Eating disorders comprise a wide spectrum of illness from mild (disordered eating) to moderate (eating disorder not otherwise specified [EDNOS] and bulimia nervosa) and severe (anorexia nervosa) (Figure 1). They cause suboptimal nutrition, and physical and psychiatric illness. With the current shift in focus from tertiary to primary and secondary services,1 the general practitioner’s role in identifying, treating and managing people with eating disorders is becoming increasingly important. Up to 5% of women presenting to primary care (or registered with a GP) have a dieting disorder.2,3 In addition, because eating disorders are frequently concealed or denied, up to 50% of cases go unrecognized in a clinical setting.5 On a practical level, secondary prevention (early recognition and intervention) has been associated with reduced chronicity, reduction in social handicap and fewer deaths.6

Every GP sees patients who have some form of eating disorder. What role they choose to take depends on the type of disorder, the seriousness of the illness and its physical and psychological manifestations, as well as the practitioner’s own interest, skill, knowledge and confidence in this area of practice.

A watchful eye: Who is at risk?

Some population groups are more likely to present to GPs with eating disorders, hence a higher index of suspicion is warranted for some demographic groups. Young women with anorexia nervosa present at a rate of approximately 34 per 100 000 in the 10–19 years age range, and bulimia nervosa constitutes approximately 57 presentations per 100 000 in women aged 20–39 years of age.7 General practitioners should maintain a high index of suspicion when females in these age ranges present with:

- gynaecological complaints (most commonly amenorrhoea or irregular menses)
- gastrointestinal problems (including nausea, unexplained vomiting, constipation, food ‘allergies’)
- psychological symptoms (depressed mood, insomnia, increasing anxiety), and/or
- overt concern about body weight or shape (requests for diet pills, a special diet, actual weight loss).
The most important risk factor for eating disorders is dieting and extreme dieting (± extreme exercise). Pre-existing low self esteem is the key factor in the tendency to develop an eating disorder. Other relevant factors are perfectionism, obsessionality, family history (there is evidence of a genetic factor in anorexia nervosa), exposure to intense competition in pursuits such as dancing and sport, and traumatic experiences especially in childhood, including sexual or other abuse. Protective/resilience factors such as assertiveness may prevent the development of illness. Where there is a high index of suspicion, GPs should further investigate or monitor the following:

- knowledge of family members and their relationships
- recording of subjects’ weight and height into routine consultations
- gentle probing regarding mental health, emotional and interpersonal matters
- monitoring menstruation patterns
- levels of physical activity and involvement in sport, and
- knowledge about involvement in (or desire to become involved in) high risk occupations (modelling) or activities (ballet, aerobics).

**The challenge: Identifying illness**

Identifying patients with eating disorders and the level of severity as they present in their various developmental or formative stages is difficult at times (Table 1, 2). In primary practice, the median number of years between onset and diagnosis of anorexia nervosa is approximately one year despite the fact that people with eating disorders present to GPs more frequently than controls in the five years preceding diagnosis.

Various problems may prevent the GP from timely identification of illness. Patient factors include denial that a problem exists or surreptitious engagement in disordered behaviours. The patient may refuse to consult a GP, or, because of lack of trust, anxiety, fear, or shame, find it too difficult to talk about dieting behaviour. At times, families may unwittingly collude with the patient in hiding the disorder. However, 90% of eating disorder patients do present to their GP with associated complaints, frequently hoping that the GP will pick up on a ‘small hint’ and probe further.

‘Doctor delay’ may be associated with negative attitudes about the perceived self inflicted nature of eating disorders. Or, it may be that the diagnostic criteria
Table 1. Anorexia nervosa: Levels of severity

