Management of Comorbidity of Mental and Physical Illness


Training Physicians at Undergraduate and Postgraduate Levels about Comorbidity

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Abstract

This chapter addresses the importance of training on comorbidity and the principles of learning. It covers the methods and structuring of such training, the content on which it is based, and what is known in the field. It includes illness versus disease management, holistic approaches, patient and doctor roles regarding shared decision-making, adherence and self-management, polypharmacy, interprofessional and team communication, and effective consultation and communication skills. We highlight methods which are learner-centred, aiming at active engagement in a collaborative endeavour with the trainer. We emphasise the need to recognise the broader systems’ factors which support or undermine integration of learning into everyday practice. Training should address cognitive (knowledge), emotional and motivational (attitudes), and behavioural (skills) elements of learning. Whilst undergraduates will need more didactic elements and proscribed activities, postgraduate training benefits from flexibility to the learners’ working context. Training the trainers is an important component of an education strategy so that teachers use a learner-centred approach consistent with the patient-centred consultation model needed to manage comorbidity. © 2015 S. Karger AG, Basel

Physical and mental comorbidity has not been well addressed in medical education, especially in systems-based curriculum designs. Increasing specialisation of healthcare delivery also threatens integrated management. Training is important for a commitment to understanding comorbidity from the start of clinical training about patient care. For clinical practice to develop, it requires active engagement, adjustments in daily working and broader support from the healthcare system [1] (fig. 1).

The crowded curriculum in medicine puts each discipline in competition with one another over what is most important for the first-year medical student, foundation trainee or intern to know. The only way to cover the material adequately and ensure an appropriate attitude towards patient care is to work cooperatively and in an interdisciplinary manner. From the outset, we need to model ways of integrating mental and physical health care knowledge so that students will see their patients in a way which allows them to feel confident in both spheres.
Our students and trainees are embarked upon a trajectory of life-long learning. We describe how this occurs, including brief coverage of theories of adult learning and how these inform training design and techniques. Examples of model programmes, including the use of communication skills training and other forms of active experiential learning, are included. All learners have to be convinced that their efforts are worthwhile, realistic and manageable, and will bring about desired outcomes. Good practice demonstrated by excellent teachers and practitioners is a strong positive influence. Clinicians and lecturers need to model respect for the psychological aspects of illness. The power of the role model in learning is well documented and so engagement of faculty by training the trainers and postgraduate education is essential for transformative learning and incorporation into clinical practice. Not surprisingly therefore, the shift from paternalism to partnership in the doctor-patient relationship is best mirrored by a shift to a more collaborative trainer-trainee relationship. Training and new skills/approaches must be supported and reinforced by the clinical environment, otherwise formalised learning is not sustained [2, 3].

Educational Theories, Principles and Implications for Training

Important and influential educationalists of our time, including Kolb [4], Schon [5], Dewey [6] and Vygotsky [7], have addressed conditions of effective learning. Kolb’s learning cycle explains how learning takes place when (1) having a concrete experience, followed by (2) observation of and reflection on that experience leads to (3) formation of abstract concepts (analysis) and general principles (conclusions) which are then (4) used to test hypotheses in future situations. All four stages are needed, although one can enter at different points and no one stage is an effective learning procedure on its own. Schon’s work on the reflective practitioner powerfully shows that learners need to be processing information and feelings while developing insight and responding to changing situations.

Dewey [6] emphasised the importance of the emotional element in learning. Negative emotions, such as extreme anxiety, will act as barriers to engagement in learning. Trainers must establish a supportive, whilst appropriately ‘challenging’, approach to the educational event. Feedback
should always be linked to what one is trying to achieve, so goals of the consultation need to be clarified and agreed [8, 9]. Feedback framed in terms of what is effective and examples of any missed opportunities are conducive to useful learning. Emotional involvement is a key feature of learning. The feedback conversation is central and includes checking how the learner is feeling, preferably in a small, supportive group setting [10]. Learners then need to set goals for implementing their learning, based on a collaborative evaluation of the importance of and confidence in being able to apply the new knowledge and behaviour. Vygotsky highlights: ‘the distance between the actual developmental level as determined by independent problem solving and the level of potential development as determined through problem solving under adult guidance…’ [7, p. 86].

