DAY FOUR
EDUCATIONAL PLANNING
AND
EVALUATION

DAY FOUR

Cognition in Ward rounds and teaching in OPDs
   Clinical decision making skills
   Problem solving skills
   Critical thinking skills
Teaching procedural skills
Teaching Affective Domain
Evaluation and assessment: what are they?
Evaluating a training program
Using results of an evaluation program
FIVE MICROSKILLS FOR CLINICAL TEACHING

Most clinical teaching takes place in the context of busy clinical practice where time is at a premium. Microskills enable teachers to effectively assess, instruct, and give feedback more efficiently. This model is used when the teacher knows something about the case that the learner needs or wants to know.

Clinical teachers play several different professional roles: expert consultant, joint problem solver, Socratic teacher, and, when appropriate, the Facilitator.

TEACHER REASONING DURING CASE PRESENTATIONS AND FIVE MICROSKILLS FOR CLINICAL TEACHING

This program defines each component and provides opportunities to practice the five microskills for clinical teaching:

- Get a commitment
- Probe for supporting evidence
- Teach general rules
- Reinforce what was right
- Correct mistakes


TEACHER REASONING DURING CASE PRESENTATIONS AND FIVE MICROSKILLS FOR CLINICAL TEACHING

During case presentations and discussions in ambulatory settings, residents spend 50% of the time presenting the case. Clinical teachers then ask questions (25% of time) and discuss the case (25% of time).

This process is mirrored in the minds of the Supervisor.

Clinical teachers first focus on diagnosing the patient’s problem, then on diagnosing the learner’s needs, and finally on providing targeted instruction.

The microskills in this program facilitate this instructional process.
The first two microskills 1) Get a Commitment and 2) Probe for Underlying Reasoning diagnose learner knowledge and reasoning.

The last three microskills 3) Teach General Rules, 4) Reinforce What Was Right, and 5) Correct Mistakes, offer tailored instruction.

MICROSKILL 1:

GET A COMMITMENT

Cue: After presenting the facts of a case to you, the learner either stops to wait for your response or asks your guidance on how to proceed. In either case, the learner does not offer an opinion on the data presented. If you recognize the patient’s problem, your immediate response is to want to tell the learner the answer.

Supervisor: Instead, you ask the learner to state what s/he thinks about the issue presented by the data. Issues may include coming up with more data, proposing a hypothesis or plan, developing a management plan, figuring out why the patient is non-compliant, deciding on whom to consult, etc.

Rationale: Asking learners how they interpret the data is the first step in diagnosing their learning needs. Without adequate information on the learner’s knowledge, teaching might be misdirected and unhelpful. When encouraged to offer their suggestions, learners not only feel more of the responsibility for patient care but enjoy a more collaborative role in the resolution of the problem.

What to say
"What do you think is going on with this patient?"
"What other types of information do you feel are needed?"
"What would you like to accomplish in this visit?"
"Why do you think the patient has been non-compliant?"

What to avoid
It is not offering your own opinion.
"This is obviously a case of pneumonia."
It is not asking for more data nor is it Socratically leading them to the right answer.
"Anything else?"
"Did you find out which symptom came first?"
MICROSKILL 2:

PROBE FOR SUPPORTING EVIDENCE

Cue: When discussing a case, the learner has committed him/herself on the problem presented and looks to you to either confirm the opinion or suggest an alternative. You may or may not agree with the opinion and your instinct is to tell them outright what you think about the case.

Supervisor: Before offering your opinion, ask the learner for the evidence that he/she feels supports his/her opinion. A corollary approach is to ask what other choices were considered and what evidence supported or refuted those alternatives.

Rationale: Learners proceed with problem solving logically from their knowledge and data base. Asking them to reveal their thought processes allows you both to find out what they know and to identify where there are gaps. Without this information, you may assume they know more or less than they do, and risk targeting your instruction inefficiently.

What to say
"What were the major findings that led to your conclusion?"
"What else did you consider? What kept you from that choice?"
"What are the key features of this case?"
"What questions are arising in your mind?"