<table>
<thead>
<tr>
<th>Stage</th>
<th>BMI</th>
<th>Clinical features</th>
<th>Interventions required</th>
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</table>
| Incipient      | 17.5–19.0   | Change in dietary pattern (e.g., vegetarianism, omitting major food group) leading to insufficient calories for energy expenditure; increased preoccupation with food, dieting, body weight and shape; solitary dieting without realistic goals; excessive exercise (e.g., exercise even when sick); moodiness; poor sleep; nervous or anxious; concern expressed by family/friends; insists feeling ‘fine’ | Aims: develop rapport; baseline assessment  
Detailed baseline assessment of: eating habits, exercise routines, weight and height  
General discussion: ‘I notice you are losing weight – is everything O.K. with you?’ Evaluate knowledge around diet, exercise |
| Full syndrome  | 16.0–17.5   | Medical: irregular menstruation; dry skin; fatigue; abdominal discomfort on eating; hypothermia; hypotension; bradycardia (pulse <60); reduced gastric motility; hyperactivity; osteopenia  
Psychological: depressed mood; poor concentration; irritability; perfectionism; fear of gaining weight or becoming fat  
Behavioural: altered eating patterns or behaviours; excess exercise; failure to appropriately substitute foods omitted from diet (e.g., meat, dairy); refusal to maintain weight at or above minimum normal; vomiting or hoarding food; use of inappropriate utensils; secretly disposing of food | Aims: stop weight loss; evaluate physical condition and mental state; involve family where possible/appropriate  
Physical examination: cardiovascular; gastrointestinal; endocrine; haematological; neurological  
Investigations: FBC; electrolytes, urea, creatinine; blood sugar; amylase; ECG  
Other: Nonjudgmental approach; encourage discussion of feelings; set limits on weight loss and ability to treat in the community; refer to consumer support organisation |
| Severe         | 13.0–16.0   | All the above plus:  
Medical: amenorrhea; lanugo hair; dizziness; headaches; brittle hair or hair loss; bradycardia (pulse <50); arrhythmias; constipation; osteoporosis; stress fractures  
Psychological: depression; preoccupation with thoughts of food; anxiety; labile mood; hypersensitivity to noise and light; obsessional thinking; social withdrawal; extreme fear of becoming fat or losing control of eating  
Behavioural: food refusal or extremely limited caloric intake; obsessional calorie counting; eating extremely slowly; cutting food into tiny pieces; excess water consumption; eating food in specific sequence; desire to talk about food all the time; excessive exercise (may be covert) | Aims: coordinate referral to specialist, or, access specialist for advice and clinical support; treat medical complications  
Investigations: above plus ESR; phosphate; calcium, magnesium; albumin, globulin; LFT; TFT; urine and serum osmolites; drug screens for blood and urine; brain imaging; DEXA (baseline and repeat as recommended); pelvic ultrasound (to assess recovery)  
Other: refer to dietitian/psychiatrist/community mental health team; access day program if available |
| Extreme        | <13.0       | All the above plus:  
Medical: severe bradycardia (pulse <45); inaudible diastole; cyanosis; inability to attend; memory dysfunction; restlessness; infection; weakness  
Psychological: severe depression; suicidal ideation; excessive ruminations about food, extreme anxiety; weight, calories; extreme guilt; extremes in emotional expression; anger; extreme fear of fat  
Behavioural: bizarre behaviours or rituals; extreme social isolation or extremely limited social interaction; speaks in whispers | Aims: prevent death; prevent further weight loss; treat medical complications; supplement nutritional deficits  
Investigations: above, plus whatever necessary for symptoms  
Other: admit to specialist unit, or involve specialist inpatient providers in developing management plan if treating in a nonspecialist hospital setting; be aware of complications of refeeding (refeeding syndrome) and of potential for cardiac failure |
GPs managing patients with eating disorders: A tiered approach

Structural difficulties also potentially impede GPs' ability to effectively manage these patients. Factors include the amount of time available and required to care for patients with eating disorders, and the appropriate remuneration for this time,16 and access to specialist eating disorder services and healthcare providers. In Australia and around the world specialist inpatient units are generally limited to metropolitan areas, where they exist all. Outpatient clinics are inconsistent in the service they offer (eg. some focus on health promotion, others on body image, some only carry out assessments while others provide limited psychological treatment), their staffing and operating hours. Community mental health services are reluctant to see patients with eating disorders because of their medical conditions, and generalist clinicians often experience difficulty managing mental health issues. The most up-to-date information about what specialist services are available can be obtained through the various consumer organisations in each state (Table 3).

Difficulties aside, there would be a number of advantages associated with GPs acting as the primary care coordinator:

• they offer affordable access to comprehensive care
• no stigma is attached to consulting a GP
• a higher incidence of prediagnosis presentation increases the potential to identify problems early
• there is frequently familiarity with the patient and family involved, therefore GPs can provide much needed support and advice during episodes of illness, and
• GPs are accustomed to managing people with chronic illnesses.