Designing learning activity pitched at a level in order to challenge without overwhelming the learner should:

1. Consider the learners’ agenda (table 1), the patients’ agenda (‘what I want doctors to help me with’), the trainers’ agenda (evidence-based practice) and the service agenda (the pragmatic approach)
3. Pitch training to the level and context of the learner
4. Ensure feedback and include follow-up action plans

Undergraduates have limited clinical experience and will benefit from an approach which involves more teaching, coaching and real patients or problem-based learning scenarios incorporating comorbidity. Involving the ‘patient’s voice’ and expert patients in education is memorable and helps students and trainees understand patients’ particular expertise [12]. Students are strongly motivated by assessment rather than seemingly distant clinical practice; therefore, assessments such as objective structured clinical examinations should incorporate identification of comorbidity. Online resources with case studies, video clips and principles of practice help the novice develop an understanding [13]. Early years’ experience of meeting patients and carers using reflective assignments and progressing to role-play utilising actors, particularly for more complex consultations, provides a vertical integration in a curriculum.

Postgraduate learners bring their own clinical experience. Incorporating their particular situations maximises relevance and engages motivation. From their own reflections in identifying

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**Table 1. Examples of learners’ needs**

<table>
<thead>
<tr>
<th>Pass the assessment</th>
<th>Manage time in consultation – get there quicker</th>
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</thead>
<tbody>
<tr>
<td>Help to develop the situation if they ‘take the lid off it’</td>
<td>Helpful strategies, skills, examples of questions and phrasing</td>
</tr>
<tr>
<td>A good history and diagnosis</td>
<td>Not miss pathology</td>
</tr>
<tr>
<td>Develop a management plan</td>
<td>Work without all the information and ‘mine for data’</td>
</tr>
<tr>
<td>Manage uncertainty</td>
<td>Patient safety</td>
</tr>
<tr>
<td>Satisfied patient</td>
<td>Connect patients to other healthcare professionals/refer/support</td>
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</tbody>
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the challenges of these interactions, they can practice new strategies in role-play and receive constructive feedback. Good postgraduate training programmes develop skills for working in partnership by involving patients with long-term conditions as co-facilitators alongside trainers [14].

**Training Goals**

Training needs to incorporate some explanation of comorbidity and the potentially dangerous implications of not identifying it within the consultation. As it will inevitably require more effort initially on the clinician’s part to explore comorbidity, conviction and skills are needed. Training outcomes include (1) acceptance of the biopsychosocial model of health and awareness of issues in comorbidity, (2) knowledge of what to manage and how, and what to refer, and (3) communication and interpersonal skills.

**The Biopsychosocial Disease-Illness Model and Patient-Centred Care**

In 1989, McWhinney [15] described the disease-illness framework and the need to explore both biomedical and psychosocial information to understand the patient and his/her situation (fig. 2). The patient’s experience and beliefs are hugely significant, although historically often neglected because a patient’s views and expectations will affect adherence to medications and the actions he/she takes regarding lifestyle changes. Discussing raised glycated haemoglobin levels with a patient distracted by depression about having diabetes is unhelpful. Engaging patient understanding and managing his/her healthcare in collaboration with the physician will have better outcomes [16].

As one patient explained, ‘You’re always hoping there will be a cure, which is why you end up being so depressed, when there isn’t one… . Within secondary care in particular, there’s still too much emphasis on treatment rather than self-...

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**Fig. 2.** Disease-illness framework and patient-centred communication. Adapted from McWhinney [15].

