

WPA template for undergraduate and graduate psychiatric education

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Introduction and description of the approach in this document

In the years just before and after the turn of the 21st century, the WPA produced its first set of curriculum recommendations for both undergraduate (medical student) and graduate (residency) psychiatric education. The goal was to improve the quality of education and, consequently, the quality of care for patients with mental disorders.

The decade since the publication of these recommendations has been marked by a significant growth in the field of psychiatry. Advances in all aspects of the field, ranging from basic understanding of the function of the brain, to diagnosis, treatment, and development of systems of psychiatric care, have stimulated an evolution in our profession and the care we deliver. In addition, remarkable advances occurred in medical and psychiatric education, in response to the progress in our knowledge of illness and the development of new treatments and systems of care. The need for a new WPA core curriculum project for undergraduate and graduate psychiatric education was therefore identified.

A task force appointed by Prof. Allan Tasman, WPA Secretary for Education, carried out the development of this project. The task force included individuals with significant experience in educational leadership, representing all parts of the world and a cross section of developed and developing countries. Prof. Jerald Kay of the United States chaired the task force. The co-chair was Prof. Pichet Udomratn of Thailand. Drafts of the material were presented in the form of symposia at several WPA international and regional congresses, in order to obtain a broad spectrum of reactions and recommendations about the content.

The project was developed with the task force's appreciation of the tremendous diversity in psychiatric education across the globe. In the field of medical student education, we are

aware of the broad range of expectations across continents and countries, ranging from formal continent wide requirements for medical student education in psychiatry to countries in which there are no requirements that psychiatric education be included in the medical student curriculum. A parallel situation exists for residency education in psychiatry. Further, the great diversity of educational resources was an ongoing focus as the task force developed the recommendations. Moreover, in order to be useful throughout the world, recommendations needed to be constructed in such a way that local or national educational leaders could modify them based on their own requirements and resources, while considering the role that culture plays in both psychiatric diagnosis and treatment and in medical and psychiatric education. In addition, there are significant influences on program structure, content, and design related to the size of the program and the institutional resources available. Thus, specific teaching content and methods must be compatible with all of these factors.

Recommendations regarding content, design, structure, methods, and evaluation tools were based on the most recent advances in psychiatric education. The medical student and resident psychiatric education sections in this document include what can be considered optimal standard descriptions of content and implementation. Although the educational and clinical competencies discussed in this document are common to all regions of the world, modifications will be needed based on local realities. These include, but are not limited to, the availability of resources such as teachers, patient populations in various teaching settings, patient demographics, facilities, educational equipment and materials, technological support, financial support, and the designated time available to complete the prescribed course of education and training. Whether programs are offered in public, private, community based,

religious, or other types of sponsoring institutions will also dictate modifications. Political and legal regulations and standards are also likely to be influential in the curriculum decisions made at the local and national level.

Some content recommendations in this document will have differential importance from country to country. For example, certain areas of the world are geographically and geologically prone to natural disasters. In these areas, an emphasis on mental health consequences of disasters would be more important than in other regions. As well, topics such as ethnopsychopharmacology, family related issues, culture bound syndromes, and dealing with the impact of violence are undoubtedly influenced by the country of implementation and therefore may be modified in a wide variety of ways.

Rather than prescribing a specific model for use in locations with a wide range of expectations and resources, this document was produced with the appreciation that, even in areas with few resources, there are differing points of view regarding content and structure of education. Some believe that, where desirable resources are few, psychiatrists must be trained more extensively than is generally considered optimal, as these few professionals may play a greater role in developing national policies or advocating within governmental agencies for psychiatric education and services. A role in the development of public health policies and programs is a specific example, requiring additional education for the health professional. A second approach favors reliance on existing state of art educational guidelines from other regions to implement even in low resource areas. A third perspective suggests that the optimal approach to both medical student and residency education, where resources are limited, is to focus on a select set of “must know” skills and knowledge. Circumscribing education to the diagnosis and treatment of common disorders exclusively is

an example of this last approach. Rather than prescribing these or other approaches, such as taking state of art guidelines and modifying them based on specific national requirements, the task force advocates these decisions are best made at the national and local level. Last, this document can become a vital resource in lobbying governments and institutions to improve educational programs and ultimately health care.

Following this introduction, the first section of this document describes general aspects of developing, implementing and evaluating curricula at the medical student and resident levels. The following two sections focus on specific recommendations and teaching approaches for medical students. The fourth section outlines expected competencies for residents and reviews three different models in use today. The fifth section highlights the importance of cultural competence at both the student and resident levels. The following two sections outline a competency-based approach to evaluating medical students and residents. In the last section, recommendations are presented for improving the education of teachers and supervisors of both students and residents.

We believe the material in this report will serve as a practical template for developing or revising educational programs in psychiatry, which can be modified in a wide variety of ways to fit local needs. We hope educators will find that time spent reviewing these pages will be as gratifying as the task force members experienced in the preparation of this work.

Development, functions and evaluation of a psychiatric curriculum

Designing, implementing, and evaluating a medical student or a psychiatry residency curriculum is a complex process. Developing a psychiatric curriculum requires a determination of its key content elements, the sequencing of learning experiences, and making decisions about the time devoted to each element consideration. Once a program has been created, it must be implemented and continually evaluated and reassessed through careful consideration. A well-constructed and quality course of psychiatric training can be available even when resources and length of training are limited.

At the level of medical student education, the process begins with clarifying what does a non-psychiatrist physician need to know about recognizing and treating psychiatric problems, and when to obtain a psychiatric consultation or make a referral. At the level of residency training, constructing a psychiatric curriculum begins with clearly outlining the clinical roles of the practitioners. This in itself presents challenges, as psychiatrists across the globe are faced with varied responsibilities, influenced in part by cultural considerations, medical practice standards, number of students/trainees, length of specialty training, and availability of resources (personnel, clinical facilities, and financial and technological support).

Just as psychiatric curricula have become more structured and refined, various organizations have specified the core competencies required from a physician and the various specialists. Thus, in the United States, the Accreditation Council on General Medical education (ACGME) has outlined six core competencies: patient care, medical knowledge, practice-based learning and improvement, interpersonal and communication skills, professionalism and systems-based practice. This is in addition to extensive specialty specific competencies. Focusing on specialists, the European Union of Medical Specialties (UEMS)

outlines the psychiatrist's main roles as expert/clinical decision-maker, communicator, collaborator, manager, health advocate, scholar and professional (1). The required competencies, according to these organizations, are based on an educational framework, within which practical decisions are made, that allows a consistent approach to the formulation and monitoring of the curriculum's performance.

The kind, depth, and scope of knowledge contained within a psychiatric curriculum is a subject of continued debate and extensive study as the profession evolves. The advantages and limitations of this process and its outcome were delineated by the deliberations of the UEMS Psychiatric Section, an entity comprised by a wide diversity of nations, perspectives and, ultimately, cultures. The Section initially refrained from creating a specific listing of topics to be covered in the residency curriculum, aside from their initial competency framework, citing that such elements "are determined by national conditions" (1). Currently, specific curricular elements are delineated only for some content areas such as emergency psychiatry. Medical schools in some countries do not require more than a rudimentary experience in psychiatry, and training requirements for residents are exceptionally varied, making the international acceptance of even generally approved components of psychiatric education a complicated task.

Consistent with this perspective, we recognize that the training terrain and the form and content of the program will vary, based on where the psychiatric training is taking place. Thus, the initial phase of curriculum development requires looking at what, if any, governing body provides oversight to psychiatric training for medical student and/or resident education in that nation or region. Then, a careful study of the knowledge content requirements will

provide the foundation for discussions about the topics to be covered, and development of appropriate didactic experiences and clinical placements.

The particular knowledge and skill sets needed for a competent practice have been debated in numerous venues in many countries, but all agree that trainees must be exposed not only to an adequate breadth of information to enable work in a variety of practice settings at the completion of training, but also that an appropriate depth of such knowledge will be needed at different stages of training – a primary care or family practitioner may have core knowledge and skills similar to a clinical specialist, but the latter’s depth will be understandably different. Yet, there is no consensus regarding the desired knowledge and skills base for physicians who are not clinical specialists, thus leading to a wide range of medical student requirements in psychiatry. This is of particular concern for primary care clinicians in regions of the world where there are few psychiatrists, since their needs for psychiatric knowledge and skills is necessarily wider than areas where mental health services are more abundant.