Table 2. DSM-IV criteria for eating disorders (modified)

<table>
<thead>
<tr>
<th>Anorexia nervosa (AN)</th>
<th>Bulimia nervosa (BN)</th>
<th>Eating disorder not otherwise specified (EDNOS)</th>
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<tbody>
<tr>
<td>• Refusal to maintain body weight at or above minimal normal weight for age/height&lt;br&gt; • Intense fear of gaining weight or becoming fat, even though underweight&lt;br&gt; • Undue influence of body weight or shape on self evaluation, or denial of the seriousness of the current low body weight&lt;br&gt; • In postmenarcheal women, amenorrhoea&lt;br&gt;</td>
<td>• Recurrent episodes of binge eating characterised by eating (in a discrete period of time an amount of food that is definitely larger than most people would eat during a similar period of time) and a sense of lack of control&lt;br&gt; • Recurrent inappropriate compensatory behaviour in order to prevent weight gain, eg. vomiting, laxatives, diuretics, diet tablets, fasting, excessive exercise&lt;br&gt; • Self evaluation unduly influenced by body shape and weight&lt;br&gt;</td>
<td>• All criteria for AN met except amenorrhoea&lt;br&gt; • All criteria for AN met except that, despite significant weight loss, the individuals current weight is within the normal range&lt;br&gt; • All the criteria for BN met except behaviours occur less frequently than twice per week or for a duration less than three months&lt;br&gt; • Regular use of inappropriate compensatory behaviours by an individual of normal body weight after eating a small amount of food&lt;br&gt; • Repeatedly chewing and spitting out, but not swallowing, large amounts of food&lt;br&gt; • Binge eating disorder&lt;br&gt;</td>
</tr>
</tbody>
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Subtypes:
Restricting type: person does not regularly engage in purging or binge eating behaviour
Purging type: person regularly engages in purging or vomiting behaviours

Severity:
Often severe, particularly the purging subtype

Subtypes:
Purging: person regularly engages in vomiting, misuse of laxatives, diuretics or enemas
Nonpurging: person uses inappropriate compensatory behaviours such as fasting or excessive exercise, but not vomiting/laxatives diuretics or enemas

Severity:
Usually mild-moderately severe

Subtypes:
A distinctive diagnosis (subgroups not necessarily related to each other)

Severity:
Severity varies widely
For all these reasons, GPs would be likely to provide effective continuity of care, encourage compliance with treatment, and intervene quickly during a crisis or a relapse.17,18

Treatment and treatment evidence

Almost all clinicians would agree that ‘early intervention’ is important in the illness trajectory and outcome of eating disorders. However, the literature is sorely inadequate and there is no evidence to substantiate this belief, nor even consensus as to what should constitute early intervention.

There is some consensus among authorities throughout the world on general aspects of treatment for anorexia nervosa (again, not evidence based) and the need to introduce life saving measures to restore nutrition and to correct medical complications is not disputed. Because many believe the best way to treat anorexia nervosa is to combine treatments, it is often difficult to determine the effectiveness of one specific treatment, as its impact may be increased, or decreased, when used in conjunction with other methods.19 Bentovim20 was unable to demonstrate benefit in terms of long term outcome from hospital admission, however, the study has been controversial and certainly failure to show effect is not equivalent to showing a treatment is not effective.

The psychological treatment of anorexia nervosa is a disputed topic. The illness appears to run its course, and perhaps intervention does little more than prevent its serious consequences, eg, reversing the medical complications, preventing invalidism, promoting growth and psychosocial development, and improving the quality of life. Long term, in-depth psychotherapy has not been shown to convey benefit, but neither has cognitive behaviour therapy (CBT). Antidepressant drugs may improve mood, but do not affect the anorexia itself. The most promising recent development is motivational enhancement, and there is some evidence that family therapy of a particularly directive type may be beneficial in younger patients.19,21

In contrast to anorexia nervosa, there is a wealth of sound evidence about the effective treatment of bulimia nervosa. Antidepressant drugs, CBT, behavioural and educational therapy, dietary counselling and interpersonal psychotherapy have all been shown to be beneficial, leading to long term recovery.22 However, not all patients respond to treatment, and because intensive work is required of the therapist, it is often too expensive to access.

A four tiered approach to management

Some GPs feel overwhelmed by mental health problems such as eating disorders and may be reluctant to take them on. While it is every GP’s responsibility to identify risk and illness, it is not necessary for all GPs to provide extended treatment. The following has been designed to inform GPs of the opportunities that exist for those who are interested in providing more comprehensive mental healthcare.