What to avoid
It is not list making nor an oral examination/grilling about the problem.
"What are the possible causes of congestive heart failure?"
It is not a judgment on the student thinking.
"I don’t think this is infectious mono. Don’t you have any other ideas?"
It is not your own opinion on the case.
"This seems like a classic case of..."
It is not asking for more data about the case than was presented initially.
"What do you know about her previous childbirth?"

MICROSKILL 3:

TEACH GENERAL RULES

Cue: You have ascertained from what the learner revealed that the case has teaching value, i.e., you know something about it which the learner needs or wants to know.
Supervisor: Provide general rules, concepts or considerations, and target them to the learner’s level of understanding. A generalizable teaching point can be phrased as: "When this happens, do this..."

Rationale: Instruction is both more memorable and more transferable if it is offered as a general rule or a guiding metaphor. Learners value approaches that are stated as more standardized approaches for a class of problems or as key features of a particular diagnosis. Targeting your instruction minimizes the risk of misjudging the learner’s sophistication on the topic - resulting in either insulting or losing him/her, and wasting both of your time.

What to say
"If the patient only has cellulitis, incision and drainage is not possible. You have to wait until the area becomes fluctuant to drain it." "Patients with cystitis usually experience pain with urination, increased frequency and urgency of urination, and they may see blood in the urine. The urinalysis should show bacteria and white blood cells, and may also have some RBC’s."

What to avoid
It is not the answer to a problem (although this may also be needed), rather it is an approach to solving it. "In this case, it’s a good idea to soak the affected area to relieve the tenderness rather than lancing it." It is not an unsupported, idiosyncratic approach. "I’m convinced the best treatment for diarrhea with salmonella enteritis is still a liquid or soft diet."

MICROSKILL 4:

TELL THEM WHAT THEY DID RIGHT
Cue: The learner has handled a situation in a very effective manner that resulted in helping you, patients, or other colleagues. He/she may or may not realize that the action was effective and had a positive impact on others.

Supervisor: Take the first chance you find to comment on: 1) the specific good work and 2) the effect it had.

Rationale: Some good actions are pure luck, others are more deliberate. In either case, skills in learners are not well established and are, therefore, "vulnerable." Unless reinforced, competencies may never be firmly established.
What to say

Specific praise is beneficial to the learner
"You didn’t jump into solving her presenting problem but kept open until the patient revealed her real agenda for coming in today. In the long run, you saved yourself and the patient a lot of time and unnecessary expense by getting to the heart of her concerns first."

"Obviously you considered the patient’s finances in your selection of a drug. Your sensitivity to this will certainly contribute to improving his compliance."

What to avoid

It is not general praise that is required.
"You are absolutely right. That was a wise decision I did that IV preparation very well."

MICROSKILL5:

CORRECT MISTAKES

Cue: The learner’s work has demonstrated mistakes (omissions, distortions, or misunderstandings) that have or will have an impact on the patient’s care, the team’s functioning, or the learner’s own effectiveness.

Supervisor: As soon after the mistake as possible, find an appropriate time and place to discuss what was wrong and how to avoid or correct the error in the future. Allow the learner a chance to critique his/her performance first.

Rationale: Mistakes left unattended have a good chance of being repeated. By allowing the person the first chance to discuss what was wrong and what could be done differently in the future, you are in a better position to assess both their knowledge and standards.

Learners who are aware of their mistakes and know what to do differently in the future need only to be reinforced. Learners who are aware of their mistakes but unsure of how to avoid the situation in the future are very likely to be in a "teachable moment" (they are eager for and appreciate tips that will help them get out of or avoid the uncomfortable situation in the future).
Learners who are unaware that they made a mistake or are unwilling to admit the error are more troublesome. Obviously they have not seen that their action has an undesirable consequence. In order to maximize learning for them, detailing the negative effect as well as the correction are both essential for effective feedback.

**What to say**

"You may be right that this child’s symptoms are probably due to a viral upper respiratory infection. But you can’t be sure it isn’t otitis media unless you’ve examined the ears."

