Appendix

Children's Hospital at Westmead Eating Disorder Inpatient Program

Michael R. Kohn

The eating disorder program at the hospital combines the expertise of the Departments of Adolescent Medicine and Psychological Medicine with other resources from the hospital. The service offers a uniform and comprehensive approach to assessment and treatment of young people with eating disorders. The philosophy of the inpatient program is to provide a supportive and therapeutic environment that enhances the opportunity for return to a healthy weight and healthy eating patterns.

The program is supported by an adolescent physician, experienced nursing staff, a dietitian, psychiatrist, physiotherapist, occupational therapist, teachers and an artist, as well as social workers who are skilled in individual and family therapy.

Referral process

Referrals for inpatient admissions are made to the Department of Adolescent Medicine and are discussed at a weekly review meeting. Where possible an initial assessment should be scheduled for the Eating Disorder Clinic as soon as can be arranged.

> A decision to admit to the program will be made in discussion with Dr Kohn (or delegate) and/or Dr Sloane Madden (or delegate), and will be based on the patient's medical state, their mental state and bed availability.

Should a patient present to the Accident and Emergency Department requiring admission they should be admitted under the care of Drs Kohn and Madden and treatment discussed with these consultants or (if they are not available) with the on-call consultant from Adolescent Medicine.

Criteria for admission

1. The patient has a diagnosis of AN that is associated with any of the following:
   - **medical instability** secondary to the AN, e.g. dehydration, electrolyte disturbance, bradycardia or other rhythm or conduction disturbance, hypotension
   - **comorbid medical problems** complicating the management of the AN, e.g. insulin-dependent diabetes mellitus
   - **weight** < 75% of standard body weight
   - **comorbid psychiatric problems** that complicate outpatient treatment of the AN but that do not preclude participation in the program, e.g. major depression, anxiety disorder, or severe family dysfunction or breakdown.
2. There is an **available bed**: there will be a maximum of 6 patients with AN admitted to Wade Ward. A child / adolescent who is medically unstable on presentation to the Emergency Department or to the Department of Adolescent Medicine will be admitted for medical restabilisation but may not be admitted to Eating Disorder program.
3. **Age is less than 16 years** (in accordance with general hospital policy).
4. A patient will only be accepted into the program after fully informed consent for treatment is obtained from the parents. This should be done at the time of admission or as soon as possible after this.

Note: A patient with AN may be excluded from the program if he/she has another psychiatric disorder that makes management via the program difficult, e.g. severe depression, acute suicide risk or psychosis.

The primary focus of management at admission is the treatment of the medical complications of AN and the commencement of the most appropriate form of refeeding to attain medical stabilisation and initiate nutritional recovery. A psychiatric assessment of the patient will also be done as soon as possible after admission, and the family will be engaged in regular family therapy sessions. Dr Sloane Madden, or the psychiatrist covering for him, should be consulted as part of the admission procedure.

Admission

History
- History of presenting illness
- Minimum weight
- Maximum weight
- Duration of weight loss

- Date of menarche
- Primary or secondary amenorrhoea
- Dietary restriction
- Purging exercise/vomiting/laxatives/other
- Body image distortion
- Fear of weight gain
- Family composition
- History of eating disorders
- Co-morbid conditions: depression anxiety/OCD/diabetes etc.

Physical findings
- Pulse
- Temperature
- Lying/sitting BP
- Weight (gowned)
- Height
- Capillary refill
- Peripheral cyanosis
- Features of protein calorie malnutrition, e.g.fatty liver
- Growth / pubertal (menstrual status) / anthropometric assessment
- Stigmata of binging/purging

Treating orders

Provisional diagnosis	
Admit	*Dr Kohn/Madden (as above)*
Menu plan	*(usually 1500–1800 kcal) or NG feed regime (usually 2000 kcal, 1.0 kcal/mL @ 100 mL/h if serum phosphate > 1 mmol/L or 0.5 kcal/mL if serum phosphate is < 1.0 mmol/L)*
Chart	*Sandoz phosphate 500 mg bd* *Multivitamin one daily* *Other medications as indicated*
Observations	*Continuous cardiac monitoring if indicated or Q6h*
Weigh	*Biweekly with urinalysis (in gown)*
Level	*Medical stabilisation or level 1 restricted activity*
Consult	*Psychiatry* *Dietitian* *Physiotherapy*
Order investigations See below	

Initial medical management

- **medical stabilisation**—i.e. maintenance of vital signs, including heart rate > 50/min, temperature > 35.5°C, sys BP > 80 mmHg, dias BP > 40 mmHg. For patients who are hypothermic overhead heating is also used to maintain temperature > 35.5°C.