A commonality across the globe is the recognition that resident trainees must be able to obtain a history from a patient and appropriately diagnose mental illness. In addition, trainees must have an understanding of disease processes at the root of mental illness, including what is known about etiology and pathogenesis, cultural factors, clinical course, and appropriate treatment interventions. The latter must be also understood and performed from biological, psychological and socio-cultural vantage points. The governing body of a given country or region often outlines specific expectations in regard to this content, yet guidelines for content of psychiatric curriculum do not exist in every country.

The depth of curricular time devoted to specific topics also will vary based on the local conditions in a particular region of world where training is taking place. For example, a locale with a high prevalence of amphetamine abuse, or of domestic and social violence, or natural disasters, may spend more time focusing on these problems and their clinical implications, compared to regions where they are not prevalent.

Once the content of the curriculum is determined, the next step is deciding what teaching formats to use. Didactic teaching through classroom based lectures is a major traditional method for imparting knowledge. With advances in technology, however, reliance on formal on-site lectures may become less critical as lectures are placed on-line for trainees to view at their own pace. This practice occurs already in a number of medical schools in various areas of the world. Similarly, tele-teaching, which permits instruction between two or more sites often, reduces the difficulties imposed by a lack of teachers or instructors in any given setting. In addition, these shifts may allow for time to implement more interactive means of teaching such as problem-based and team-based learning groups.

The phase-appropriate aspects of psychiatric education must be a consideration in the planning, implementation and evaluation of both medical student and resident programs. For example, eliciting an appropriate clinical history is a more fundamental skill than learning how to administer complex medication therapy. Thus, when approaching the timing and amount of material being covered, it makes sense to logically map basic skills first and then layer the knowledge, covering more complex and specialized information as a trainee makes consistent progress.

Once the undergraduate or postgraduate training requirements have been ascertained, teaching resources must be considered, including the number of available faculty and their

scope of subspecialty expertise. Fewer faculty may hinder the provision of multiple simultaneous lectures across beginning and advanced training, while a large faculty often permits smaller group teaching. Where available, programs may choose to televise lectures via the web, while using live teaching for more interactive endeavors. Unfortunately, there are regions of the world where medical libraries are rare and accessing computerized literature searches may be challenging, if not impossible.

Although discrete information from lectures and reading provide basic knowledge, there are abstract levels of understanding and conceptual integration that must also be fostered. Ultimately, trainees are typically educated by the simultaneous and/or subsequent use of various teaching modalities. Struggling trainees at any level may require a more concrete and directive approach, while those with greater levels of learning capabilities or intellectual sophistication may benefit from more self-directed means.

Faculty supervision of the residents' and medical students' clinical work is central to all medical education, and is historically the experience in which integration of knowledge, clinical skills, and attitudes occurs. However, the amount of and opportunities for the use of this modality will vary widely based on available resources. Relying on extensive supervision by senior faculty is a major challenge in areas of the world with a paucity of psychiatrists and/or other mental health professionals.

Group clinical conferences offer yet another teaching approach, and provide better efficiency where faculty resources are sub-optimal. Morbidity and mortality conferences, where cases with undesired outcomes are reviewed, journal clubs, and larger grand rounds all offer non-lecture based educational opportunities. Group conferences also allow the

exchange of information in a more active process and promote a higher level of integration of knowledge.

As an example of laying out a curriculum, the Royal College of Psychiatry's Curriculum for residents in the UK has recommended a modular approach to establishing a core curriculum (2). The core module covers basic essentials in clinical psychiatry such as history taking, diagnosis, and treatment. With successful completion of this model, trainees study modules in specialty areas including: adult, forensic, geriatric, child and adolescent psychiatry (including learning disabilities), and psychotherapy. Finally, trainees study modules on addiction, rehabilitation, and liaison psychiatry. Within the UK's medical system, this process takes place over the course of 6 years. This is in contrast to other localities where training may be as brief as 12 months. Thus, this modular approach may not be feasible or appropriate in every system, and certainly, if used, must be modified to suit the local context. The advantage of this framework, though, is that content and sequence can be determined for any curricular component at either the medical student or resident level, no matter what the desired content.

Once a curriculum course has been mapped, it must be implemented. Available faculty resources and national requirements often dictate the leadership and administrative requirements for training program oversight. National standards, for example, often mandate a specific individual to be the coordinator, a highly desirable practice regardless of requirements. The program director for either students or residents oversees the development and monitoring of the curriculum's implementation. Sufficient faculty to provide on-site teaching as well as assisting in other educational modalities, is necessary since both skills in education are needed for implementation of comprehensive teaching, mentoring, supervision,

and professional guidance. When adequate faculty resources are not available, the program director's job becomes even more critical, as developing the needed faculty effort is essential for success in any clinical training program.

Maintaining a strong curriculum requires frequent and consistent reviews. There are continual advances within both undergraduate medical education as well as postgraduate psychiatric education, and the content and structure of the curriculum needs to reflect this evolution with regularly scheduled updates. Moreover, educational resources, clinical sites and available faculty often change, and governing bodies may alter the requirements to which training programs must adhere. Each of these changes requires the curriculum to be modified accordingly. Sustained quality also relies on identifying deficiencies and monitoring progress in plans and attempts to remediate them.

Although training directors most often lead program education efforts, maximal involvement of both trainees and faculty in program evaluation is vital, as individual perspectives and experiences may vary considerably (3). A most effective approach is to create a permanent education committee, either for students or residents, chaired by the director, that includes representatives from faculty responsible for major didactic and curricular components. Its main goal is to evaluate and monitor the curriculum. Concerns and proposed changes to the curriculum, including both faculty and student input, should be brought before the committee, and appropriate discussion and debate of the issues should be allowed. When appropriate, new curricular plans can be implemented and evaluated under the direction of the training office.

Effective evaluation of trainee performance requires thoughtful and ongoing feedback. Within both undergraduate and graduate training programs, this process relies on agreed

upon outcome measures. Trainees should regularly evaluate didactic and clinical experiences. This feedback provides important information from those who are in training, either medical students or residents, to those evaluating the quality of their education.

Objective measures paired with faculty evaluations of trainees' performance (see sections on competency assessment in medical student education and competency based evaluation in residency training) should be used to accurately assess the effectiveness of the curriculum. If trends in trainees' shortcomings and lack of skills become evident, one or several elements of the curriculum may need strengthening, curriculum content may require adjustment, or the characteristics of clinical rotations might be reevaluated. Quality training involves a cyclic approach to curricular design, evaluation, and change. Some national requirements include specific guidelines regarding the cycles in which programs must undergo such reviews. At a minimum an overall analysis of the curriculum should occur every five years (4). Regular, less formal assessment should occur at a minimum on an annual basis.

As noted earlier, curricular goals differ across the world for both medical students and psychiatric residents. Of equal importance is attention to cultural and political influences on education. These influences may reflect wide geographical differences, as there are regions of the world where the diversity of nations in the region is significant. This requires acknowledging both the cultural context in which training is taking place, as well as the anticipated practice locations of trainees.

Limited resources impede educational efforts on many levels. Without adequate faculty, the most dynamic curriculum will fail. A shortage of faculty limits how much supervision trainees receive. In addition, if faculty members have too many responsibilities, they may not

have the time or ability to fully engage in the teaching process. Insufficient resources limits exposure to a wide variety of clinical settings. Some medications are not available in various parts of the world, or a medication may be “available”, but its cost may make it completely prohibitive. Striving to incorporate the “latest advances” in the neurosciences is important (5); however, in a location where access to high speed internet or the latest journals and textbooks are not readily available, the ability to carry out a literature review to inform a solid educational content would be crucially compromised.

