IAEM Clinical Guideline X

Guideline for the assessment and management of patients with suspected or confirmed eating disorders in the emergency department

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EMERGENCY MEDICINE

DISCLAIMER

IAEM recognises that patients, their situations, Emergency Departments and staff all vary. These guidelines cannot cover all clinical scenarios. The ultimate responsibility for the interpretation and application of these guidelines, the use of current information and a patient's overall care and wellbeing resides with the treating clinician.

GLOSSARY OF TERMS

ECG	Electrocardiogram
BMI	Body Mass Index
AN	Anorexia Nervosa
BN	Bulimia Nervosa
BED	Binge Eating Disorder
SUSS test	Sit-up/Squat-stand test

TIDE Type 1 diabetes and eating disoders

Guideline for the assessment and management of adult patients with suspected or confirmed eating disorders in the emergency department

INTRODUCTION

Eating disorders are a group of mental disorders that are characterised by serious disturbance in eating behaviour and weight regulation as a result of core psychopathology around eating and body image.

They are associated with cardiac arrhythmias, refeeding syndrome and suicidal ideation, and affect a wide demographic irrespective of gender, age, social class and ethnicity. It is not uncommon for eating disorders to remain undetected, and patients may engage in masking behaviour to avoid detection.

Emergency care clinicians have an important role in the recognition, assessment, and management of patients with eating disorders. Data from the UK has shown that people with eating disorders are 1.6 times more likely to attend emergency departments (EDs). Furthermore, up to 16% of 14-20 year old's attending the ED have an eating disorder and 43% of frequent attenders had an eating disorder on screening.

Given the challenges in recognition and complexity of management, this guideline collates expert opinion to offer a standardized evidence-based approach to patients who present to the ED with suspected eating disorders.

The guideline builds on work done by the HSE National Clinical Programme for Eating Disorders and references the Royal College of Psychiatrists standard document "Medical Emergencies in Eating Disorders: Guidance on Recognition and Management".

PARAMETERS

Target audience: This guideline should be used by all members of the multidisciplinary team involved in the acute assessment and management of adult patients in the emergency department including, but not limited to:

- Emergency medicine doctors
- Emergency care nurses
- Medical social workers
- Psychiatry team including doctors, liaison nurses
- Dietitians
- Physicians

Patient population: The target patient population for this guideline patients presenting to an emergency department with suspected/ confirmed eating disorder.

AIM

The aim of this guideline is to ensure a safe, standardised and evidence-based approach to assessment and management of patients presenting to an emergency department with suspected/ confirmed eating disorder.

Classification of Eating Disorders

ICD-11 is the classification used for feeding or eating disorders (Table 1).

Table 1: Classification of feeding or eating disorders

Anorexia Nervosa	Anorexia Nervosa is characterised by significantly low body weight for the individual's height, age and developmental stage that is not due to another health condition or to the unavailability of food. A commonly used threshold is body mass index (BMI) less than 18.5 kg/m2 in adults and BMI-for-age under 5th percentile in children and adolescents. Rapid weight loss (e.g. more than 20% of total body weight within 6 months) may replace the low body weight guideline as long as other diagnostic requirements are met.
Bulimia Nervosa	Bulimia Nervosa is characterised by frequent, recurrent episodes of binge eating (e.g. once a week or more over a period of at least one month). A binge eating episode is a distinct period of time during which the individual experiences a subjective loss of control over eating, eating notably more or differently than usual, and feels unable to stop eating or limit the type or amount of food eaten. Binge eating is accompanied by repeated inappropriate compensatory behaviours aimed at preventing weight gain (e.g. self-induced vomiting, misuse of laxatives or enemas, strenuous exercise).
Avoidant-Restrictive Food Intake Disorder	Avoidant-restrictive food intake disorder (ARFID) is characterised by avoidance or restriction of food intake that results in: 1) the intake of an insufficient quantity or variety of food to meet adequate energy or nutritional requirements that has resulted in significant weight loss, clinically significant nutritional deficiencies, dependence on oral nutritional supplements or tube feeding, or has otherwise negatively affected the physical health of the individual; 2) significant impairment in personal, family, social, educational, occupational or other important areas of functioning (e.g.,due to avoidance or distress related to participating in social experiences involving eating).
Pica	Pica is characterised by the regular consumption of non-nutritive substances, such as non-food objects and materials (e.g., clay, soil, chalk, plaster, plastic, metal and paper) or raw food ingredients (e.g., large quantities of salt or corn flour) that is persistent or severe enough to require clinical attention in an individual who has reached a developmental age at which they would be expected to distinguish between edible and non-edible substances (approximately 2 years).
Rumination-Regurgitation Disorder	Rumination-regurgitation disorder is characterised by the intentional and repeated bringing up of previously swallowed food back to the mouth (i.e., regurgitation), which may be re-chewed and re-swallowed (i.e. rumination), or may be deliberately spat out (but not as in vomiting).
Other Specified Feeding or Eating Disorders	The presentation is characterized by abnormal eating or feeding behaviours. The symptoms do not fulfil the diagnostic requirements for any other disorder in the Feeding or Eating Disorders grouping.

