Anorexia Nervosa/Eating Disorders - Full Clinical Guideline

Reference no.: CG-T/2012/153 v3.0.0

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 in order to minimize complications and reduce risk of mortality.

Patient with severe AN (BMI<15) may require admission to Royal Derby Hospital (RDH) 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 with specialist knowledge in eating disorders (RCP 2014).

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.

Aim & Purpose of Guideline

This guideline aims to ensure safe management of patients with AN 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 types of eating disorders. For further information regarding the management of patients with AN, consult the MARSIPAN report (www.rcpsych.ac.uk/docs/default-source/improving-care/better-mh-policy/college-reports/college-report-cr189.pdf).

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1. Criteria for Admission to RDH

If an elective admission to hospital is being considered, this should be discussed with the Nutrition Team Consultant at RDH and the consultant psychiatrist from the Derbyshire Eating Disorders Service (DEDS), 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

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

In general, patients with severe AN 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. Details regarding local service provision are outlined below:

Services provided by Leicester and Stafford SEDU:

- Nasogastric insertion and feeding
- Daily biochemistry
- Frequent nursing observations
- Prevention of symptomatic behaviours (water drinking, absconding, exercising, etc.)
- Daily ECG
- Sedation of an anxious patient

- Use and management of mental health legislation

Services **NOT** provided by Leicester and Stafford SEDU include:

- Intravenous infusions
- Artificial ventilation
- Cardiac monitoring
- Central venous pressure (CVP) lines
- Parenteral nutrition (PN)
- Cardiac resuscitation (‘crash’) team (Leicester but not Stafford
- Treatment of serious medical complications.

Reasons for admission to RDH 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 305 during working hours, or patients should be admitted to the Radbourne Unit out of hours. This will allow issues around possible sectioning to be clarified and allow transfer to ward 305 during working hours, avoiding the need for the patient to go through MAU/ED

Contact details for local eating disorders services:

Derbyshire Eating Disorder Service	(01773) 881467
Leicester SEDU (Beaumanor Unit)	(0116) 2256267
Stafford SEDU, (Kinver Unit)	(01785) 783113/783122

2. How to admit a patient with AN to ward 305

2.1 Elective admission from home or other in-patient unit

Once an admission to RDH has been agreed, the nutrition team consultant will arrange direct admission to ward 305, ***clearly documenting/communicating the aim of the admission and any goals that have been agreed***.

For patients being transferred from one service to another, special care is required to ensure the transfer is safe. Patients may try to sabotage a transfer by engaging in behaviours that result in them becoming too ill to transfer. Where possible a meeting should be held between representatives of the two services (usually including the patient and their family), so that it is very clear what will happen and who is responsible for what during the transfer.

2.2 Unplanned admission (e.g. internal transfer e.g. from A&E/MAU)

Where patients are admitted for other reasons (e.g. trauma, pneumonia), initial care may be provided on the appropriate specialist ward. Consideration should be given to subsequently moving the patient to ward 305 at the discretion of the nutrition team consultant if there are ongoing treatment needs in relation to the AN that cannot be met by a SEDU or appropriate outpatient services (e.g. DEDS).

If transfer to ward 305 is agreed, ***the aim of ongoing treatment should be agreed and documented in the medical notes.***

3. In-Patient Management of AN

Patients with severe AN should be managed on the luminal gastroenterology ward (305) and be under the care of the ward consultant with nutrition team consultant input. Immediate referrals should be made to:

- Nutrition team consultant (if not already aware)
- DEDS (a named psychiatrist should be identified if this has not already been done pre-admission)
- Ward dietitians (via ExtraMed)

All patients admitted for management of refeeding should receive one to one observation by mental health trained staff unless agreed not necessary by both the nutrition consultant and the DEDS psychiatrist

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 behavioral problems common in patients with anorexia nervosa, such as sabotaging nutrition
- Occasionally to treat patients under compulsion (using section 3 of The Mental Health Act)
- Manage family concerns
- Arrange safe discharge with appropriate follow up

3.1 Aims/Goals

Early in the admission a meeting should be held between the medical consultant, medical nurses, DEDS psychiatrist (or if not available, liaison psychiatry consultant), and dietitian from both RDH and DEDS to agree treatment aims and how to achieve them. The meeting should be clearly documented in the medical notes. A management plan should be agreed and handed over to the nursing staff.

Regular follow-up meetings 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.

If weight gain is less than expected, be suspicious about sabotage of treatment (see section 3.7 on the management of behavioural issues).

Family

Family members of severely ill patients with AN can be even more distressed than relatives of patients with non-psychiatric life threatening conditions. The problem that many families report is lack of information. Even if the patient has said they do not want their family to be given information, the family can still be seen and counselled in general about any issue they wish to raise, as long as information coming from the patient is not divulged. Regular meetings can keep them informed and allow them to influence treatment in an extremely helpful way.