Healthcare financing plays a substantial role in training. In most parts of the world, however, both lack of payment and/or inadequate numbers of psychiatrists make certain aspects of care, such as psychotherapeutic or psychosocial interviews an uncommon or non-existent part of regular clinical practice. These variations must be taken into account in designing a training program, while at the same time advocating for appropriate financing for patient care and comprehensive training.

As already discussed, the duration of undergraduate medical education and psychiatric residency training varies around the world. Psychiatric residency training programs may range from one to six years. The shorter the training program, the more difficult it is to cover the entire field adequately, and decisions must be made regarding the breadth and depth with which material is covered. It is unreasonable to expect that a trainee will become clinically competent in a single year or two, but this time period may be all that is available. While the resources available may limit the amount of time to be used in training, it also must be acknowledged that this hinders the ability to easily train psychiatrists with equal skills or knowledge across all regions. There may be differences in competency levels of psychiatrists trained in various parts of the world, based simply on these factors. There is no ready

solution for this problem, which becomes even more complex if we assume, as we must, that updating education programs is, ultimately, an unending endeavor.

Medical student education: general psychiatric competencies

The figures below can be an adequate reminder of why undergraduate psychiatric instruction is critical for all physicians (7):

- More than 500 million people worldwide suffer from mental and/or neurological disorders.
- Major depression is, at the global level, the fourth leading cause of global burden of disease.
- 70 million worldwide suffer from alcohol dependence.
- 24 million worldwide have schizophrenia.
- One million commit suicide, and between 10-20 million attempt it every year.
- One out of four people will be affected by a mental disorder at some stage of life.
- Social and environmental factors are playing growing and decisive roles in the occurrence, management and outcomes of numerous conditions, including different types of violence, post-traumatic stress disorder (PTSD), substance use, and developmental disorders.

The need for treating mental disorders is obviously pressing in both developed and developing countries. It is, therefore, evident that all physicians must know how to detect and manage these disorders (from a bio-psycho-social perspective), and when to refer them to a specialist. Steps of the learning process for a medical student include the acquisition of knowledge, the dexterity in the use of specific skills, and the adoption of professionally appropriate attitudes (8,9).

Knowledge

There is consensus in that, regardless of country, geographic region or volume of resources, every medical student will have to demonstrate, by the conclusion of his/her educational process, the ability to:

- organize clinical data from psychiatric interview and mental status examination allowing him/her to hypothesize reasonable psychiatric diagnoses and psychosocial circumstances or stressors;
- develop thorough psychiatric differential diagnoses based upon information from and about the patient;
- recognize the clinical characteristics of the following mental disorders: major depression, bipolar disorder, dysthymia, panic disorder, generalized anxiety disorder, PTSD, obsessive-compulsive disorder, schizophrenia, schizoaffective disorder, personality disorders, substance use disorders, cognitive disorders, somatoform disorders, attention-deficit/hyperactivity disorder (ADHD).
- Understand the parameters of ethical clinical practice

Similarly, in the areas of laboratory and other types of testing (e.g., psychological tests), the student will have to be able to:

- determine which tests are indicated based upon the patient's psychiatric presentations;
- discuss the rationale for ordering the tests with the patient and/or family
- recognize when tests provide abnormal or pathological results, including results related to medication compliance.

In order to generate an appropriate psychiatric case formulation and present plausible and comprehensive hypotheses about the etiopathogenesis, course and outcome of the patient's psychiatric condition, the student must know about:

- biological factors;
- psychological factors;
- sociocultural factors;
- spiritual factors;
- patients' psychological strengths and weaknesses or barriers for adequate management.

Last but not least, the medical student will have to demonstrate the ability to:

- recognize potential risks and psychiatric emergencies among general medical patients, including: suicidal thinking, homicidal thinking, signs of mental decompensation, impulsivity and violence-proneness, poor judgment or cognitive deficits, serious side effects to medications (neuroleptic malignant syndrome, neurotoxic or cardiotoxic responses, overdose);
- demonstrate knowledge about medical and medico-legal interventions (psychiatric referrals, involuntary commitment, judgments of medical incompetence);

Skills (interpersonal and communication)

The medical student will demonstrate the ability to conduct a psychiatric interview, including:

- establish rapport with patients by properly introducing him/herself and defining the role the interview will play in the patients' care;

- be empathic with patients, showing genuine concern for patients' moods, dilemmas, viewpoints, and conflicts through tone of voice, speaking style, facial expressions and gestures;
- facilitate interviews with helpful blends of open and closed questions, supportive remarks, use of silence, and therapeutically oriented interventions;
- use language neutral to gender, age, race, sexual orientation, culture and religion;
- conclude interviews with proper timing and respect.

The student will demonstrate the ability to elicit data for a complete psychiatric history, including:

- chief complaints in the patients' own words;
- details for a thorough history of present psychiatric illness (onset of symptoms, duration of symptoms, course of exacerbations and decreases of symptoms, help-seeking patterns, actions patients have taken to cope with symptoms, impacts of symptoms on patients' lives, patients' thoughts about causes for and meanings of symptoms, patients' expectations for prognosis);
- details for past general medical history and psychiatric history;
- details for family and social history;
- details for developmental history;
- details for substance use history.

The student will recognize indications for treatments of patients with mental disorders, including:

- psychotherapies (individual: psychodynamic, cognitive, behavioral, and supportive; marital and/or family; group);
- medications;
- other somatic therapies;
- necessity for social, economic or legal interventions.

The student will demonstrate the ability to provide coherent, thoughtful presentations of psychiatric patients in both oral and written forms, including:

- patients' psychiatric histories;
- mental status examinations data;
- physical examination data;
- data from laboratory and other tests;
- differential and specific diagnoses;
- psychiatric formulations (including cultural);
- treatment plans.

The student will demonstrate the capacity to respond appropriately to constructive feedback given by instructors.

Attitudes

The medical student will demonstrate professionalism through the ability to:

- be punctual and attend required events;
- complete patient notes in a timely fashion with legible writing;
- maintain professional boundaries (physical, sexual, financial, and emotional) with patients, and to practice within an appropriate ethical framework;
- be truthful about medical data;

- be courteous to patients, patients' families, staff, colleagues, and other health professionals;
- maintain confidentiality regarding patient care;
- demonstrate respect, empathy, responsiveness, and concern regardless of the patient's problems, personal characteristics, or cultural background;
- demonstrate sensitivity to medical student-patient similarities and differences in gender, ethnic background, sexual orientation, socioeconomic status, educational level, political views, and personality traits;
- demonstrate integrity, responsibility and accountability in the care of assigned patients;
- demonstrate scholarship by contributing to a positive learning environment, collaborating with colleagues, and performing self-assessment and self-directed learning;
- assess one's strengths, weaknesses and be willing to seek and accept supervision and constructive feedback.

Appendix I includes a sample of psychiatric screening questions and instruments useful in all these didactic tasks.

Psychiatric teaching approaches to medical students

Information in medicine, including psychiatry, is rapidly changing. It is estimated that medical knowledge doubles every five years. What is being taught in medical school loses its relevance substantially during the practice years (10). The student- or learner-centered approach is, at least in part, a response to this explosion of knowledge. Strategies for this kind of learning include problem-based learning, case-based learning, project-based learning,

peer teaching or peer-assisted learning, and group work (11). Learner-centered learning is a form of active and reflective learning that is initiated and maintained by the learners' intrinsic motivation to learn. However, this kind of learning requires many faculty members or medical teachers working as facilitators; it is, therefore, time consuming as students would have to be divided into many small groups to enhance discussion and effective interactions.

Interactive lectures can be effective and appropriate provided their limitations are recognized. Advantages of lectures as a teaching method for medical students include the efficient and organized delivery of a large body of information, solid and coherent structure, and minimal time and resource utilization. Lectures can be interactive and participatory with simple innovations such as questioning and periodic pauses and reviews (10).

With the advancement of technology and computers, students in high resource institutions can now learn through websites, the so-called tele-learning. The use of these resources allows clinical teaching to continue without medical students examining actual patients (12).

At the present time, the use of computer-based instruction (CBI) in education is growing in developed countries, but a comparison between CBI and traditional lectures has just been recently performed (13). It was found that students did not prefer one method significantly to the other. Students who learned by CBI spent less time studying, but lecture-based instruction was much less expensive than CBI. The authors concluded that a lecture was more cost effective than CBI, but CBI was more time efficient in terms of actual student learning.