<table>
<thead>
<tr>
<th>Disease: Biopsychosocial perspective</th>
<th>Patient presents unwell</th>
<th>Illness: Patient perspective</th>
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</thead>
<tbody>
<tr>
<td>History</td>
<td>Skills</td>
<td>Ideas</td>
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<td>Physical examination investigations</td>
<td>Listening</td>
<td>Concerns</td>
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<td></td>
<td>Rapport</td>
<td>Expectations</td>
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<td></td>
<td>Empathy</td>
<td>Feelings</td>
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<td></td>
<td>Question style</td>
<td>Effects on life</td>
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<tr>
<td></td>
<td>Clarifying</td>
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<td>Signposting</td>
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<td>Summarising</td>
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<td>Explaining</td>
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<td>Negotiating</td>
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<td></td>
<td>Shared decision-making</td>
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<td></td>
<td>Integration</td>
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<td>management plan</td>
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<td>Understanding the patient</td>
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The biopsychosocial model is shown in fig. 2. The patient presents unwell, and the clinician must gather information about physical examination and investigations. The differential diagnosis is then considered. The patient’s perspective, including ideas, concerns, expectations, feelings, and effects on life, is also explored. The clinician must understand the patient to ensure effective communication and interpersonal skills.
Management’ (Shani Evans, 2008) [14]. Students need to recognise that partnership between patients and clinicians in a co-creating health relationship is essential both for patients’ well-being and tackling escalating costs of care [17].

**Issues in Comorbidity: The Dialectic between the Physical and the Mental**

The curriculum needs to include the following six themes which should cover the basic understanding of comorbidity for students and junior trainees.

1. **The Interdependence of Mind and Body: How the Psychological Can Impact the Physical and Vice Versa**
   - A psychological understanding and a framework of illness and the emotional responses to it are vital to a well-functioning and quality health service. This perspective becomes increasingly pertinent as survival from disorders that used to be life-threatening becomes more commonplace. Diabetes, HIV and renal disease are a few examples of diseases that cannot be cured but can be managed; and yet the psychological effect of a long-term disorder that will change lives and impoverish expectations is also important. Students must learn the goals after survival include reducing suffering, increasing emotional well-being, pain control, functional ability and vitality. A clinician teacher’s role includes sharing awareness of common psychiatric comorbidities and how to manage them in a patient-centred way.

2. **Presentations of Illness That Can Confound Diagnosis**
   - Medical students and young doctors have to struggle with large amounts of new knowledge and tend to prefer clear facts that are easy to digest. As their learning progresses they will be able to recognise when patients’ presentations do not follow the usual pattern of a disease profile. Discrepancies in symptoms or repeat presentations by the same person who is not getting better may suggest a misdiagnosis and even the possibility of medically unexplained symptoms.

   Physical manifestations of psychological distress are well understood, such as dry mouth or tachycardia when anxious. Some symptoms are less obviously associated with a trauma. They may convey meaning unknown to the sufferer and require more careful history taking to elucidate.

   Medically unexplained symptoms are not so easy to understand on the surface, but may be simpler to demonstrate clinically. In a simulated clinical setting, for example, by exploring psychosocial information students can easily be encouraged to divine the likely association of headaches in a person whose partner has just died of a brain tumour, or one who complains of memory problems when stressed and exhausted from looking after their elderly mother who has Alzheimer’s disease. The common factor here is encouraging students’ curiosity and getting them to ask appropriate questions. Exploring a symptom can be likened to detective work.

   How can we engage students and trainees fully in the current governmental commitment to offer ‘parity of esteem’ as in the USA for mental health issues as for physical ones [18]? We need medical schools to collaborate with psychiatry and psychology departments in order to ensure that the psychological perspective becomes part of teaching all systems and permeates across most aspects of training. Psychiatry is not just a discipline like medicine or surgery: it is also a way of understanding pathological processes that engages the medical model, but also views patients from their own psychological and social perspective. Especially valuable can be educational methods bringing together specialists from different fields of medicine and surgery (gastroenterology, cardiology, gynaecology, primary care, psychologists, psychiatrists) in clinical forums to discuss patients, encouraging the skills needed to communicate effectively and manage care [19]. Similar methods in under-
graduate teaching from multispecialist groups are needed to prevent development of negative attitudes towards patients with medically unexplained symptoms [20].

