

Access pathways to Queensland Health Adult inpatient beds for patients with eating disorders

Endorsement

These Access Pathways have been formally endorsed by the following:

- General Practice Queensland
- Statewide Mental Health Network
- Statewide General Medicine Clinical Network

Background

Eating disorders are associated with significant psychiatric and medical morbidity. Effective management of affected patients requires close collaboration between clinicians working in psychiatric and medical settings. The overarching principle that guides the management of patients with eating disorders within Queensland Health (QH) is that patients have access to the level of health service they require as determined by their medical and mental health needs. In practical terms this means that patients have a right to access medical and mental health services across the continuum of care including community, inpatient and specialist services.

Access Pathways

These Access Pathways were developed following a review of the relevant literature (I-XIII) by the QH Statewide Eating Disorders Outreach Service (EDOS) in conjunction with the following key stakeholders: Nurse Unit Managers within QH mental health services; the Eating Disorders Sub Network of the Statewide Mental Health Network (a statewide advisory group); General Practice Queensland; and a focus group of psychiatrists and physicians who trialled successive versions of the Access Pathways. Further consultation also occurred with all Qld Directors of Medicine, Emergency Medicine and Mental Health. The aims of the Access Pathways are to provide clear guidance to assist treating teams to manage the medical and psychological risks and needs of patients with eating disorders; to encourage consistency in treatment protocols; and to promote coordinated care with a smooth transition across medical, mental health and specialist services.

EDOS

EDOS is available to provide assessment and support for treating teams using treatment protocols developed jointly by EDOS and the specialist adult eating disorders inpatient team at the Royal Brisbane and Women's Hospital (RBWH). EDOS can also facilitate access to specialist beds at the RBWH if a trial of local treatment with EDOS input has not been able to achieve treatment goals.



Goals of Inpatient Treatment

The goals of inpatient treatment include (in the following order): medical stabilisation; prevention and treatment of re-feeding syndrome; weight restoration; and reversal of cognitive effects of starvation prior to outpatient psychotherapy.

Physical indicators for admission to QH medical, mental health and RBWH specialist beds

Table 1 was developed following reviews of current literature and the guidelines utilised by EDOS for safe and effective treatment of adults with eating disorders, and further consultation with all Qld Directors of Medicine, Emergency Medicine and Mental Health. The table lists physical parameters that are relevant in considering whether psychiatric versus medical admission is indicated. If any parameter is met at the time of assessment, inpatient treatment is advised in accordance with the Royal Australian and New Zealand College of Psychiatrists guidelines (II). The list in the table is not exhaustive; therefore any other medical problems which are of concern should be discussed with the relevant medical team.

| | Psychiatric admission indicated ^a | Medical admission indicated ^b |
|--|--|---|
| Weight | Body Mass Index (BMI) <14 | BMI <12 |
| Weight loss | Rapid weight loss (i.e. 1 kg/wk over several weeks) or grossly inadequate nutritional intake (<1000kCal daily) | |
| Re-feeding risk | Low | High |
| Systolic BP | <90 mmHg | <80 mmHg |
| Postural BP | >10 mmHg drop with standing | >20 mmHg drop with standing |
| Heart rate | | ≤40 bpm or > 120 bpm or significant postural tachycardia |
| Temp | <35.5°C | <35°C |
| 12-lead ECG | Normal sinus rhythm | Any arrhythmia including QTc prolongation, or non-specific ST or T-wave changes including inversion or biphasic waves |
| Blood sugar | Below normal range | < 2.5 mmol/L |
| Sodium | <130 mmol/L* | <125 mmol/L |
| Potassium | Below normal range | <3.0 mmol/L |
| Magnesium | | Below normal range |
| Phosphate | | Below normal range |
| eGFR | >60 ^{ml/min/1.73m²} and stable | <60 ^{ml/min/1.73m²} or rapidly dropping (25% drop within a week) |
| Albumin | Below normal range | <30 g/L |
| Liver enzymes | Mildly elevated | Markedly elevated (AST or ALT >500) |
| Neutrophils | Below normal range | <1.0 x 10 ⁹ /L |
| Other | Not responding to outpatient treatment | |
| * Please note, any biochemical abnormality which has not responded to adequate replacement within the first 24 hours of admission should be reviewed by a Medical Registrar urgently | | |

Table 1: Physical indicators for psychiatric and medical inpatient admission of adults with an eating disorder

^a Psychiatric admission is indicated if BMI <14 or there are other abnormalities of physical parameters that are not of sufficient severity to warrant medical admission.