Level 1: Identifying risk and illness (all GPs)

All doctors in general practice need to identify patients at risk of developing dieting disorders (the extreme dieter), to detect and monitor those with partial syndrome disorders (EDNOS) and to diagnose those with full syndrome disorders. The GP’s main goal is to help the patient to: ‘realise the seriousness of their disorder and to motivate them for therapy’14 before arranging referral to other health professionals for treatment. The GP’s role here is primarily in detection, and providing or arranging for appropriate treatment.

Level 2: The care coordinator

For patients with partial and full syndrome disorders, the GP may wish to limit actual practice to medical management but to take responsibility for coordinating associated services, monitoring overall progress, liaising with health workers in other disciplines and remaining involved in the patient’s treatment across the treatment spectrum.21 While ‘there is no consensus as to what constitutes case management, on an individual patient level it means the coordination of care for patients who require a number of services from different providers’,17

Level 3: Extended practice

General practitioners are often the patient’s preferred source of psychiatric care.13 Where additional training has been undertaken, and/or the GP feels particularly adept at managing mental health problems, they may feel comfortable taking on an extended role. This may include encouraging the patient to discuss their dieting and emotional problems, employing motivational interviewing techniques, engaging the patient in CBT or family therapy, and/or developing a dietary plan and food challenge hierarchy. Developing a rapport with the patient, encouraging him/her to normalise eating

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For more information, please refer to the following resources:

Table 3. National eating disorder consumer/community organisations

<table>
<thead>
<tr>
<th>Organisation</th>
<th>Website</th>
<th>Phone</th>
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<tbody>
<tr>
<td>Eating Disorder Foundation of NSW Inc</td>
<td><a href="http://www.edsn.org.au">www.edsn.org.au</a></td>
<td>(02) 9412 4499</td>
</tr>
<tr>
<td>Eating Disorder Association of Qld Inc</td>
<td><a href="http://www.eatingdisorders.org.au">www.eatingdisorders.org.au</a></td>
<td>(07) 3876 2500</td>
</tr>
<tr>
<td>Eating Disorders Foundation of Victoria</td>
<td><a href="http://www.wchm.org.au">www.wchm.org.au</a></td>
<td>(03) 6222 7222</td>
</tr>
<tr>
<td>Community Nutrition Unit Tasmania</td>
<td></td>
<td>(03) 9885 0318/1300 550 236</td>
</tr>
<tr>
<td>Anorexia and Bulimia Nervosa Association of South Australia</td>
<td></td>
<td>(08) 8212 1644</td>
</tr>
<tr>
<td>Eating Disorders Association of WA Inc</td>
<td></td>
<td>(08) 9221 0488</td>
</tr>
<tr>
<td>Women’s Centre For Health Matters ACT</td>
<td></td>
<td>(02) 6290 2166</td>
</tr>
<tr>
<td>Eating Disorders Foundation of WA</td>
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and behaviour patterns in an attempt to prevent the development of a full syndrome disorder will be important in patients who present in the early stages of illness. Engaging those with full syndrome disorders in treatment, monitoring their progress and medical condition, and providing consistent and continuous care across the treatment spectrum and across the illness trajectory will also be important.

It is advisable that GPs taking on an extended role, regardless of their level of experience, develop a supportive clinical arrangement with specialist eating disorder practitioners of various disciplines. A team approach is best, so aligning self with a dietitian, psychologist, psychiatrist and family therapist (where possible) will be important for every GP.

Level 4: Continuing care

Because eating disorders (particularly anorexia nervosa) are chronic illnesses, it is common for GPs to see patients over many years. The GP’s role here is similar to that taken for other chronic conditions (eg. asthma or diabetes). Treatment of intercurrent medical and psychiatric conditions is still indicated and a rehabilitation model with realistic goals for treatment is appropriate. The GP should concentrate first on physical complaints because treatment of physical problems is easily accepted, appreciated, and this increases rapport. Psychologically, the focus should be on rehabilitation and quality of life. Comorbid conditions such as a history of sexual abuse, substance abuse, or depression should be sought and may require long term treatment before other psychological gains are possible.19

Conclusion

All GPs are responsible for identifying eating disorders at their various stages of development. Individual factors, patient factors and systematic problems all contribute to the difficulty surrounding identifying and treating patients with eating disorders. However, it is suggested that primary practitioners may be the most appropriately placed clinicians to manage the majority of patients, and GPs are encouraged to identify local health care professionals of various disciplines who can support them in a more specialist or extended role.

Conflict of interest: none declared.

References