It is generally accepted that, in psychiatry, there is no substitute for experience when dealing with the living patients' real problems. Every patient is unique and different, and the

experience gained by talking to patients and relatives, and examining and directly observing patients under treatment has no ready substitute. Therefore, clinical teaching continues to be the mainstay of didactics in medicine, including psychiatry, particularly in countries with limited resources. This didactic approach should include at least inpatient, outpatient, and community work. Every student must be involved in clerking patients, both in outpatient and inpatient settings. Students should observe teachers and peers interviewing patients, and also observe other mental health professionals such as psychologists, social workers, and occupational therapists at work. Whenever possible, students should accompany community teams or social workers during home visits to patients under their care.

For the nurturing of an acceptable and correct professional clinical attitude, apprenticeship is still a good method. This is of crucial importance in the acquisition and development of doctor-patient relationship skills, as observation and structured feedback should be provided (14). Students should then realize that correct and acceptable attitudes in the learning of psychiatric care do not come from books or the internet alone. Role modeling by and feedback from teachers are important. In several studies (e.g., 15), it has been found that some medical students in pre-clinical years were afraid of psychiatric patients and, consequently, their attitudes toward psychiatry were rather negative. However, after rotating through the psychiatric ward and working with many psychiatric patients, their attitudes changed into a more favorable and positive outlook.

As mental disorders, particularly depression, are commonly found co-existing with other medical and mental illnesses, students should learn to recognize and treat each condition appropriately. Therefore, the integration of psychiatry with other disciplines such as internal

medicine, obstetrics–gynecology, pediatrics and many other specialties should be implemented.

Teaching methods vary in their reliance on the number, types and sophistication of instructors, the amount of available financial support, and the access to educational materials. Those methods currently in use include lecturing written materials, interactive computer or web based learning, supervised clinical care with actual or simulated patients, and problem focused group learning. Equally important is the number of students across all years of the curriculum that must be educated simultaneously.

Graduate education: a competency based approach

All the competencies elucidated for medical students are relevant to training and educating the psychiatry specialist. As is true in all of medicine, the depth and breadth of the postgraduate experience is greater and additional skills and knowledge are required in both clinical and administrative domains. Specialist training in psychiatry, for example, should also include, but is not limited to, sufficient didactic and clinical experiences to develop competency in:

- The major types of psychotherapy
- Somatic therapies (electroconvulsive therapy, biofeedback, phototherapy)
- Understand the principles of, and conduct clinical practice in an ethical manner respective of human rights
- Psychiatric administration (leadership of interdisciplinary teams, quality assurance and performance improvement)
- Providing psychiatric care to patients who are receiving treatment from non psychiatric physicians and nonmedical therapists and coordinating such treatment

- Teaching psychiatry to medical students, residents, and others in health professions
- Training in neurology to develop expertise in the diagnosis of those neurological disorders and conditions often encountered in psychiatric practice that must be considered in the differential diagnosis of psychiatric disorders.
- Understanding the designing and interpretation of psychiatric research studies
- Developing expertise in the critical assessment of new therapies and scientific theories
- Participating in national professional and scientific societies especially through presentations at regional and national scientific meetings.

To demonstrate specific aspects of the competency based approach, we selected three among many models that designate resident competencies. These include the UEMS, an American and an international public health approach. Educators and administrators are urged to select topics, ideas, and approaches that are compatible with and practical for their own programs, countries and regions.

The UEMS approach

The UEMS (16) has proposed a general competency model wherein the psychiatric specialist must perform within seven diverse overarching competencies, adjusted to, but also independent of, working environment, including sociopolitical and cultural context. The role of the psychiatrist includes caring for individual patients and their families, and from a public mental health perspective, for the society at large. In such context, the competencies of a fully trained resident can be described as follows.

- **As a *clinical expert*, a psychiatry resident should be able to:**

- elicit a comprehensive psychiatric, sociocultural and medical history;
 - conduct a psychopathological investigation;
 - establish a diagnosis;
 - document properly the clinical findings and actions taken;
 - formulate and implement a treatment plan in collaboration with the patient, his/her family and other health professionals;
 - utilize the appropriate therapeutic skills;
 - apply relevant medical technologies.
- **As a *health advocate*, he/she should be able to:**
 - appreciate the determinants of mental health in a given society;
 - promote mental health and prevent mental disorders in individual patients and society.
- **As an *academician*, he/she should be able to:**
 - formulate a self-addressed life long program of continuing medical education;
 - read scientific literature and interpret new findings;
 - investigate the determinants of mental health and disorders;
 - integrate and apply new knowledge and technologies in his/her daily work;
 - conduct research;
 - perform quality assurance and contribute to quality development;
 - document epidemiological changes in psychopathology.
- **As a *professional collaborator*, he/she should be able to:**
 - establish treatment plans through working with patients and caretakers;

- work effectively with other healthcare professionals including those in primary care.
- **As an *administrator/leader*, he/she should be able to:**
 - develop cost effective treatment plans and mental health services;
 - utilize resources effectively.
- **As a *communicator*, he/she should be able to:**
 - establish a therapeutic alliance with patients and relatives;
 - educate the patient, families and other health and social services professionals;
 - educate the public about mental health to combat stigma.
- **As a *professional*, he/she should be able to:**
 - abide by ethical principles of the profession;
 - respect patient rights and broader human rights;
 - support patient autonomy and dignity;
 - respect the patient’s culture, beliefs and values.

Psychiatrists must identify and deal with the prevention, diagnosis and management of urgent psychiatric conditions. Residents must develop skills in triage, often within multidisciplinary settings. Common conditions seen in emergency psychiatry include, but are not limited to, severe agitation and panic, some conversion reactions, acute psychotic episodes, poisoning and substance related intoxication or withdrawal, depression with severe suicidal ideation/suicide attempt, homicidality, some eating disorders, rape and other types of assault, child maltreatment, and disaster management.

Based on a well-formulated treatment plan, psychiatry residents must be able to provide the least restrictive environment for intermediate care. Effective treatment, no matter the length, often requires sophisticated collaboration with primary care clinicians and social services/staff with clear goals of recovery and rehabilitation while being mindful of resources.

The ACGME approach

The ACGME in the US has established for all medical specialties six general competencies expected of a new practitioner. Psychiatry programs must define the specific knowledge, skills, behaviors, and attitudes required and provide educational experiences as needed in order for their residents to demonstrate the following competencies (17):

- *Patient care* that is compassionate, appropriate, and effective for the treatment of health problems and the promotion of health. Each resident must receive supervised experiences in the evaluation of treatment of patients of all ages and gender from across the life cycle and from a variety of ethnic, racial, sociocultural, and economic backgrounds. These experiences must occur in hospital and outpatient rotations and include, in addition to general adult psychiatry, assignments in child and adolescent, geriatric, addiction, consultation/liaison, forensic, emergency, and community psychiatry.
- *Medical knowledge* about established and evolving biomedical, clinical, and cognate sciences, as well as their application of this knowledge to patient care. The didactic curriculum, for example, must include, but is not limited, to the following components:
 - a) the major theoretical approach to understanding the doctor-patient relationship;
 - b) the fundamental principles of epidemiology, etiologies, diagnoses, treatment, and

prevention of all major mental disorders, including the factors that affect the prevention, incidence, prevalence and long-term course and treatment; c) comprehensive discussions of the diagnosis and treatment of neurologic disorders commonly encountered in psychiatric practice, such as dementia, neoplasms, headaches, traumatic brain injury, infectious diseases, movement disorders, multiple sclerosis, seizure disorders, stroke, and intractable pain; d) instruction in research methods in the clinical, biological, and behavioral sciences, including techniques to appraise the scientific and professional literature and to apply evidence based findings to patient care as well as opportunities to participate in research.

