focusing on ideas self-harm and/or suicide as well as ideas and behaviours aimed at weight loss. The patient's mental health should be kept under review throughout the admission.

Patients with autism can also present with eating disorders and autistic traits may have an impact on treatment response and outcome. Patients should be assessed on an individual patient basis and adaptions may need to be made. Evidence based methods such as PEACE pathway can be helpful. PEACE Pathway - Home

3.6 Use of MHA/mental capacity act (MCA)

Use of the Mental Health Act 1983 (2007) may be necessary for compulsory treatment for patients with severe mental disorder who are physically ill and refusing treatment and/or lacking capacity. Under the MHA, feeding is recognised as treatment for e.g. Anorexia Nervosa and can be done against the will of the patient as a life-saving measure. For previously unknown patients presenting with severe physical risk, Section 2 (MHA) enables assessment and initial treatment up to 28 days, including establishment of further treatment plan for mental disorder as needed. Section 3 (MHA) allows treatment of mental disorder and its physical sequelae for up to 6 months, in known patients.

The tests for compulsory admission and treatment are:

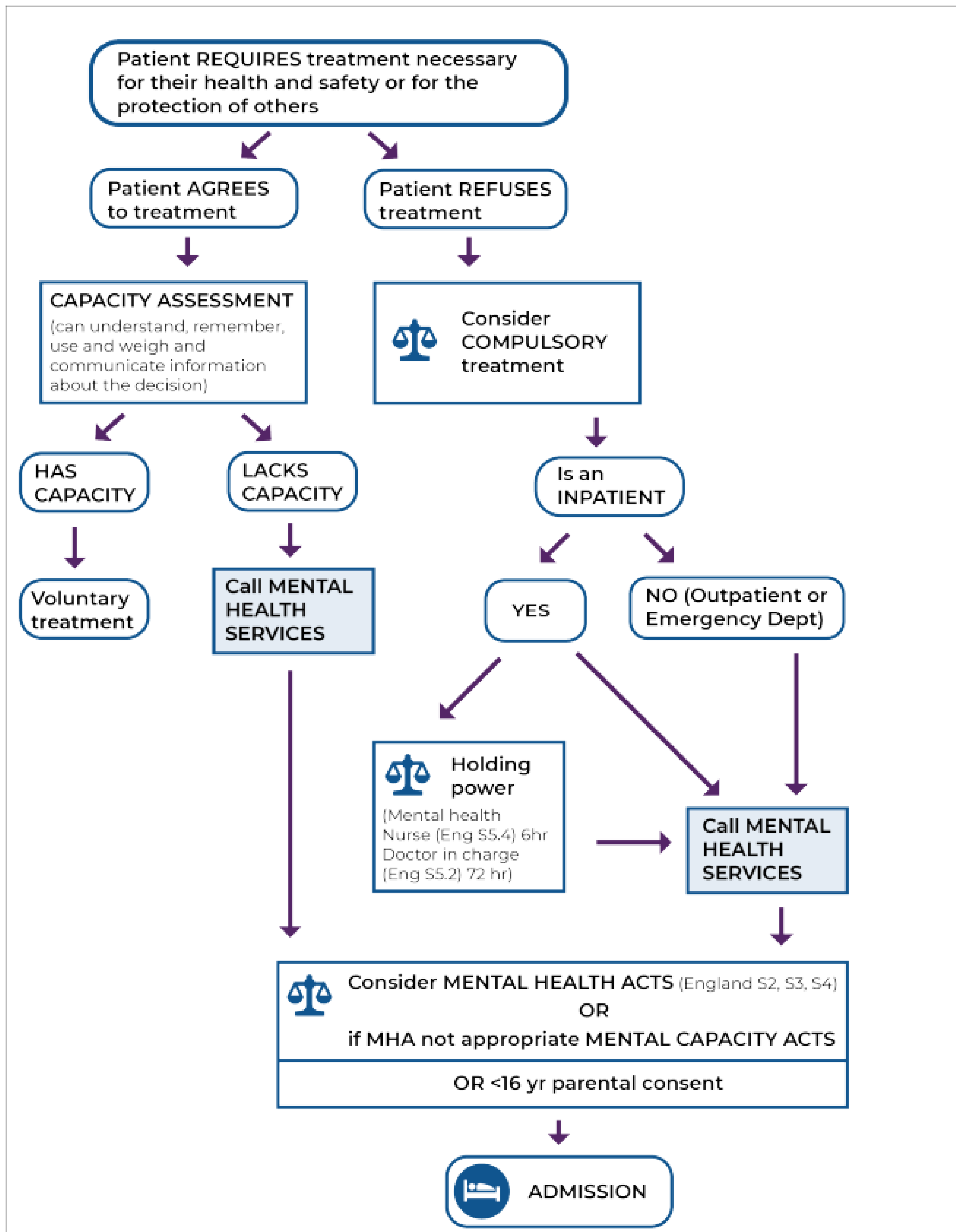
- the presence of a severe mental disorder (e.g. anorexia nervosa)
- the condition presents a risk to the health or safety of the patient
- in-patient treatment is appropriate (e.g. for re-feeding)

The decision for use of the MHA should be considered from the outset, for example, in a patient refusing treatment in an accident and emergency unit. If medical staff suspect that this course of action may be necessary, liaison psychiatric services should be contacted. If the medical consultant is not satisfied with the opinion given, there should be direct contact between the medical consultant and the consultant psychiatrist, and the issue escalated until the patient's treatment is safe. Where immediate life-saving treatment is necessary in a patient lacking capacity, treatment should not be delayed and can be provided under the Mental Capacity Act, then advice for further treatment sought from the Liaison Psychiatric Team.

Medical consultants can no longer be the Responsible Medical Officer for a patient detained under the MHA (1983). The equivalent role under the amended Act (2007), i.e. the Responsible Clinician must be an Approved Clinician. Approved Clinicians are Consultant Psychiatrists or Multi-Professional Approved Clinicians (MPACs) employed under Derbyshire Healthcare NHS FT, with service level agreements to take on RC responsibilities for patients detained under MHA in the Acute Trust.

If there are concerns about risk and the person is trying to leave/refusing to stay, the Doctor's Holding Power, i.e. Section 5 (2) can be invoked. A subsequent MHA assessment will then need to be carried out.

If there are concerns regarding mental capacity, a capacity assessment should be undertaken as per UHDB policy. The below diagram from MEED guides decision making when assessing the need for compulsory treatment.



3.7 Behavioural Management

The seriously ill patients with an eating disorder may manifest behaviours which compromise their treatment, such as micro-exercising and disposal of food.

Behavioural problems are among the most difficult and urgent to manage. A key factor is the provision of adequate psychiatric and medical nursing staff.

The patient should be made aware that staff are knowledgeable about potential weight loss behaviours to create a safe nursing environment.

4 Discharge Planning

It is important that patients do not stay in medical settings longer than necessary.

Review at regular intervals whether the patient can be stepped down to a less intensive setting.

The MDT should be agreement at what point discharge is deemed clinically safe.

The discharge plan should be agreed with EDS, which may include transfer to a specialist eating disorder unit.

Discharge Communication

Patients being transferred from one service to another may require additional support to ensure safe transfer. This made on a case-by-case basis.

5 References

Medical emergencies in eating disorders (MEED): guidance on recognitions and **management. CR233, May 2022**

NICE Guideline (NG69) Eating disorders: recognition and treatment. 2020

NICE CG 174 Intravenous fluid therapy in adult patients in hospital 2017

6 Document control

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