**What to avoid**

Avoid vague, judgmental statements.
"You did what.?! (angry tone)

**THE CASE OF A PAINFUL EAR**

A new first year resident presents a case to you while you are attending in the ambulatory clinic. The resident appears to be bright and eager to learn. He says:

**Resident:** "I just saw a four year-old boy in the clinic with a complaint of ear pain and fever for the past 24 hours. He has a history of prior episodes of otitis media, usually occurring whenever he has an upper respiratory tract infection. For the past two days, he has had a runny nose and mild cough and yesterday, he began to have a low grade fever and complained that his right ear was hurting. His mother gave him Tylenol last night and when he got up this morning. He has no allergies to medication."

"On physical exam, he appeared in no acute distress and was alert and cooperative. His temperature was 38.5 C. His HEENT exam was remarkable for a snotty nose and I think his right tympanic membrane was red, but I’m not sure. It looked different from the left one. His throat was not infected. His neck was supple without adenopathy. His lungs were clear and his heart had no murmur. I didn’t see any rashes or skin lesions."

**Supervisor:** "This is obviously a case of Otitis Media. Give the child amoxicillin and get him out of here."

<Stop>
**Alternative Strategy**

Same case presentation by the resident.

**Supervisor:** "What do you think is going on?"

**Resident:** "I think he has an upper respiratory infection, probably otitis media."

**Supervisor:** "What led you to that conclusion?"

**Resident:** "He has a history or repeated otitis media and currently has a fever, a painful right ear, and a runny nose."

**Supervisor:** "What would you like to do for him?"

Resident: "First, I would like you to confirm my findings on the right ear. If you concur about otitis media, then we should give him some antibiotics. Since he doesn’t have any allergies to medications, I think amoxicillin is a reasonable choice."

**Supervisor:** "You did a good job of putting the history and physical exam findings together into a coherent whole. It does sound as if otitis media is the most likely problem. There is great variability in ear problems. The key features of otitis media that I look for in the physical exam are the appearance and mobility of the ear drum, landmarks, opacity of the drum, and mucus discharge, and in the history are prior upper respiratory infections and past problems with the ears. This child would seem to fit these criteria."

"With the lack of allergies, amoxicillin is a logical choice for an antibiotic. I’ll be glad to confirm your ear exam findings. Let’s go and see the patient."
THE CASE OF AN ADOLESCENT GIRL

In ambulatory clinic, a third year medical student presents the following case to you. The student appears to be conscientious but somewhat insecure about her knowledge and skill in pediatrics. The student reports:

**Student:** "I just finished examining a 16 year-old girl. She has been complaining of pain when she urinates for the past few days. She has never had a urinary tract infection. She denies burning on urination, abdominal pain, fever or seeing blood in her urine. She says she thinks her last menstrual period was a couple of weeks ago. I don’t know if she is sexually active. I wasn’t sure if I was supposed to ask those kinds of questions. She is here with her mother.

"On physical exam, she looked well to me. She was afebrile and the rest of her vital signs were O.K. Her ENT exam was normal. Her lungs were clear and her heart was regular without any murmurs. Her abdomen was soft and not tender and I didn’t think her spleen or liver were enlarged. That’s all I examined."

*(Supervisor as Expert Consultant: "Get a urine and make sure she doesn’t have a vaginal or meatal discharge.")*  

<Stop>

**Supervisor:** "What do you think is her problem?"

(Skill 1: Get a Commitment)

**Student:** "I am concerned that it might be a urinary tract infection."

**Supervisor:** "What do you see here that might indicate a urinary tract infection?"

(Skill 2: Probe for Underlying Reasoning)

**Student:** "She has pain on urination but not much of a problem with frequency or urgency of urination."

**Supervisor:** "The UTI is a logical possibility but we don’t have adequate information to confirm the diagnosis. We need a more complete physical examination – particularly of the lower abdomen and external genitalia. We also need a sexual history. Has she suddenly become sexually active?"

"You identified the most probable concern in this case but you need to complete the physical exam and get a sexual history. Without more information, we can’t be sure of what we have."

"Do you want me to model how to take a sexual history and do a pelvic examination or would you like me to observe you do them?"