^b In some cases, as indicated in the column of indicators under the 'Medical admission' heading, an initial medical admission is indicated. Generally speaking, this is recommended if BMI <12 or there are significant abnormalities of physical parameters.

Guidelines for transfer from medical ward to mental health ward

If a patient with an eating disorder requires a medical admission, the following criteria should be met before transfer from that ward:

1. The risk of refeeding syndrome has passed (up to 2 wks from commencement of refeeding)

The first two weeks of refeeding pose the greatest risk to the patient with an eating disorder. Potential biochemical abnormalities include hypokalaemia, hypophosphataemia, hypomagnesaemia and hypocalcaemia: thus patients must be monitored for electrolyte disturbance on a daily basis and urgent replacement instituted if indicated. A cardiovascular review and ECG should also be performed regularly to detect cardiovascular manifestations of refeeding syndrome. A routine daily thiamine injection (100mg IMI) in the first three days of treatment is essential.

Some patients rapidly develop peripheral oedema and cardiac failure, and this should be suspected in the presence of rapid weight gain. The risk of heart failure in refeeding syndrome is reduced by gradual realimentation. The Eating Disorders Outreach Service is also able to provide written guidelines (see attached appendix: inpatient treatment guidelines) and weekly advice and support to the treating team in all aspects of treatment including management of re-feeding syndrome.

2. All patients should be medically stable for a minimum of 24 hours prior to transfer.

Electrolyte disturbances such as hyponatraemia, hypokalaemia, hypocalcaemia, and hypochloraemia may reflect ongoing vomiting or laxative abuse, water-loading, or a total body deficit due to chronic starvation. Although phosphate and magnesium levels may initially present within the normal range, they often drop precipitously during refeeding. Thiamine deficiency is common and can be expected to worsen during re-feeding, and requires replacement from the time of admission (See Appendix: Initial Management Guidelines). Despite prolonged starvation, hypoalbuminaemia is rare in anorexia, and should prompt a search for occult infection. Haematological complications result from bone marrow suppression, and include anaemia, neutropenia (relatively common in anorexia), and thrombocytopenia.

Cardiovascular complications include sinus bradycardia, hypotension, impaired myocardial performance, mitral valve prolapse and sudden death. ECG abnormalities in eating disorders (particularly anorexia) include bradycardia, low QRS, P and T wave voltages, ventricular tachyarrhythmias, non-specific ST-T changes, presence of U waves, and prolongation of the QTc interval. QTc interval prolongation has been suggested to increase risk of sudden cardiac death, and ventricular arrhythmias are a major cause of death in anorexic patients. QTc interval prolongation does not necessarily reflect underlying biochemical derangement, and studies have demonstrated QTc interval prolongation in individuals with normal electrolyte levels and demonstrated no correlation between BMI and QTc interval.

Orthostatic pulse or blood pressure changes suggest significant intravascular depletion and place patients at significant risk of syncope. Severely malnourished patients are typically unable to mount an adequate immune response, and thus findings of tachycardia, pyrexia or clear localising signs may be absent on clinical examination.