- *Practice-based learning and improvement* that involves the investigation and evaluation of care for their patients, the appraisal and assimilation of scientific evidence, and improvements in patient care. This competency focuses on life long learning to improve knowledge, skills, and practice performance.
- *Interpersonal and communication skills* that result in the effective exchange of information and collaboration with patients, their families, and other health professionals.
- *Professionalism*, as manifested through a commitment to carrying out professional responsibilities, adherence to ethical principles, and sensitivity to patients of diverse backgrounds.
- *Systems-based practice*, as manifested by actions that demonstrate an awareness of and responsiveness to the larger context and system of health care, as well as the ability to call effectively on other resources in the system to provide optimal health care. Specific knowledge, skills, and attitudes should include but are not limited to: a) practicing cost

effective health care and resource allocation that does not compromise quality of care; b) advocating for quality patient care and assisting patients in dealing with system complexities, including disparity in mental health care; c) knowing how to advocate for the promotion of mental health and the prevention of disease; d) acknowledging the importance of medical errors and examining systems to prevent them.

Table 1 provides an example of the skills component of competency requirements, including the number of patient experiences to establish these skills, based on the US residency of 48 months. Because the ACGME requirements are too extensive to present here, the reader is referred to the ACGME website, www.acgme.org, to review all the requirements for graduate medical education in psychiatry.

Table 1 An illustration of competency requirement skills for psychiatry residents (numbers represent minimal number of cases to be managed) (modified from the requirements of the US Accreditation Council for Graduate Medical Education, ACGME, ref. 9)

Domain	Year 1	Year 2	Year 3	Year 4
Assessment and presentation	Perform clinically appropriate H&P ≥ 10			
	Perform basic MSE ≥ 10	Perform cognitive examination ≥ 10		
	Perform basic psychiatric case presentation ≥ 10	Present biopsychosocial case formulation ≥ 10		
	Assess safety and make appropriate disposition: harm to self ≥ 6 harm to others ≥ 5	Determine competency to consent or refuse treatment ≥ 8	Present psychodynamic case formulation ≥ 10	
	Diagnose: Major depression ≥ 5 Bipolar disorder ≥ 4 Schizophrenia ≥ 4 Substance abuse ≥ 8 Substance dependence ≥ 6	Diagnose: Schizoaffective disorder ≥ 4 Anxiety disorders ≥ 5 Dysthymic disorder ≥ 4 Somatoform, malingering and/or factitious disorders ≥ 3 Psychiatric disorders due to general medical condition ≥ 4 Substance-induced psychiatric disorders ≥ 4 Mental retardation ≥ 3		
	Recognize presence of personality disorder ≥ 3	Diagnose dementia ≥ 4 Diagnose delirium ≥ 4 Diagnose common personality disorders ≥ 4	Developmental disability ≥ 3	
			Diagnose disorders of childhood: ADHD ≥ 5 Depression ≥ 4 PDD, separation anxiety disorder, psychosis ≥ 2	

Somatic treatment – Demonstrate safe and effective use of:	SSRIs ≥5 Antipsychotics ≥5 Mood stabilizers ≥5 Sedative hypnotics ≥5	Typical and atypical antipsychotics ≥4 of each Anticonvulsants ≥5 Antianxiety agents ≥5	Tricyclic antidepressants ≥3 Lithium ≥5 Augmentation for treatment refractory depression ≥5 Augmentation for treatment refractory psychosis ≥5 Augmentation for treatment refractory bipolar disorder ≥5	Stimulants ≤3 Long-acting antipsychotics ≤3 Observe ECT ≥3
Side effect management		EPS ≥5	Sexual dysfunction due to antipsychotics or antidepressants ≥5	Tardive dyskinesia ≥2
Detoxification	Alcohol ≥5		Benzodiazepines ≥3	
Provide consultation to medical and/or surgical services		Delirium ≥6 Dementia ≥4 Psychological response to illness, injury or treatment ≥5		
Psychotherapy		Supportive psychotherapy: Inpatient ≥10 Consultation ≥5 Partial hospitalization ≥5	Crisis intervention ≥5 Outpatient supportive psychotherapy ≥10	Psychodynamic Psychotherapy at 40 sessions ≥4 Marital and/or family therapy ≥2 Brief dynamic therapy ≥2 CBT ≥2 At least one of: Outpatient group psychotherapy ≥1 Interpersonal therapy ≥1 Behavior therapy ≥1
			Provide psychotherapy for: Major depression ≥6 Dysthymic disorder ≥6 Personality disorders ≥5	Provide psychotherapy for anxiety and/or somatoform disorder ≥8
			Demonstrate effective	

			recognition and management of transference and contertransference (documented by supervisor)	
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H&P – History and physical examination; MSE – Mental Status Examination; ADHD – attention deficit hyperactivity disorder; PDD – pervasive developmental disorder; SSRI – selective serotonin reuptake inhibitors; EPS – extrapyramidal side effects; ECT – electroconvulsive therapy; CBT – cognitive behavioural therapy

An international public health approach

This model assumes that, in regions where very few psychiatrists exist, there must be broader resident training experiences in preparation for roles in developing, implementing and evaluating all aspects of mental health care and policy locally, regionally, and nationally. This model, therefore, also addresses training about the impact of civil and political unrest and natural disasters, to name but two areas not included specifically in the earlier approaches. Further, this model emphasizes that mental disorders are no less prevalent in low-income countries, as well as the increasing importance of mental health problems as epidemiological transitions from communicable to non-communicable diseases take place. There is greater emphasis also on the link between mental health and personal and national poverty as reflected in educational, social welfare, and criminal justice issues. There is clear acknowledgment of the salience of mental health to the achievement of the majority of the objectives of the United Nations Millennium Development Goals by 2015, that include: a) eradicate extreme poverty and hunger; b) achieve universal primary education; c) promote gender equality and empower women; d) reduce child mortality; e) improve maternal health; f) combat HIV/AIDS, malaria, and other diseases; g) ensure environmental sustainability; h) develop a global partnership for development

Competencies in this model require that residents:

- have a clear conceptual understanding of the epidemiological information on prevalence, risk factors and consequences of mental illness;
- understand the contribution of mental disorders to global burden of disease;
- understand the public health framework of mental health promotion, prevention, treatment, rehabilitation, and prevention of mortality;

- appreciate the various components of social policy, health policy, mental health policy, and mental health service delivery, including the role of primary care;
- appreciate human rights issues;
- can diagnose and manage the common psychiatric disorders;
- understand the principles of suicide prevention;
- understand the definition and impact of disasters and their management;
- comprehend the importance of life long learning through familiarity with the characteristics of evidence based psychiatry.

The centrality of cultural competencies in the teaching of medical students and residents

The cultural approach in psychiatry must be understood as an essential component of every aspect of psychiatric theory and practice. The following paragraphs briefly review the inclusion of cultural concepts, topics and specific competencies in psychiatric training of medical students and residents in psychiatry.

Knowledge

- Diagnosis and differential diagnosis
 - Medical students
 - Cultural aspects of primary psychopathologies (i.e., impact on severity);
 - cultural risk and protective factors
 - Residents
 - Culture-bound syndromes
- Comprehensive treatment plan
 - Medical students

Fostering of multidisciplinary care

- Residents

Cultural aspects of pharmacological (i.e., pharmacogenomics) and psychological treatments; cultural psychotherapies

- Maintaining, consolidating, sharing and conveying knowledge and clinical experience

- Medical students

Clinical formulation, family dynamics and environmental factors; multidisciplinary team approach

- Residents

Socio-cultural implications and public health policies and procedures

Skills

- Conducting a well-organized clinical interview, aimed at obtaining thorough and adequate anamnestic information

- Medical students

Obtaining appropriate demographic information; exploration of cultural variables and their meaning (gender, religion, language, ethnicity, tradition, health and illness beliefs, etc.)