(3) Risk Factors for Mental Health Difficulties in Physical Illness: Particularly Long-Term Conditions
Some physical health conditions often go hand in hand with a psychiatric morbidity. A common example is one of anxiety and depression experienced with severe breathing problems [21]. Students starting their clinical attachments will often come across such patients who may be the subject of their first clerking. In a medical school focused on clinical skills and listening and attending to a patient’s agenda, the student may be struck by the worries and concerns of patients with asthma or bronchitis. Their task may be to take a history and then examine the patient physically. They will also ask about the impact of illness on the person’s life. They will understand that work may be limited, exercise impossible and enjoyment curtailed. Managing long-term conditions holistically can have a significant positive effect on patients’ mental health and quality of life. If psychiatry is integrated into teaching from the outset (including how to perform a mental state examination), students may feel able to ask about mood symptoms as a result and even enquire about suicidal thoughts. Fostering an understanding of these principles and supporting learners who are commonly anxious about asking such potentially upsetting questions is a key goal of educators. Students adjust to knowing that patients with psychiatric symptoms can be on medical wards and not just in a psychiatry setting. They also learn that psychiatric symptoms are commonplace, associated with physical conditions and treatable if recognised.

The importance of understanding the interrelationship of conditions and the medications used to treat them are also crucial. Patients dispensed medications from multiple providers are at greater risk of an adverse drug reaction and are more likely to suffer from the prescribing cascade [22]. Medication for physical illness can cause mental health symptoms and conversely drugs taken for mental health problems may cause physical symptoms and predispose to physical disease. How students will be guided to consider these issues and how to approach them requires teaching faculty who are committed to an integrated way of viewing health.

(4) Learners’ Own Physical and Mental Health: Knowing One’s Self and Being Aware of Assumptions and Judgments
Being aware of one’s own views and reactions to other people’s misfortunes is essential to enable learners to behave in a non-partisan, professional manner that does not seek to judge but merely to inform. Knowing something about the nature and management of addictions is also enormously important when deciding on the best course of action in the treatment of physical problems in people with substance misuse, alcoholism or addiction (e.g. liver failure). Religious and cultural diversity among patients and students will influence understanding, personal attitudes and communication.

Mental health problems may remain uncovered for patients whose doctors do not explore this aspect of the patient’s psychosocial history [23]. Whilst patients may drop cues from demeanour or language, they are less likely to raise these worries directly. Doctors commonly use distancing tactics such as focusing only on biomedical facts, premature reassurance or jollying patients along rather than pursue cues, and thus miss significant mental health problems. Key communication skills are associated with increased disclosure. Teaching learners to observe demeanour, note speech quality, listen, allow silence and express empathy are particularly important. Skills training helps the healthcare professional to engage the patient and discuss with them their ideas, concerns and expectations in

Mental illness carries stigma. Those most at risk of this way of thinking are the medical students and doctors themselves. Students often fear a mental health diagnosis because of ignorance, stigma and a belief that it will prevent their qualifying as a doctor [25]. Stress, one of our biggest difficulties in busy, demanding and responsible jobs, can cause much physical and mental ill health. Sometimes alleviated by alcohol use, which may become a problem in itself, it is more dangerous when we fail to recognise it in ourselves.

Students and trainees can experience distressing situations in their own lives as well as in clinical practice. A curriculum which includes teaching about stress, its impact on doctors and the available support services enables students and trainees to recognize when this may be an issue and where to get help.

Experiential learning is also powerful. For example, clinical skills training combining the ability to ‘break bad news’ sensitively while attempting to understand the unique perspective of the person with a particular physical or indeed ‘mental illness’ diagnosis is one learning strategy that is used [26]. Role-playing the clinician can be very helpful in that one is exposed to a range of affects from the simulated patient and one learns how to manage each. If students are asked to play the patient as well as the doctor, this adds a power to the scenario, but can be challenging. These methods can really assist medical students and trainees to empathise. Exercises such as having a conversation whilst breathing through a straw to simulate the experience of someone with chronic obstructive pulmonary disease (COPD) [Kim C, pers. commun., 2013] and the ‘hearing voices’ audiotaped exercise used to illustrate the experience of patients with psychosis [27] help learners imagine the lived experience of disability and appreciate of the patients’ suffering. By being in the patients’ ‘shoes’, the potential consequences of a doctor choosing to listen attentively or maintaining distance can be understood. Train-

ers must be skilled in facilitating such situations and be prepared to listen and support students who are upset or having difficulties. Preferably they will have received training in role-play methods using ground rules for safety.