3. **Patients should ideally be at a BMI of 14 before transfer to a mental health ward**, though transfer can occur with BMI between 12 and 14 if there is agreement between the medical and mental health units, and the patient has been medically stable for 2 weeks as evidenced by:

- Systolic BP 90mm or above
- Heart Rate >50 and < 100 bpm
- No significant postural tachycardia or hypotension
- Normal ECG
- Normal electrolytes

4. **All patients admitted to medical wards should receive assessment by the local Consultation Liaison Psychiatry team, and EDOS or local eating disorder specialists where appropriate, with these teams providing ongoing advice and support to the treating medical team as required.**

The **local mental health consultation-liaison team** should ensure adequate, regular and frequent (up to daily if required) support is provided to the medical team to assist them with behavioural and psychological management. The mental health C/L team can interview patient and family for collateral information and support; provide advice and support to medical staff on how to manage challenging behaviours, and can coordinate attendance of EDOS staff at team reviews either in person or via video-link up .

EDOS will consult with the medical and mental c-l team at least weekly face-to-face or by teleconference. Specialised eating disorders support and training can also be accessed via EDOS either in person or via video-link up.

Guidelines for admissions to, and discharge from, QH mental health inpatient units

1. The receiving inpatient mental health treatment team should be consulted, and have input into the treatment plan prior to admission.
2. The mental health treating team should have timely access to advice and support from the local department of medicine, including transfer back to a medical bed if indicated.
3. All treating teams can access EDOS for advice throughout treatment.
4. If the patient is admitted directly to a mental health unit, monitoring and treatment of refeeding syndrome should be undertaken in the first two weeks as per the guidelines for medical admission.
5. Patients should be at a BMI of 17-20 before discharge.
6. All patients should be linked in to appropriate medical and mental health follow up with a discharge summary provided to the receiving service, and a documented individualised treatment plan developed in consultation with the consumer and the follow up agencies. Please note that EDOS can help to facilitate referral to appropriate services.
7. Patients are to be transferred to a specialist eating disorders bed at the RBWH if the criteria below are met, and a bed is available.

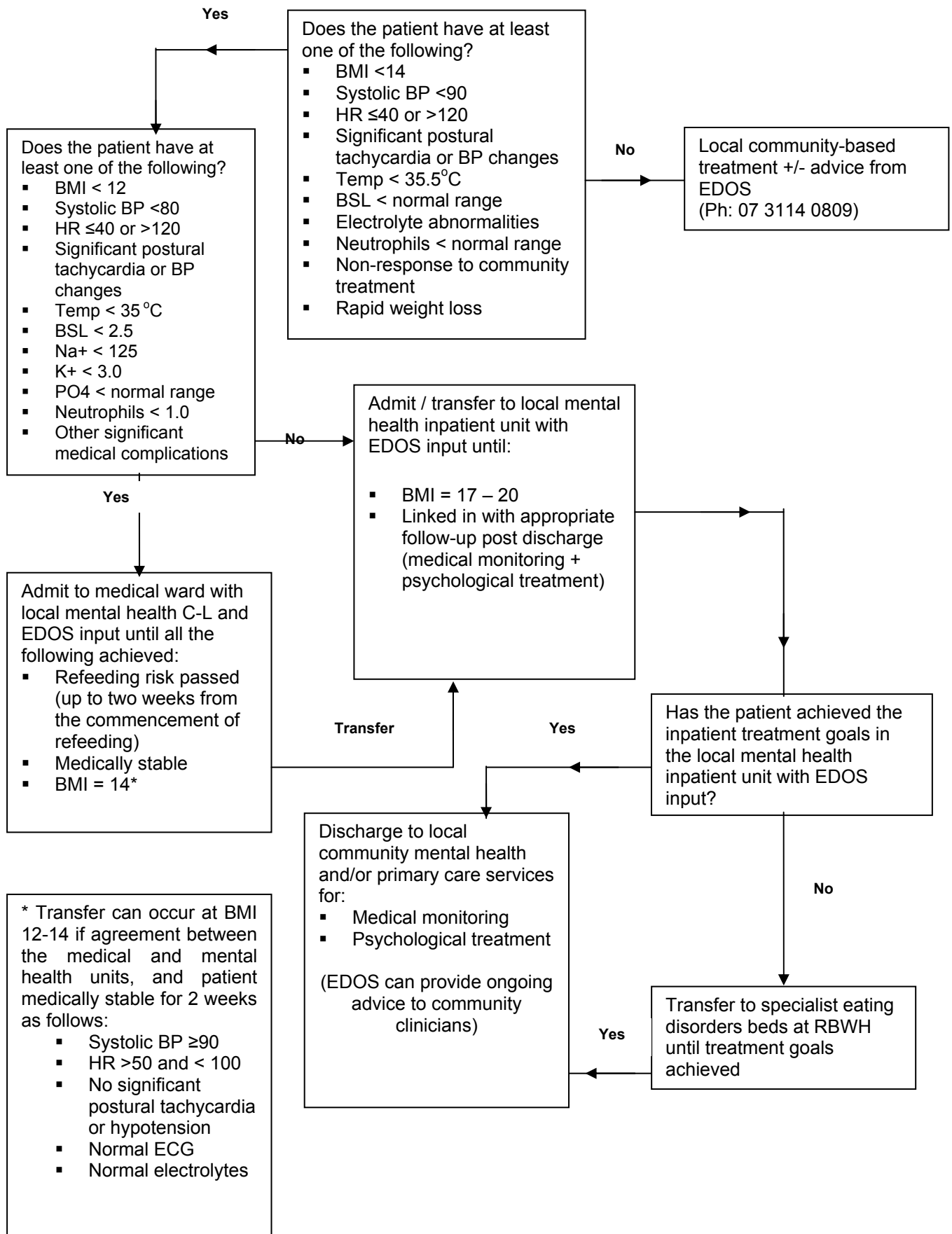
Criteria and guidelines for transfer to QH adult specialist eating disorders beds at the RBWH