- Residents

Use of items of a cultural formulation; delineation of the patient's cultural identity

- Clinical documentation and data filing

- Medical students

Documentation of cultural variables

- Residents
 - Adequate use of interpreters, whenever available and needed
- Appropriate implementation of follow-up procedures
 - Medical students
 - Follow-up of known cultural variables
 - Residents
 - Cultural issues in family care, relationships, attitudes, compliance, beliefs and ethical issues
- Tests for diagnostic and therapeutic interventions
 - Medical students
 - Cultural correlates of psychometric and personality tests
 - Residents
 - Cultural tests; help-seeking patterns and approach to treatments

Attitudes

- Relating to the patient and his/her family with professionalism, empathy, and genuinely human understanding
 - Medical students
 - Racial/ethnic, social and cultural differences; refugees, migrants and minorities
 - Residents
 - Information about family history, structural hierarchy, coping mechanisms, sociocentric vs. egocentric views; mind-body unitary entity, holistic views

Didactic tools

An emphasis on cultural competencies as part of the training of future psychiatrists requires a continuous awareness of their impact on all facets of the clinical process.

Readings and lectures should include at least:

- Basic definitions (culture, race, ethnicity, cultural psychiatry, cultural variables, etc.);
- Clinical dimensions and applications of contemporary cultural psychiatry;
- Description and use of cultural formulation(s);
- Basic clinico-cultural competencies;
- Cultural variations of psychiatric and non-psychiatric conditions;
- Cultural aspects of special populations;
- First-person narratives of patients with medical and/or psychiatric conditions;
- Culture and psychiatric diagnosis;
- Discussions of “classics” of psychiatric literature;
- Current and future research in cultural psychiatry.

Problem-based, case-based, patient- and trainee-centered activities should include:

- Appropriate utilization of different settings (inpatient, outpatient, forensic, community-based and other facilities);
- Participation in psychotherapy activities (specifically, in “cultural psychotherapy” settings);
- Individual demonstration of work and interventions by different members of the clinical team, including interpreters;
- Journal clubs, movie-based discussion, experiential groups, historiographic “therapy” activities, psycho-cinema, psychodrama.

An adequately scheduled (at least bi-monthly) supervision of cultural cases by experienced clinicians or other mental health professionals should be provided, including:

- Use of “journaling” by trainees, with further discussion of contents;
- Formal and informal supervision, experiential groups;
- Provision of adequate training opportunities to supervisors;
- Provision of bibliographic support (books, book chapters, cultural journals, essays, patient memoirs, etc.).

Competency assessment in medical student education

Assessment plays an important role in ensuring the quality of medical graduates. It should be designed to reflect the levels that students are expected to reach. However, there is no single tool that can be used to assess all the learning objectives and competencies. One of the most common tools used is periodic direct observation by faculty of a student’s interaction with the patient with or without rating scales. An emerging evaluation method is a 360° evaluation, in which evaluation is conducted by all those faculty, peers, and staff involved in care of the student’s patient. Matching the assessment methods with the competencies being learned is essential (18). Using several other commonly used methods, Table 2 illustrates this approach.

Table 2 Core clinical skills and common medical student assessment methods during clinical rotations in psychiatry (according to ref. 19)

Clinical skill	Assessment method
Cognitive assessment	Stimulated chart recall, oral examination
Mental state examination	Standardized patient examination, chart review of student notes
Assessment of functional status	Stimulated chart recall, standardized patient examination, oral examination
Communication skills	Standardized patient examination, direct observation
History taking	Record review, objective structured clinical examination (OSCE), direct observation

Stimulated chart recall – Uses a student’s patient record in an oral exam-like format to explore decisions made.

Standardized patient examination – The student provides care to a standardized patient (a well person or an actual patient trained to simulate an illness in a standardized way) as if he/she were a real patient and is evaluated by a trained observer.

Objective structured clinical examination – A multi-station exam of simulated clinical tasks. The student performs the task and is evaluated concurrently by a trained observer.

There are several critical issues related to the assessment of competencies. An important issue is whether some competencies should be assessed at multiple times or whether a “one-time” assessment will suffice (20). This is a complex issue because both knowledge and skills tend to decay if they are not used (reinforced) or if they have a high degree of condition specificity (e.g., a student may be competent to perform a mental status examination for a patient presenting with symptoms for anxiety disorders, but not competent in performing a mental status examination for a patient presenting with delirium or cognitive disorders). Skills that are considered to be essential for competence, such as performing a mental status examination, should be assessed in at least two different contexts. Assessment of performance of clinical skills, however, is generally time consuming and constrained by the availability of patients with the desired variety of presenting problems.

In high-resource institutions, technology has a vital role in assessing competencies. As an example, multidimensional electronic infrastructure has been developed in some American medical schools. Third and fourth year medical students use an electronic competency management system (ECMS) to register for all competency experience; students are required to upload their final projects (powerpoint presentation, video interviews, papers they have written, etc.) into ECMS. The faculty evaluates the final projects and submits feedback to the student via ECMS. The appropriate competency director reviews the projects and feedback and gives the final approval, which is recorded in the student’s ECMS file, as well as on the student’s competency transcript. ECMS thus functions like an electronic portfolio (21).

In other developed countries such as the UK, there is a consensus statement on the content of communication curricula in undergraduate medical education, which includes

computer – based and electronic communication (22). Students are required to have sufficiently competent information technology skills and be familiar with computerized patient records to ensure patients' electronic records are well maintained. So, there should be no difficulties in assessing competencies of medical students through electronic infrastructure provided by the faculty. Moreover, using an electronic reporting system for student-patient-faculty encounters during a psychiatry clerkship can be of significant value in assessing what students are seeing, doing, and learning on the required experience (23).

In low-resources institutions with highly limited access to technology, the assessment method should be based on close supervision and face-to-face interaction between students and staff.

Competency based evaluation in residency training

Competency based evaluation is a relatively new approach to assessing clinical competence in the field of medicine, although variations of this approach have been used for several decades. When program directors and faculty are asked to assess whether a resident is competent to be promoted or to practice independently, an accurate determination requires multiple observations and methods of assessment just as in making a diagnosis of a complex or challenging patient. The model for evaluation of residents described here has been developed by the US ACGME (24) and is summarized in Table 3.

Purposes of assessment

Did the resident achieve the objectives for the educational experience? The objectives of a rotation or other educational experience provide guidelines and a framework for what the resident is expected to know or be able to do by the end of that experience. An example is whether a resident has gained the competence to accurately assess suicide risk when evaluating a patient in a hospital emergency room.

What knowledge, skills, or attitudes the residents need to acquire or improve must be established. By providing constructive and ongoing feedback, the faculty can help guide the resident in implementing changes that will lead to performance improvement.

How might the residency program use aggregate performance data to improve education? For example, in reviewing all of the evaluations done at the end of a particular rotation on residents completing an inpatient psychiatric rotation, the faculty might determine that the residents, as a group, are rated low in their understanding of basic psychiatric disease principles. This insight will facilitate the program adding didactic lectures, case conferences, and other experiences that help enrich the residents understanding of the pathophysiology of psychiatric illness.

Assessment results can provide formative and summative feedback to residents. Formative evaluation refers to an assessment whose primary purpose is to provide feedback to the residents during an experience in order to improve knowledge or skills. Summative assessments review performance at the end of an experience, and are typically used to make a statement about whether a resident has mastered specific competencies; identify skills needing attention; and identify opportunities for program improvement.

Fundamentals of assessment

An assessment system must accomplish its aim. First, is it *reliable*? That is, does the assessment tool used provide a dependable and consistent result of a resident's performance that is consistent across evaluators? Without established reliability clinical performance ratings and in-training exams are less helpful and perceived as unfair by trainees. The assessment tool must also be *valid*. A valid assessment tool measures what is intended. For example, does a clinical performance rating done at the end of a rotation accurately capture what the faculty member believes that resident's performance was on that particular rotation.

An assessment tool must be *practical* to implement because if it is too complicated, it will never be used.

In developing an assessment system, it should be comprehensive, and assess what is necessary. For example, Table 3 shows a possible model of an assessment system. The multiple perspectives gained from having a focused observation tool, a 360° evaluation, a portfolio, and a clinical performance rating tool can provide an array of information that in combination can determine whether a resident is appropriately gaining the knowledge and skills necessary to practice independently and competently. An important criterion for assessment systems includes using multiple evaluators, which improves the reliability of the assessment tool, and obtaining multiple observations, which also improves the reliability of the assessment being used.