Refeeding syndrome

Emergency care clinicians need to assess their patients to determine if they are at risk of refeeding syndrome which is a medical emergency.

Refeeding syndrome is a rare but potentially fatal condition that can affect malnourished patients who have engaged in prolonged fasting in the early stages of refeeding.

The person's metabolism switches from a catabolic to an anabolic state and, as a result of this flux, they may experience severe shifts in their fluid and electrolyte balance, particularly with regard to phosphate, potassium, magnesium and sodium, as well as glucose and other electrolytes. The drop in phosphate in particular can result in severe cardiopulmonary, neuromuscular and cognitive dysfunction.

Symptoms include arrhythmia, cardiac failure, confusion, seizures and coma. Death can occur as a result of cardiac arrhythmia and failure, multi-organ failure and acute respiratory distress.

Refeeding syndrome also occurs in non-eating-disordered conditions that cause starvation. Micronutrients and vitamins, such as thiamine, are depleted on starvation and once feeding is reintroduced, remaining stores are utilised rapidly. Deficiency in thiamine can manifest as Wernicke's encephalopathy or Korsakoff's Psychosis.

Fluid retention is common. Cardiac decompensation and neuromuscular dysfunction may develop. If left untreated, convulsions and coma may follow.

RISK ASSESSMENT IN THE ED

A full clinical history and collateral history needs to be taken. It is important when communicating with patients with eating disorders to use language that is compassionate and non-stigmatising.

Emergency care clinicians are advised to use the Royal College of Psychiatrists' risk assessment framework for assessing medical emergencies in eating disorders (adapted for use for emergency care clinicians) Appendix 1.

The framework is a guide to risk assessment and cannot replace proper clinical evaluation. However, a patient with one or more red ratings or two or more amber ratings should probably be considered high risk.

Assessment of the adolescent patient

The use of the HEADSSS assessment is encouraged to structure the assessment of an adolescent patient, encompassing home, education/employment, activities, drugs, sex and relationships, self-harm and depression, safety and abuse (Appendix 1).

Physical exam

A full physical exam should be performed in the usual manner as patients with eating disorders can have a large number of physical problems.

Some points on the physical exam to be considered:

- **Emaciation**: the patient may look cadaverous and be covered with fine downy 'lanugo' hair.
- **Hypothermia:** The patient may be shivering and be found to have hypothermia (core temperature <35°C).
- **Weakness:** the patient may be unable to sit up or may show weakness on the sit-up/squat–stand (SUSS) test (see below-Figure 1).
- **Bradycardia**: low heart rate: a rate of less than 40 bpm, while awake, has been thought to indicate higher risk.
- **Postural hypotension**: a large drop in blood pressure on standing, accompanied by symptoms of dizziness or faintness, indicates that the cardiovascular system is severely affected.
- **Delayed gastric emptying:** the stomach slows down in anorexia nervosa, and the patient can have a very dilated stomach, which occasionally can rupture if a large meal or a binge is ingested.
- Oral examination to include **dental hygiene**.
- Assessment of **hydration status**.

Body Mass Index

Monitoring of body weight is a vital measure of risk in patients with eating disorders.

Body Mass Index (BMI) is calculated as the person's weight in kilograms divided by their height in metres squared, i.e. BMI = weight (kg)/ height (m^2).