1. The patient has been offered a trial of treatment in their local mental health inpatient unit with input from EDOS.
2. Despite EDOS support, the goals of inpatient treatment have not been met.
3. EDOS agrees to the transfer to a specialist eating disorders bed at the RBWH, and has developed a written treatment plan in consultation with the consumer, family and referring team.
4. The local service agrees to maintain ongoing contact with the patient during the admission, and provides follow up treatment on discharge.
5. If the local service has two or more patients admitted with an eating disorder on any one ward, high priority will be given to transfer.

Further copies of this document can be found at

http://hi.bns.health.qld.gov.au/mental_health/eating_disorder/documents/access-path.pdf

Flowchart of QH access pathways for adult patients with eating disorders



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APPENDIX

Royal Brisbane and Women's Hospital Eating Disorder Outreach Service Initial Management Guidelines

Thank you for your referral. The Eating Disorders Outreach Service (EDOS) provides a consultation liaison service to Queensland hospitals with the goal of increasing the capacity of local services to manage patients with eating disorders and who are considered to be at risk of re-feeding syndrome. A time will be arranged to meet with your team to provide assessment and treatment recommendations as soon as possible.

TO MINIMISE THE RISK OF RE-FEEDING SYNDROME IT IS RECOMMENDED YOUR TEAM COMMENCE THESE INSTRUCTIONS IMMEDIATELY

Medical Management

- Commence supplemental thiamine (100mg daily IMI first 3 days, then oral) and multivitamins prior to nutrient delivery.
- It is strongly advised that the patient has medical monitoring for at least the first 7–10 days of re-feeding
- Immediately - FBC, E/LFTs, phosphate, Mg, ECG, B12/folate, transketolase, TFTS and other investigations as indicated by clinical findings
- Daily E/LFTs, phosphate, Mg, ECG are necessary until goal energy intake is reached. Immediately replace K, PO₄, Mg if these are found to be deficient
- BSL QID – early morning, and 1 – 2 hrs after meals, as low glycogen stores and an abnormal insulin response may lead to post-meal low BSLs, and low BSLs in the morning/overnight.
- **Hypoglycaemic episodes often occur in the early re-feeding stage of severely malnourished clients. Low BGLs (<4.0mmol/l) should be managed according to the document 'Insulin Subcutaneous Order and Blood Glucose Record Adult (that include Guidelines for Medical Officer responding to Blood Glucose Alerts and Hypoglycaemia Management in Diabetes: BGL less than 4 mmol/L'. However, in view of the risk of excess simple carbohydrate precipitating re-feeding syndrome and rebound hypoglycaemia in these patients secondary to inadequate glycogen stores, wherever the above document recommends giving a fast acting carbohydrate, a slow acting carbohydrate (eg. one of the following: Tetrapak of Resource Plus/Ensure Plus Fortisip/glass milk and crackers), should be given in addition at the same time.**