(5) Risk Factors for Physical Health Difficulties in People with Mental Illness
Depressed people are less likely to be able to manage their illness, medications or lifestyle changes [16, 17]. Difficulties exercising and keeping fit are often associated with feeling unmotivated, anxious about facing the world or being indifferent to one’s own future. Drugs used in treating psychotic disorders often cause weight gain, induce diabetes mellitus and risk heart disease. Enabling students to discover these issues early on in their training through talking to patients with chronic mental health problems, and their families, also encourages a more compassionate and thoughtful view of the complexity of psychiatric disorder. Interestingly, there is some evidence that although the coexistence of depression and multiple physical conditions is associated with increased illness burden, such patients benefit most from the Chronic Disease Self-Management Programs, and students and trainees should learn about these approaches [28].

(6) Consultation Skills to Identify and Plan Management for Comorbidity
Goals for the consultation include an open, respectful, empathic, accurate and constructive consultation based on both the patient’s and doctor’s agenda, focussing on gathering relevant biomedical and psychosocial information and shared decision-making. The very important therapeutic function of the consultation, in and of itself, is well known.

To operationalise the disease/illness and shared decision/partnership care, a number of consultation guides for skills training have been developed [29–31]. These frameworks define the skills that, when used in context, are known to be helpful. Particularly important are listening (and
silence), observing non-verbal cues, listening to quality of speech and responding to cues using empathic reflection.

**Training Issues**

*Barriers to Identifying Comorbidity*

Whilst clinicians may be aware of comorbidity, they can also feel time pressured and powerless to manage the problems, as well as lack confidence or strategies to deal with all the issues, and thus act to avoid being overwhelmed by a variety of patient needs. Training must take account of the fact that clinicians may control and limit the interview as a way of avoiding emotional difficulties [32].

Comorbidity may mean that patients are already seeing, or will need to see, other members of the healthcare team. Accessing and transferring patient information between healthcare providers is not easy where multiple information systems of patients’ data exist. If clinicians see only problems and no ways of efficiently dealing with these, they may be reticent to explore comorbidity and may focus narrowly or exclusively on the primary presenting problem. Similarly, students and trainees need to have a strategy of how to respond. These can include listening attentively, acknowledgement of the problem and advocacy by offering, with the patient’s permission, to talk to the doctor or attending physician. Trainees may in addition be able to offer simple advice, help patients to problem solve, book a longer appointment and refer to colleagues. Without plans for what to do next, students and trainees will likely not ask about comorbidity. Training should incorporate strategies for the next steps.

**Skills for Patients and Clinicians to Understand Each Other**

The doctor-patient interaction is recognised as one of unequal power which brings with it a number of challenges for open communication. Patients frequently hint rather than say what their problems are. If the doctor overly controls the nature of information gained and the type of information the patient gives, an inadequate problem definition may occur. Skills are needed to pick up on cues, create trust and gain an accurate comprehensive history, and these skills can be taught [33].

**Teaching Consultation and Communication Skills**

Communication skills training promoting patient-centred approaches in clinical consultations is best designed on a blended learning skills-based and attitude development approach with incorporation of peer support using a variety of training techniques [32, 34–36]. Group problem-solving discussions on how to respond to comorbidity and practical management planning addresses learners’ concerns about ‘taking the lid off’ problems and not having confidence or strategies to tackle them. Without this, application in practice will be compromised [36]. Case studies, such as those below can be used to discuss goals for a consultation, practical management strategies and to practice communication skills.

**Case Study 1**

Mr. Peters, 58 years of age, was admitted through the accident and emergency department with acute shortness of breath, and is now on intravenous antibiotics. He has a 5-year history of COPD and has had three chest infections already this year. Mr. Peters had smoked 20 cigarettes a day for 40 years, but has now cut down. COPD is significantly affecting his life.