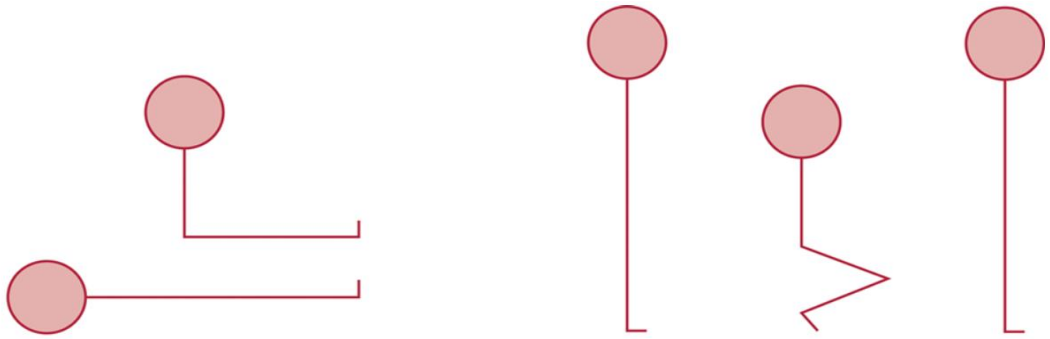
BMI has its limitations as a risk measure since it can easily be manipulated by fluid-loading and hiding weights in one's clothing, and efforts should be made to minimise and control for such behaviours where possible.

BMI assessment for patients under 18 years must be age-adjusted.

Sit-up/squat–stand (SUSS) test

In the ED you may wish to observe whether the patient has any difficulty with getting up from a chair or examining couch. More formally, clinicians can ask the patient to perform the SUSS test (pictured) and document the score in the ED clinical records.

Figure 1: Sit up-Squat-Stand (SUSS) 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

Scoring (for sit-up and squat–stand tests separately)
0: Unable
1: Able only using hands to help
2: Able with noticeable difficulty
3: Able with no difficulty

Mental state examination

Where applicable, a mental state examination should be performed in the usual manner.

Table 1: Checklist of 'lightbulb' signs indicating increased severity of presentation (adapted from the Royal College of Psychiatrists' Medical emergencies in eating disorders (MEED) College Report (CR233))

Realm of enquiry	Finding	Notes
History	Rapid weight loss	>1kg per week for 2 consecutive weeks
	Acute food refusal	Seek expert advice if >24 hours
	Frequent vomiting	Can lead to hypokalaemic alkalosis
	Muscle weakness	E.g. difficulty climbing stairs
	Faints, chest pain, short of breath	Can accompany cardio-respiratory malfunction
	Little urine output	Can mean renal shut-down
	Intractable constipation	Can mean colonic atony
	Suicidal thoughts	Can lead to suicidal behaviour
Examination	BMI <13, or m%BMI <70 in <18 years	Also depends on rate of weight loss
	Pulse <40, postural hypotension with recurrent syncope	
	Core temp <35.5o	
	Muscle weakness (SUSS, HGS, MUAC tests)	
Investigations	Any significant ECG abnormality	
	Hypokalaemia	<2.5mmol/L
	Hyponatraemia	Can mean water-loading
	Urine SG <1.010	Can mean water-loading
	Low phosphate	If patient is being refed or has recently binged, this can mean refeeding syndrome
	Raised transaminases	Usually due to malnutrition; monitor and only investigate if there is a continued rise
	Hypoglycaemia Glucose <3mmol/L	Can occur in extreme starvation often with exercise; patient usually ketotic

Special considerations: Type 1 diabetes and eating disorders (T1DE)

People with diabetes have been shown to be at risk for disordered eating compared to their non-diabetic peers.

The proposed diagnostic criteria for T1DE is people with type 1 diabetes who present with all three criteria:

1. Intense fear of gaining weight, or body image concerns, or fear of insulin promoting weight gain.
2. Recurrent inappropriate direct or indirect* restriction of insulin (and/or other compensatory behaviour**) to prevent weight gain.
3. Presenting with a degree of insulin restriction, eating or compensatory behaviours that cause at least one of the following:
    - harm to health
    - clinically significant diabetes distress
    - impairment on daily functioning.

* Indirect restriction of insulin refers to reduced insulin need/use due to significant carbohydrate restriction.

** Dietary restriction, self-induced vomiting, laxative use, excessive exercise, over-use of thyroid hormones, over-use of diabetes medication believed to avoid weight gain or promote weight loss.