Table 3 A proposed model for the assessment of clinical competencies in residents (according to ref. 24)

Tool	Who evaluates?	How are the evaluators trained?	What performance is evaluated?	Frequency
Clinical performance rating	Faculty	Faculty set behavioral anchors; review meaning of numerical ratings	All appropriate competencies	Once a month
360°/multi-rater	Nurses, peers, ancillary personnel		Interpersonal and communication skills; professionalism	One a year
Focused observation	Faculty	Faculty discuss focused observation tool and have criteria for rating the resident	All appropriate competencies	Quarterly
Portfolio	Faculty mentor, program directors	Faculty decide criteria for portfolio entries	All appropriate competencies	To be determined

Case logs	Program directors		Medical knowledge, patient care	Semi-annual meeting with program directors
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Table 4 Behavioral anchors for “end of rotation” assessment

Fail (1)	Needs to Improve (2)	Satisfactory (3)	Above Expectations (4)	Excellent (5)
Poorly organized history	Misses important details in history	Covers essential details to construct differential diagnosis	Covers essential details for diagnosis; explores psychosocial issues	Covers essential details for diagnosis; history-taking well focused; explores psychosocial issues; well paced

Components of a core assessment system

As noted, when resources allow, the use of a wide range of assessment tools and methods is best for measuring resident’s capabilities. There are other types of assessment methods that can be used, and the following list is by no means the only appropriate one. It is, though, an approach helpful in developing and establishing a competency based system. What follows is a brief description of each one of these components.

Global clinical performance ratings are often used at the end of specific clinical rotations. In order to increase the utility of the information from these “end of rotations” assessments, one approach is to add behavioral anchors to the assessment, as shown in Table 4.

Focused observer methods include such approaches as direct observations of a resident-patient encounter with a concurrent written evaluation by the observer. This can be done live

or videotaped, with a patient's permission, and can be used in any typical patient care setting. Observing a resident's core skills early in the educational programme to identify those skills requiring improvement, can then later gauge whether improvement occurred. Regularly scheduled sequential evaluations identify gaps in knowledge or skills and assess improvements as a result of remediation efforts. The disadvantage of this approach is that it may be very time consuming, and faculty must be trained as a group, so that their evaluations are consistent across observers.

Multi-rater evaluations, often called 360° evaluations, provide multiple perspective on a variety of aspects of the resident's performance. For example, in an inpatient service, such assessments are comprised of evaluations by faculty, other residents, medical students, nurses, other clinical staff, administrative support staff, and even patients. Self-evaluation is also an important part of a multi-rater assessment system. The disadvantage of this system is that it requires a great deal of administrative time, in part because all of the raters have to be trained to use a specific evaluation approach.

Cognitive tests, which have been designed in a number of countries, either locally or nationally, for use in a variety of settings, are of most help in assessing medical knowledge. They are not generally useful in assessing clinical performance.

Case logs are another important way of documenting resident experiences. They permit the resident to track patient care experiences, including the number of cases by particular diagnoses, or particular treatment interventions.

A *learning portfolio* is a collection of materials that represents a resident's efforts in multiple areas of the curriculum. The portfolio can include self-assessment and goal setting documents prepared by the resident, mentored observation and feedback, works in progress

with formative feedback, self reflection on work, and summative materials documenting achievement. Portfolios can provide a mechanism for integrating all aspects of clinical competencies into assisting the developing competence of a physician. Because the resident is responsible for developing the portfolio, it promotes reflection and self-assessment. For the same reason, it also facilitates a learner-centered approach in which the curriculum components are specifically geared to the particular educational needs of the resident. Because the nature of the portfolio is quite variable and the information is more often qualitative than quantitative, it is unlikely that this mechanism or approach could be used in isolation. It does, though, provide a faculty member with insight into the resident's professional development towards competency.

The most important aspect of any assessment system is the way information about performance is communicated back to the resident. This feedback includes both formative and summative kinds of assessment information. A formative assessment conducted during a clinical or other learning experience provides residents with immediate feedback allowing them to incorporate new knowledge and skills to improve their clinical performance. An example of a formative assessment is the observation of a resident's clinical interview of a patient in the hospital with immediate feedback on his/her performance, including gaps that need to be remediated and the development of a remediation program. Summative assessments review performance typically at the end of an experience, and are used to make a more final type of comment about whether a resident has mastered specific competencies desired within the confines of a specific clinical rotation. It also identifies skills that are in need of improvement for that individual, and allows for information to be communicated to the faculty members who will be supervising the resident in their next clinical experience.

Finally, summative assessments provide opportunities for program improvement by pooling performance of all residents within a particular experience. The final aspect of a summative assessment includes the determination about whether a resident is suitable for promotion or graduation from the program.

Educating medical student and resident teachers and supervisors

Basic educational theory

Attention to some basic principles common to all adult education enhances medical student and resident teaching irrespective of resources. These include, but are not limited to the following:

- Teaching must be goal directed.
- Learning is most productive when information is immediately needed, relevant, and practical for problem solving.
- Motivation for learning is highest when it is valued and personally rewarding.
- Students have various learning styles based on auditory, visual, and tactile or “hands on” approaches, and teaching is most effective when employing more than one style (Socratic questions, demonstrations, role playing, videotaping, brief lectures).
- Both teacher and student must be prepared for educational activities.
- Organizing information, whether in handouts and/or in presentation, facilitates student and resident learning.
- Practicing, as in how to interview patients or present cases, is vital.
- Providing for student self assessment and reflection is integral to learning.
- Encouragement, praise, and criticism must be honestly provided to enhance motivation.

- Teaching must begin with an assessment of prior knowledge, skills, and attitudes, which avoids false assumptions regarding the level of student or resident knowledge.
- Active learning, as opposed to observation and over reliance on lecturing, facilitates the acquisition of psychiatric knowledge and skills.
- Sharing clinical experiences by teachers, including mistakes, is often helpful to students and residents.

In all of medical education, there exists a formal curriculum (learning objectives, assignments and experiences) and an informal curriculum (interactions with teachers where the “culture of medicine” is taught). The “hidden curriculum” reflects the values of an organization and its teachers and transmits positive and negative attitudes from one professional generation to the next. The respect or lack of respect accorded by teachers to patients, for example, is a potent organizer for student-patient interactions.

Teaching skills and attitudes

Teaching is most effective when it actively engages students through asking questions.

Typical questions in clinical settings include:

- What is your understanding of this patient’s illness in terms of the biological, psychological, and social contributions? What is your clinical reasoning and supporting evidence?
- What tests might be indicated?
- What medications or other treatments would be helpful?
- What are likely challenges to providing effective care of the patient?

Teaching is often richer when the instructor describes his/her approach to a problem and explains what information was significant in establishing a diagnosis and treatment plan.

Effective teaching is also characterized by the provision of positive comments about what the student did correctly as well as pointing out empathically the learner's mistakes. Demeaning comments to students makes learning unsafe and are counterproductive (25). Opportunities for consolidation and integration of experiences are enhanced by the teacher's stimulating reflection through questions such as: what was learned today? What troubled or surprised you? What further questions did our experience generate?

Demonstrating interest in the student through active involvement (by asking questions, using clinical material, and creating goals and objectives for the experience) characterizes successful lecturing.

Providing feedback

Providing effective feedback to students and residents is vital. They strongly desire it and feel they never receive a sufficient amount. Providing feedback is positively correlated with teaching ratings and improves learner's knowledge and skills (26).

Feedback is considered formative, as opposed to a final evaluation, because it influences performance prior to assigning a grade or rank, and it reinforces positive and alters negative behavior. To deliver effective feedback, teachers must organize their thoughts and observations prior to speaking with a student; establish an appropriate location for giving feedback; and select the correct time for the feedback. With respect to where feedback is offered, positive feedback is appropriate at any time. Negative feedback should be provided only in private and without interruption. The timing of feedback is most helpful when it occurs as proximal to the event as possible. It should not be delivered when the teacher is angry or does not have all the relevant facts about a student's performance. For lengthier and more formal feedback sessions, appointments should be made. The provision of feedback

involves four different steps:

- elicit self-reflection from the student (what and how do you feel about your work so far?);
- reinforce what the student did well;
- explain areas of possible improvement in non-judgmental language that describes specific, objective, observable, and modifiable behaviors;
- establish that the student understands the feedback and ask for a plan on how to improve.