3.2 Medical Management

Patients with anorexia nervosa can seem deceptively well. They may have an extremely powerful drive to exercise which sometimes seems to over-ride their lack of nutritional reserve, so that they may appear very energetic right up to a physical collapse.

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

- **BMI (weight kg/height m^2):** low body weight <17.5
  medium risk 13.5–15
  high risk <13.5
- **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 (<3.0 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)
  - Amylase
  - Glucose
    - hypoglycaemia: blood glucose <3.0 mmol/l. If present suspect occult infection, especially with low albumin or raised CRP
  - thyroid function
  - iron
  - ferritin
  - Vitamin B12
  - Folate
  - vitamin D
  - zinc, copper, selenium, vitamin A/E, carotene in selected patients as dictated by the nutrition consultant

ECG:

- Bradycardia
- Raised QTc (>450 ms)
- Non-specific T-wave changes
- Hypokalaemic changes

- **Physical Examination, measure vital signs (increased risk levels in brackets):**
  - Low pulse (<40 bpm)

- Blood pressure, especially if associated with postural symptoms
- Core temp (<35^{o}C)
- Check for hepatomegaly
- Muscle power reduced
- Sit-Up-Squat-Stand (SUSS) test: scores of 2 or less, especially if scores falling (see below for details of assessment and scoring)

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.
3. Scoring (score Sit-up and Squat–Stand tests separately):

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

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.

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 AN for refeeding syndrome using the trust refeeding syndrome guideline***. 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.

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

3.4 Dietetic Management

The preferred route of feeding is oral and this may be observed for 48-72 hours and recorded using food charts. If patients fail to take adequate nutrition, despite being given strict nutritional plans and oral nutritional supplements, they will need to progress to nasogastric (NG) feeding.

Some patients may resist weight gain by any means, and compulsory treatment may be required under the Mental Health Act.

All feeding regimens (oral and NG) will be prescribed by the ward dietitians.
As soon as the decision is made for NG feeding in severe anorexia, the dietitians should be contacted for a regimen (bleep …., Monday to Friday before 3pm)

Dietetic Assessment
Food and fluid charts should be completed to assess adequacy of intake. Carbohydrates in intravenous fluids need taking into consideration. Consider keeping any paper nursing forms outside of the bay/room in order that patients cannot amend the documentation.

Nasogastric feeding
This may be required if oral intake is inadequate, and should not be delayed. 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.

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 also be avoided.

Low carbohydrate/high phosphate feeds (oral and enteral) may be of benefit to meet calorie requirements without inducing refeeding syndrome.

In severe anorexia nervosa a low starting intake (e.g. 5–15 kcal/kg/day) may be used under the following circumstances:

- significant ECG abnormalities
- substantial electrolyte abnormalities at baseline (before feeding starts)
- active comorbidities, infections etc
- significant comorbidities, especially cardiac, including heart failure
- very low initial weight (BMI,12) may require fewer calories initially
- when beginning enteral feed (e.g. nasogastric) feeding

The rate should be built up to 20kcals/kg/day within 2 days unless there is contraindication.

Once basal metabolic requirement (BMR) intake is established, add 10-20% depending on activity levels. Once this is established, add a further 400kcal to facilitate weight gain.

Fluid requirements
The total fluid intake can easily exceed safe levels, and the recommendation is 30–35 ml/kg/24 h of fluid from all sources as re-feeding oedema is well recognised. Strict fluid monitoring is required.

3.3 Nursing Management

A single room with en-suite bathroom ensures privacy for patients in a disturbed mental state and may limit disruption to the rest of the ward. However, it also gives the patient opportunities to exercise, dispose of nutrition and purge, which would be more difficult in an open ward. Avoid placing patients in side rooms, unless 1:1 supervision is available.

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

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’).

The following monitoring is advised:

Recommendation for BMI<13		Rationale
Bed rest	24 hours bed rest for most patients (consider DVT prophylaxis) Risk assess tissue viability Consider special mattress	In view of compromised physical state
Fluids	Input/output measured	Patients may drink large amounts of

	(supervised) Consider turning off water supply to room to prevent fluid overloading where this problem is suspected Avoid excessive IV fluids	fluid causing fluid overload and electrolyte disturbances
Showers/ washes	Supervised	To monitor for abnormal behaviours. To ensure physical safety.
Toilet	Supervised	To monitor for abnormal behaviours. To ensure physical safety. To obtain accurate fluid balance
Meals	Encourage patient to eat appropriate diet and snacks as advised by the dietitian Complete food charts Consider NG feeding if intake remains inadequate Supervise during and for 30mins after meals and snacks Monitor for signs of refeeding syndrome	
Leave	No leave when on medical ward For BMI >13, consider allowing short periods in wheelchair where appropriate (depending on physical wellbeing) **BUT NO UNACCOMPANIED LEAVE**	Patients who are not under Mental Health Act cannot legally be prevented from leaving ward, however patients should be discouraged from leaving the ward. Staff should be aware that patients may use these opportunities to exercise and in other ways to sabotage weight gain
Physical observations	BP, pulse and temperature 4x day BM 4x day before meals Alongside carrying out physical observations ensure room is kept warm	Patients are vulnerable to hypothermia and hypoglycaemia

3.4 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.