Table 3**: Red flags for T1DE** (adapted from the Royal College of Psychiatrists' Medical emergencies in eating disorders (MEED) College Report (CR233))

Biochemical	Increase in HbA1c above 86mmol/mol or erratic blood glucose levels Multiple emergency department or ward admissions with hyperglycaemia, diabetic ketoacidosis (DKA). Recurrent ketonaemia (>3mmol/L) – may have compensated metabolic acidosis. Recurrent severe hypoglycaemia (two or more episodes over 24 months).
Beliefs, behaviours and functioning	Over-exercising. Impaired awareness of hypoglycaemia. Extreme dietary restriction or binge eating. Weight loss history (weight loss in line with Medical Emergencies in Eating Disorders guidance criteria) or fear of weight gain. Body image concerns. History of eating disorder diagnosis. Diabetes distress. Fear of hypoglycaemia. Mental health comorbidity (e.g. depression, generalised anxiety disorder).
Relationships	Secrecy about diabetes management, failure to request regular prescriptions, disengagement from diabetes services Poor school/work performance/attendance Conflict at home around meals and eating/diabetes management

Capacity/ refusal to accept treatment

A formal assessment of capacity may need to be documented in the clinical records particularly if there is a query if the patient has the capacity to make treatment decisions? This is generally done by the most senior clinician available in the ED.

The four elements to assessing capacity are as follows:

1 Can the patient understand the information relevant to the decision?

2 Can the patient retain the information?

3 Can the patient use or weigh the information?

4 Can the patient communicate the decision she wishes to make?

Any concern regarding capacity of the patient and/or that the patient is refusing treatment should be discussed with the relevant consultant.

Treatment in the emergency department

All patients should be treated in the usual manner: analgesia, anti-emetics and intravenous fluids should be administered as clinically indicated.

Please note some drug doses, for example intravenous paracetamol, may need to be adjusted in patients with low BMI. Please refer to medication formularies.

Table 4: **Guidance on management of clinical findings** (adapted from the Royal College of Psychiatrists' Medical emergencies in eating disorders (MEED) College Report (CR233))

Check for/measure	When to be concerned	Specific management
Heart rate	<40bpm awake, or symptomatic postural tachycardia	Nutrition, monitor ECG
ECG	Prolonged QTc, heart rate <40bpm, arrhythmia associated with electrolyte disturbances	Nutrition and correct electrolyte abnormalities, increased QTc – bed rest, discuss with cardiologist
BP	Systolic BP<90 or <0.4th percentile. Syncope	Nutrition andrest until postural hypotension improved; echocardiogram likely to be abnormal while malnourished
Hypothermia	<35.5	Nutrition, blankets, may need space blanket
Hypovolaemia	Tachycardia or inappropriate normal heart rate in undernourished person, hypotension and prolonged capillary refill time	Normal saline 10ml/kg bolus, then review. If IV fluids are used then these should usually be normal saline with added KCl, with added electrolytes, e.g. phosphate, as required
Hypokalaemia	<3.0mmol/L	Correction; Consider IV initially if <2.5mmol/L
Hyponatraemia		Specialist nursing supervision to prevent water-loading. IV correction as per local protocols, proceed with caution.
Other electrolyte abnormalities	Check phosphate, magnesium, calcium. Consider refeeding syndrome	Correct as per local protocols
Hypoglycaemia	Occurs in very severe emaciation due to low glycogen stores, Usually accompanied by ketones.	Check for additional (e.g. sepsis) or alternative (Addison's disease, insulin abuse) diagnoses. If symptomatic, e.g. coma, give IV glucose.

Parenteral vitamins B and C

Intravenous Pabrinex® should be considered in patients with severe depletion or malabsorption.

Oral thiamine should be considered in patients with milder presentations.

Role of psychological medicine/ psychiatry in the emergency department

Early referral to psychological medicine/ psychiatry as per local policy is advisable if indicated.

Role of medical social worker in the emergency department

A referral can be made to the Medical Social Work Department (if this is deemed appropriate).

Consider if there are any identified social issues that are felt to be contributing to the patient's presentation.

For example, for patients under the aged of 18 years, are there any child protection or welfare concerns.

For patients over 18 years, are there any ongoing family issues, child protection concerns or addiction issues.

This is not an exhaustive list. If unsure, please contact your local medical social work department to discuss a possible referral.