The patient’s ideas: ‘My lungs are damaged from working on the buses, exhaust fumes in the garage and stress. I know smoking is bad but helps with stress and I’ve cut down but not quit.’

The patient’s concerns: ‘My breathing is bad and I can’t do much or go far. I retired early on health grounds and miss my mates. I’m worried about all the hospital admissions, but staff are wonderful, I feel safer in hospital and enjoy the company.’

The patient’s expectations: ‘I want the doctor to give me a stronger drug to help breathing. He’ll probably “have a go at me” again about quitting smoking.’
Two years later, Mr. Peters, has become increasingly isolated, rarely goes out, is now having panic attacks about his COPD, cannot sleep and often wakes in the night to use his nebulizer. When he cannot breathe his wife phones an ambulance. He is scared he is dying and his wife feels distraught and does not know how to cope.

Case Study 2
Erica Johnson is a 31-year-old woman of African-Caribbean parentage. She developed schizophrenia in her mid-20s. Although compliant with treatment, a depot antipsychotic medication for the past 3 years and no hospital admissions, her general health is suffering. She has gained a lot of weight and is now morbidly obese, has developed type II diabetes and has raised blood pressure. Her self-esteem is at an all-time low and she feels depressed. Her general practitioner notices that recent blood tests suggest her diabetes is not well controlled.

The general practitioner is mainly concerned about her diabetes. He sees that Erica is overweight but is unsure whether there is enough time to tackle this problem today and feels unsure about the potential impact on her mental health.

Erica is desperately unhappy about her weight. She feels low and miserable, is lonely, and feels unattractive. She wants a family, but has no confidence to find herself a boyfriend. Erica wants to give up the injections which she feels are the cause of her problems.

Summary
Role-play provides a powerful and effective teaching tool. The participant has space for self-reflection and comment followed by feedback from the actor and facilitator. Using video, a recording can be played back so that particular points in the interaction can be identified. Feedback is vital with the opportunity to then repeat any aspects since an experience of success in doing something differently consolidates learning.

Training Course Designs
Intensive experiential postgraduate courses consisting of a 2- or 3-day programmes with a group size of no more than 8 participants, involving videoing and delivered by expert facilitators, are most successful [24, 35, 37]. More pragmatic courses include three consecutive small group sessions of 3–4 h each, a week or more apart, with practice between sessions [38]. As with patients, changing clinicians’ habits is difficult and has to start with a belief in the importance and achievability of the changes. Action plans for implementation in practice, subsequent review of success and troubleshooting closes the training loop [4].

New Models of Learning
Some educationalists have called for a broadening of concepts of education, away from the conventional pedagogy in medicine where learning is an individual enterprise, to a collective activity [39, 40]. Clinicians do not work alone and their actions are determined by many external factors. Just as patients have a psychosocial world, so do clinicians, and the influence it has on working practice should be recognised. The whole culture and materiality of the workplace environment affects the daily interactions and practice patterns [1, 41]. An electronic record, for example, that includes or does not include a section on whether comorbidity has been screened for will affect practitioners’ behaviour and should be included in training about consultations. Such systems’ enablers and barriers need to be recognised for training to be real and credible. Observing practice ‘in situ’ strengthens both learners’ and teachers’ abilities to engage with performance in practice. As communication within teams is essential and liaison and referrals are important, team learning is to be promoted.

Conclusions
This chapter has addressed the importance of training for patient-centred consultations on comorbidity and principles of learning to guide the
methods and structuring of such training. A spiral curriculum is advocated with interdisciplinary teaching, using a variety of educational methods and incorporating identification and management of comorbidity into summative assessments.

Training the trainers is an important component of an education strategy so that teachers use a learner-centred approach consistent with the holistic patient-centred consultation model. With training that addresses issues of comorbidity, communication skills and the ability to plan management in a shared decision-making approach, our students and trainees will be better prepared for the reality of high-quality, modern practice in whichever field they work.

References


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