3.5 Use of MHA

Use of the Mental Health Act 1983 (2007) may be necessary for compulsory treatment under section 3, for patients who are physically ill and refusing treatment. Under the MHA, feeding is recognised as treatment for AN and can be done against the will of the

patient as a life-saving measure.

The tests for compulsory admission and treatment are:

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

The decision to apply 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, the 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.

Medical consultants can no longer be the responsible medical officer for a patient detained under the MHA. The equivalent role under the amended Act (the responsible clinician) must be an approved mental health professional, in this situation generally a psychiatrist, who should probably be given an honorary contract with 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.

Some patients, having experienced nasogastric feeding, may be frightened of the procedure and when less ill may be willing to indicate what sort of approach they would prefer (e.g. requesting the use of a narrower nasogastric tube if possible). The question of the validity of advance directives, such as a request not to apply nasogastric feeding, needs to be evaluated with psychiatric, medical and legal help in each case as the issue arises.

3.6 Behavioural Management

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

Patients with AN are subject to an extreme compulsion to pursue thinness. They may attempt to sabotage their treatment by:

- Falsifying weight by drinking water before weighing, wearing weights or other items and gripping the weighing machine with long toes to increase weight.
- Engaging in obsessive exercise such as wiggling toes, standing, walking around, running up & down staircases
- Wearing very little clothing in order to shiver
- Sabotaging attempts at feeding by disposing of food, hiding food in tissues/up sleeves, running nasogastric feed into the sink or a pillow and turning off drips
- They may try and run away
- They may vomit in the toilets
- They may recruit friends and relatives to dispose of food or to smuggle laxatives onto the ward

These problems are not straightforward to deal with. The patient may promise to stop,

but are likely to break that promise.

The following may be of benefit:

- consider agreeing a ‘contract’ with the patient about the behaviours that are expected and agree any restrictions to be imposed on the patient
- confining patients to areas that can be more easily observed
- locking toilets

Patients who continue to sabotage their care may need to be observed one to one (occasionally a higher ratio is required) for 24 hours a day. This may also be considered for suicidal patients. The most important factor contributing to the success of one-to-one observation is training and experience of the staff involved. Ideally 1:1 nursing should be by a registered mental health nurse experienced in eating disorders.

4 Discharge Planning

It is extremely important that patients do not stay in medical settings longer than necessary because of the ever-present possibility that they may sabotage treatment and they can become institutionalised.

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

No patient with an eating disorder should be discharged from RDH without discussion with the Nutrition Team Consultant.

No patient with severe AN (BMI <15) should be discharged without the physician in charge consulting with an eating disorders psychiatrist, or, if not available, with a liaison or general adult psychiatrist to assess physical and psychiatric risk factors.

No patient with an eating disorder should be discharged simply because one risk factor (e.g. low potassium) has improved, but others (e.g. low BMI) remain

The discharge plan should be agreed with DEDS, with the following options being available:

- transfer to SEDU
    - If the patient's needs can be met by a SEDU, the patient should usually be transferred without delay. This should occur even if an unexplained abnormality (such as abnormal thyroid or liver function tests) has been discovered. The abnormality can be handed over and followed up in the psychiatric setting with the help of the eating disorders liaison physician.
- transfer to DHCFT psychiatric bed, e.g. Radbourne Unit
    - If a SEDU bed is not immediately available, consider transfer to the Radbourne Unit. NG feeding however cannot be undertaken there, in which case the continued support of the medical team is essential.
    - The Eating Disorder Psychiatrists will liaise with the Radbourne Unit in this situation.
- discharge home

Discharge Communication
Patients being transferred from one service to another are vulnerable and special care is required to make sure the transfer is safe. Patients sometimes try to sabotage a transfer (e.g. when they realise that another place has a better chance of achieving weight gain) by engaging in behaviours that result in them becoming so ill that transfer becomes impossible. Many of the problems can be avoided by adequate communication. There should be a properly conducted and recorded meeting between representatives of the two services, usually including the patient and their family, so that it is very clear what will happen and who is responsible for what.

5 References & Further reading

Management of Really Sick Patients with Anorexia Nervosa (2nd edn) MARSIPAN Royal College Psych 2014

http://www.rcpsych.ac.uk/usefulresources/publications/collegereports/cr/cr189.aspx

Document Controls

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Approved By:	SMB Unit/Medical Divisional Sign Of 4/6/2021 Gastroenterology Dietitians 2021 Nutrition Business Meeting 4/6/2021
Review Date:	June 2024
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