  Note: notification of PICU may be required for any patient deemed not medically stable, or for whom electrolyte abnormalities or arrhythmias are noted. No treatment should be undertaken however without consultation with Dr Michael Kohn or the consultant on call from Adolescent Medicine.
- **daily physical examination**
- **daily electrolytes** (including serum phosphate) until within normal range, and then biweekly
- **other investigations as clinically indicated**: detailed below:

Medical tests

(a) blood tests
  - Full Blood Count/Erythrocyte Sedimentation Rate/Reticulocyte Count.
  - Electrolytes, Urea, Creatinine, Liver Function Tests, Calcium, Magnesium, Phosphorus
  - Luteinising Hormone, Follicle Stimulating Hormone, Oestradiol
  - Thyroid Stimulating Hormone, Tri-iodothyronine (T3-RIA), Thyroxine (T4)

(b) imaging
  - Bone Density—DEXA whole body scan informing of body composition and bone health. This information is used to establish the 'minimum healthy weight'.
  - Cerebral Imaging—CT/MRI/SPECT scan (as clinically indicated or in conjunction with research projects)

(c) others
  - Electrocardiograph (ECG)
  - (Metabolic Chart—measuring resting energy expenditure)

Refeeding program

- Aim for a gradual return to a healthy eating pattern while gaining approximately 0.8–1.0 kg per week (with or without the assistance of nasogastric feeding).
- If nasogastric feeding has been commenced it is weaned. Once the vital signs are maintained without overhead heating, nasogastric feeds may be continued only overnight. 1000 kcal are given of a 1 kcal/mL formula at

100 mL/h, between 8 p.m. and 6 a.m., in conjunction with a 1500 kcal menu plan. The overnight nasogastric feed is reduced by 300–500 kcal aliquots at the biweekly meetings if eating and weight goals are achieved, with equivalent (or slightly greater) increases in the daily menu plan.

- Each patient will have an individualised meal plan worked out by the dietitian and the medical team. All patients are required to attend meals, including snacks, in the dining room. Meals are at set times, are limited to half an hour, and are supervised by nursing staff.
- The caloric content of the meal plan is determined at the biweekly clinical team meetings.
- Nasogastric tube (NGT) feeding is also considered in the following circumstances: deteriorating medical condition, inadequate fluid intake, large amount of weight to gain, e.g. > 15 kg, continued weight loss, e.g. >1 kg in first 4 days or failure to gain weight over time.
- Weight is measured biweekly, on Monday and Friday mornings. Patients wear a hospital gown and must void in a bed pan prior to weighing, so that consistent results may be obtained. Urine specific gravity and pH are checked at the same time.

Psychological assessment

Standardised instruments

Standardised clinical measures are frequently administered as part of research projects and include measures of eating disorder psychopathology, comorbid psychiatric illness, and cognitive processing.

Clinical assessment

A full clinical assessment on each patient and their family is made by Dr Madden. Individual and family therapists are allocated from the Eating Disorder team (psychologists and social workers from the Departments of Adolescent and Psychological Medicine). These assessments and progress in therapy are reviewed in the biweekly clinical meetings.

Family assessment

Each family on the eating disorder program will have an initial family assessment undertaken by a member of the Maudsley Family therapy treatment team.

Overview of psychological management

- A psychiatric assessment of the child will be conducted by the psychiatry team at the time of admission, with the aim of identifying all psychiatric disorders that may be primary or secondary to the eating disorder or may

be comorbid conditions, e.g. delirium, depression, anxiety disorder, post-traumatic stress disorder, psychosis.

- Further individual and family assessment will be undertaken by staff allocated from the Department of Psychological Medicine or the Department of Adolescent Medicine, in order to gain a fuller understanding of the individual, social and family factors that may have predisposed, precipitated and perpetuated the development of AN in each individual patient.
- All decisions regarding the use of psychotropic medication will be made by the psychiatry team.
- Psychometric testing will be performed by a clinical psychologist when this is indicated.

Clinical meetings

- Medical ward rounds: these are bedside rounds each Monday, commencing in Wade Ward at 3 p.m.
- Biweekly clinical meetings are held on **Mondays and Fridays.** These are multidisciplinary meetings. The following are reviewed at these meetings:
  - assessment of fitness to participate in physiotherapy program
  - specific meal plan and refeeding plan for each patient—*calorie prescription* is based on an estimation of resting energy expenditure, determined via the Harris–Benedict Equation, and will be gradually adjusted to sustain desired weight gain.

Discharge

Full discharge is arranged once a patient has completed their nutritional rehabilitation (i.e. reached 85% of standard body weight) and has achieved sufficient modification of their eating behaviours and psychological status to maintain their therapeutic gains at home. Earlier times for discharge or transition to partial hospitalisation may be determined from ongoing clinical assessment.

The patient will require blood tests prior to discharge. These include:

- Full Blood Count/ Erythrocyte Sedimentation Rate/ Reticulocyte Count.
- Electrolytes, Urea Creatinine, Liver Function Tests, Calcium, Magnesium, Phosphorus
- Luteinising Hormone, Follicle Stimulating Hormone, Oestradiol
- Thyroid Stimulating Hormone, T3-RIA, T4

A discharge summary is required to be sent to the referring GP or the GP nominated by the family. Additional copies should be sent to:

- Dr Michael Kohn, Adolescent Medicine
- Dr Sloane Madden, Department of Psychological Medicine

- Maudsley therapist designated
- File CHW

Discharge Information: there is a standard Word document available

- Consulting physicians
- Diagnosis
- Length of admission
- Discharge weight and height
- Discharge BMI
- Summary of treatment
- Discharge eating plan
- Medications
- Follow up consultations
  - Medical weekly appointments with Team 1 registrar/resident in Thursday ED clinic and consultation in conjunction with Dr Madden and Dr Kohn on the third week post discharge
  - Family therapy (Maudsley)
- Goal weight
- Summary of investigations (date, Ix, result)