In general, there are a small number of challenging students who require additional effort and intervention. Slow learners have good attitudes but require more help and are grateful when given it. Some students have poor knowledge and/or skills and require additional opportunities. Occasionally, students will be inhibited in learning because they are frightened of criticism or judgment. These students require encouragement. The unmotivated student must be engaged through understanding the lack of motivation. Is there a psychiatric disorder? Does the student need reminding of his/her responsibility to learn? Students with poor interpersonal skills or who treat patients in an unprofessional manner (either with condescension or undue familiarity) are often challenging. The teacher is obligated in these situations to inform the learner of the unacceptable behavior and establish clear expectations for acceptable rules of physician conduct. Such students may be unaware of the impact of their behavior on others and can be assisted in understanding this.

Some useful Internet sites for the medical student and resident teacher

Professional development as an educator is essential for all teachers. For those teaching in countries and regions with fewer colleagues, networking with others in similar positions

can be difficult. The internet is one vehicle for keeping abreast of educational innovations and newer pedagogical methods. It is also an invaluable resource for not “recreating the wheel” when starting, implementing and evaluating a program by permitting the new educator to base his/her activities on proven and detailed models. The sites listed below are representative of Western countries (especially the United States), but may be helpful with the realization that there are analogous resources available throughout the world:

- The Association of American Medical college website (www.aamc.org) has a listserv and a national curriculum database.
- The e-journal *Medical Education* (www.mededuc.com) features articles like “Small group teaching: what students really think”.
- Another electronic journal specifically for educating health professionals is *Medical Education Online* (<http://med-ed.online.org>), also hosting discussion forums.
- The American Association of Directors of Psychiatric Residency Training (www.aadprt.org) has available resources on every aspect of residency training, including an extensive library of model curricula.
- For medical student education within psychiatry, the website of the Association of Directors of Medical Student Education in Psychiatry (www.admsep.org) is most helpful.
- Another American resource devoted to career development of the psychiatric educator is sponsored by the Association for Academic Psychiatry (www.academic_psychiatry.org).

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APPENDIX I

Some Sample Psychiatric Screens for Medical Students

Interviewing skills remain at the very core of an effective doctor-patient relationship. The following screening questions may facilitate the medical student's inquiry about sensitive issues. Some of the screens are useful regardless of a particular clinical setting. Others may have greater relevance for a specific setting, for example, in the emergency psychiatry, outpatient and inpatient sites (4).

Seven questions about which the medical student should obtain information from any psychiatric patient in the evaluation interview:

- Why is the patient presenting now?
- What does the patient want/expect from the visit?
- Is a general medical illness contributing to the patient's behavioral or emotional problems?
- How lethal is the situation regarding suicidality, homicidality and abuse of others?
- In what ways are the patient's relationships helping or impeding the problem?
- What are the patient's cultural expectations, explanations and treatments for their illness?
- What is the patient's psychiatric diagnosis?

Sample psychiatric screens

- *The Mini-Mental State Examination*

This is only a test of cognitive functioning, not a substitute for a comprehensive mental status examination.

- ***Alcohol and drug abuse screen***

Have you ever had a drinking or drug problem? (70% of alcoholics and 1% of nonalcoholics answer YES to this question).

- ***The CAGE Test***

- Have you ever felt you ought to *Cut* down on your drinking?
- Have people *Annoyed* you by criticizing your drinking?
- Have you ever felt bad or *Guilty* about your drinking?
- Have you ever had a drink first thing in the morning to steady your nerves or get rid of a hangover that is, an *Eye opener*?

(A positive answer on two or more will identify the majority of people with alcohol abuse or dependence)

- ***Drug and tobacco screen***

- When is the last time you used any illicit drug or tobacco?
- How much are you using now?
- What was the most you ever used?
- Have you used any other forms of tobacco (chew, cigarettes, cigars, pipes)?

- ***Sexual screen***

- Are you sexually active at the present time? If NO, have you ever been?
- Are (were) your partners men, women, or both?
- If BOTH. which do you prefer?
- What means *of* birth control do you (have you) use (d)?

(ask both males and females)

- Do you have any concerns or problems with your sexual life?
- Have there been any changes in your sexual activity?
- Changes in level and frequency of interest? Changes in type of interest?
- Do you or have you ever engaged in anal intercourse?
- Are there any ways in which you would like your sexual life to be different?
- Have any bad or frightening things ever happened to you sexually? For example: rape, sexual abuse, or molestation?
- Have you had any sexually transmitted diseases such as herpes?
- Chlamydia, gonorrhea, syphilis, or AIDS?
- Have you ever been treated for a sexually transmitted disease?
- ***HIV risk factors***
 - Do you worry about getting AIDS? Why? or Why not?
 - Do you practice safe sex? (Explain the concept if needed)
 - Have you ever injected (or shot up) drugs into your veins?
 - Have you ever had sexual contact with another person, man or woman who used IV drugs?
 - How many sexual partners have you had in the last 10 years?
- ***Suicide and violence screens***
 - Have you ever had thoughts that life is not worth living?
 - Have you ever had thoughts of killing yourself? Are you having these thoughts now?
 - How would you do it?
 - Have you taken steps to carry out your plan? (collected weapons, pills, poisons,

etc.)

- Have you ever had thoughts of hurting anyone else? Are you having these thoughts now and how would you do this?
- Have you ever hurt anyone else?

- ***Screens for family violence - child abuse***

- How did you feel during your or your partner's pregnancy?
- Has your child lived up to your expectations?
- At what age do you think children know right from wrong? (Abusers often have unrealistically high expectations of children)
- How do you feel when your child behaves badly? What do you do? Is there anyone you can turn to for help?
- Have you ever been concerned that anyone would hurt your child? Have you been frightened with thoughts of hurting your child? Have you or anyone else hurt your child?

- ***Sexual abuse victims***

- Are there things going on in your home that you are uncomfortable with or ashamed to talk about?
- Has there been any sexual contact between family members in your home (besides your parents)?
- Have you been involved sexually with any adult, including either of your parents?

- ***Partner/elder abuse victims***

- Is your family under a lot of stress?

- What happens when you and your partner argue?
- Do either of you have trouble with your temper?
- Have you ever fought physically with your partner? If so how badly have you or your partner been hurt?
- Is there a weapon in the house?
- Are you afraid to go home?

- ***Abuse history***

- How were you disciplined as a child?
- Did you ever witness any violence in your home as you were growing up?
- Did a family member ever physically hurt you?
- During your childhood or adolescence did a relative, family friend or stranger ever touch your body, or have you touch them, in a sexual way?
- Did anyone attempt or succeed in having sexual intercourse with you?
- Did you ever have an unwanted sexual experience of any kind?

- ***Screen for sleep disorders***

- Are you content with your sleep pattern?
- Are you excessively tired during the day?
- Does your bed partner complain about your sleep pattern?

- ***Screen for depression***

- How would you describe your mood?
- In the past month, have you felt down, depressed, or hopeless most of the day nearly every day? If yes: Describe what that is like for you. Do you feel that way now?

- How long have you felt depressed?

If no: When did you last feel down, depressed, or hopeless?

How long did you feel depressed?

- ***Screen for eating disorders***

- Have you lost or gained weight in the last year? How much?
- How many times have you started a diet in the last year?
- Have you ever felt that your eating was out of control? Have you gone on eating binges?
- Have you ever vomited or spit out food after eating to get rid of it?
- Have you ever used diuretics or laxatives? How often?
- Have people ever criticized you about being too thin?

- ***Screen for psychosis***

- Have you ever had trouble with your thinking?
- Has your thinking ever been so confused that you lost track of your ideas?
- Have any of your thoughts seemed frightening or disturbing to you?
- Have you ever felt like people were watching or following you? Or that they wanted to hurt you?
- Have your eyes or ears ever played tricks on you?
- Have you ever had the experience of hearing a voice when nobody else was around, or of seeing things that weren't there?