Nutritional Management

- The patient should consume 4,000kJ (no more or less) in the first 4 - 7 days of re-feeding (liquid supplements, orally or via N/G, can be used if hospital meal plan is unsuccessful).
- A 4000kJ default re-feeding meal plan is outlined below for use prior to dietitian assessment and review
- Ensure the current meal plan is clearly written out and copies available for staff and patient
- It is essential that only food on the meal plan is consumed ie. NO food to be brought in from outside, & NO diet foods/lollies/chewing gum as these can be used to diminish appetite and/or may have a laxative effect
- Weight progress should not be discussed with patient at this stage

Clinical practice guidelines for re-feeding are available. RBWH guidelines are located at: <http://hi.bns.health.qld.gov.au/rbh/policies/guidelines/09407guid.pdf> Titled: Identification and management of patients at risk of re-feeding syndrome.

Further information is available on line at: http://www.ranzcp.org/images/stories/ranzcp-attachments/Resources/Publications/CPG/Clinician/CPG_Clinician_Full_Anorexia.pdf

4000kJ Default Meal Plan

BF: 1 cereal & 1Milk

MT: 1 fresh fruit

L: 1 Main Meal Option (salad, sandwich, or hot meal option)

AT: 1 fresh fruit

D: 1 Main Meal Option (salad, sandwich, or hot meal option)

S: 1 Milk

Nursing Management

- No leave off the ward due to medical risk
- Observations
 - QID lying & standing blood pressure. Staff should notify RMO if:
 - Pulse is below 60bpm,
 - Temp below 35.5c, and/or;
 - Systolic BP below 90, or if;
 - Significant postural drop of more than 10mmHg
- BSL QID – 1 – 2 hrs after meals, as low glycogen stores and an abnormal insulin response may lead to post-meal low BSLs, and low BSLs in the morning/overnight. Suggested times are 0400, and 1 – 2 hrs post each main meal. Treat blood glucose levels of <4.0mmol/l as per Medical Management point f.
- Daily ECG
- Patient may require full bed rest if medically unstable
- Accurate assessment of the patient's nutritional status and eating behaviours
 - Weight:
 - Measure and record, weight, height & urine specific gravity the morning after admission at 6.30am after voiding, and repeat each Monday and Thursday
 - Height:
 - Should be measured in early morning, check patient is standing at full height
 - Bowel chart: record bowel activity (or lack of) daily as patient will have reduced gut motility
 - Intake:
 - Record all offered food & fluids as well as all consumed intake including fluids.
 - Check all meals against the meal plan, patient should not be allowed to choose meal from the meal plan at this stage see nutritional management plan/page1)

- Request family members to assist with the management plan, by NOT bringing in food and medications (laxatives) from home or allowing patient to exercise.
- Monitor and contain eating disorder behaviours
 - Visual observations minimum frequency 15 minute intervals
 - It is often more effective particularly on medical wards to provide 1:1 constant supervision.
 - Shared room (rather than single room)
 - Exercise
 - Limit physical activity (may require bed rest to reduce energy expenditure)
 - Vomiting /chewing spitting
 - Support at meals and post meals
 - All toilet needs need to be attended prior to meals
 - When risk is high supervise in toilet and shower
 - Laxatives/diuretics
 - Manage constipation as clinically indicated with stool softeners
 - No laxatives from home
 - Supervise toilet use
 - Inappropriate fluid intake
 - Monitor fluid intake for under or over drinking
 - Restriction
 - If possible provide supervision during and after meals to observe and record intake.

**Enquires regarding the Access Pathways or the Initial Management Guidelines
should be directed to EDOS on (07) 31140809**