Indications for referral for inpatient admission

All cases should be discussed with the emergency medicine registrar or consultant in the first instance.

Any significant clinical/ safety concerns is sufficient to seek medical opinion regarding

admission. Completion of the risk assessment framework for assessing medical emergencies in eating disorders may assist in this decision.

A multi-disciplinary discussion between the emergency medicine registrar, the medical team on call and the psychiatry on call may be beneficial.

Patients at high risk of developing refeeding problems should be hospitalised

In adults, this can pertain to patients who have one or more of the following:

- BMI less than 16 kg/m2
- Unintentional weight loss greater than 15% within the last 3–6 months
- Little or no nutritional intake for more than 10 days
- Low levels of potassium, phosphate or magnesium prior to feeding.

Or patient has two or more of the following:

- BMI less than 18.5 kg/m2
- Unintentional weight loss greater than 10% within the last 3–6 months
- Little or no nutritional intake for more than 5 days
- History of alcohol abuse* or concomitant insulin, chemotherapy, antacids or diuretic therapy.

Criteria for hospitalisation for acute psychiatric stabilisation

- Acute food refusal (Not deemed at risk of refeeding syndrome)
- Suicidal thoughts or behaviours
- Other significant psychiatric comorbidity that interferes with ED treatment (anxiety, depression, obsessive compulsive disorder)

Other considerations regarding hospitalisation

- Failure of outpatient treatment
- Uncontrollable binge eating and/or purging by any means
- Inadequate social support and/or follow up medical or psychiatric care

Role of dietetics team

The dietician team should be involved early for full nutritional assessment and nutrition care planning as per local policy.

Discharge from emergency department

For patients not meeting indication for admission for acute medical stabilisation, a robust follow-up plan must be agreed with the emergency department team, psychiatry team and the patient.

The role of the GP is important in the on-going management plan and a detailed discharge letter should be forwarded to them.

The MSW can provide on-going advice regarding social supports as required.

Voluntary organisations such as Bodywhys may have an important supportive role in the community. Patients and their relatives should be given information on the red flags for the significant risk signs/ symptoms and behaviours and advised to represent at any time if concerned.

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Appendices

Appendix 1: Stakeholders

1) Dr Aileen McCabe, Consultant in Emergency Medicine, Tallaght University Hospital
2) Sinéad Feehan, Chief dietician, Tallaght University Hospital
3) Omotayo Raji, Registrar in Emergency Medicine, Tallaght University Hospital
4) Sarah Deery, Medical Social Work Team Leader, Tallaght University Hospital
5) Aine McGarvey, Senior Pharmacist, Tallaght University Hospital
6) Breda Naddy, Programme Manager, National Emergency Medicine Programme
7) Pauline Boyle, Clinical Specialist Dietician
8) Dr Paula McKay, Consultant Liaison Psychiatrist
9) Dr Michelle Clifford, Consultant Child & Adolescent Psychiatrist, National Clinical Lead for Eating Disorders

Appendix 2 The HEEADSSS psychosocial interview for adolescents

Home	who, where, recent changes (moves or new people), relationships, stress or violence, smartphone or computer use (in home vs room)
Education & employment	where, year, attendance, performance, relationships and bullying, supports, recent moves, disciplinary actions, future plans, work details
Eating and exercise	weight and body shape (and relationship to these), recent changes, eating habits and dieting, exercise and menstrual history
Activities	extra-curricular activities for fun: sport, organised groups, clubs, parties, TV/computer use (how much screen time and what for)
Drugs and alcohol	cigarettes, alcohol and illicit drug use by friends, family and patient. Frequency, intensity, patterns of use, payment for, regrets and negative consequences
Sexuality and gender	gender identity, romantic relationships, sexuality and sexual experiences, uncomfortable situations/sexual abuse, previous pregnancies and risk of pregnancy, contraception and STIs
Suicide, depression and self-harm	presence and frequency of feeling stressed, sad, down, 'bored', trouble sleeping, online bullying, current feelings (eg on scale of 1 to 10). thoughts or actions of self-harm/ hurting others, suicide risk: thoughts, attempts, plans, means and hopes for future
Safety	serious injuries, online safety (eg meeting people from online), riding with intoxicated driver, exposure to violence (school and community), if high risk - carrying weapons, criminal behaviours, justice system