(Skills 3-5: Teach General Rules, Provide Positive Feedback, and Correct Errors)

**Student:** "I would really appreciate your demonstrating how to do them."

**Supervisor:** "O.K. Let’s go and see the patient."
MICROSKILL FACILITATING SIMULATIONS

Working in triads or small groups, each person will have the opportunity to play the student, the preceptor and the observer of the interaction.

Roles

Learner: Use one of the trigger cases at the end of this workbook. Remember that learners make mistakes and modify your presentations accordingly! Don’t offer your ideas too freely, or the preceptor will be left with nothing to do.

Supervisor: Use as many of the microskills as you can - try for at least the first two (getting a commitment and probing for evidence). Remember that these skills are counter-intuitive and may not be part of your regular teaching scripts. Thus, you will need to be purposefully aware of the microskills as you practice them.

Observer: Take brief notes on the dialogue, cues and responses. What microskills are being used? What suggestions can you make for improvement?

Process

1. Choose roles.
2. Role play for 3 to 5 minutes.
3. After completing the simulation, allow the "preceptor" to critique him/herself, then the student, then the observer.

PRACTICE CASES

Directions: The following case presentations provide the stimulus for a teaching simulation. One person should perform the role of the resident, another the preceptor, and the remainder observers. Supervisor should practice using as many of the five microskills as possible.

1. Resident/Trainee: I just don’t understand these electrolytes on my patient, Mr. T. He’s the 36 year old man on 4 East with alcoholic hepatitis. His sodium is 133, potassium 2.9, Chloride 102, and bicarbonate 18. He looks O.K., but still has some nausea and a fever of 101.2. BP is 106/68, pulse 90. On exam he is jaundiced, and has mild RUQ tenderness but no rebound. His wbc is 16.8, unchanged from admission. Why do you think his potassium is so low? We’ve been putting some in his IV fluid.
2. Resident/Trainee: I have a 57 year old male with a history of hypertension, one pack per day smoker who presents with dyspnea when climbing hills to work. Further questioning reveals a vague tightening in the anterior chest with exertion that the patient rates as 6/10. He first noted this 2 months ago, now occurring daily. He had a pain free, comfortable exam. BP 140/90, EKG normal. I’m wondering if we should admit him to the hospital.

3. Resident/Trainee: I have a case of an 18 year-old G1P0 single, white female who presented for her regular prenatal appointment at 31 3/7 weeks gestation (by a 13-week ultrasound). She incidentally complained of a frontal headache and swelling in her ankles and hands. Her blood pressure was 180/100. Urine was 4+ SSA. She has 3+ edema, 3+ deep tendon reflexes, and her cervix was thick and closed.

4. Resident/Trainee: I have a 35 year old female with two teenagers who reports being depressed and having suicidal thoughts. The patient quit work three months ago to help her husband in his business and to assist in the home remodel. She began worrying about money and has lost sleep, appetite and energy.

5. Resident/Trainee: I have a five-year-old boy with fever and ear pain for five days. His tympanic membranes are red. I’d like to treat him with Amoxicillin and Actifed.

References on Clinical Teaching


M.I.T. FOR PSYCHOMOTOR SKILLS

STANDARDIZED/ SIMULATED PATIENTS

Historical perspective:

The history of standardized patient use is a success story that documents what can be accomplished through systematic educational research, development, and program evaluation.

Three significant events led to Howard Barrows’ creation of the first standardized patient. As a chief resident at the New York Neurological Institute, Barrows worked on the service of an attending physician who observed all medical students work up a patient from beginning to end. When asked why, the physician replied that no one else was watching students. Barrows noted that in the absence of observation and feedback, errors could persist. The second major event occurred as Barrows selected and managed patients for the neurology board examination. When the patients were debriefed after the exam, one described a physician who was hostile and performed an uncomfortable examination. When told that the physician would be spoken to, the patient said that he had "fixed" the examinee by "changing his Babinsky from one side to the other" and changing his sensory findings. The third triggering event for Barrows came when he was developing a set of films on the neurological examination using an artist’s model. He noted that the films did not include the elements of observation and feedback, so important for learning. He began to think about teaching the model to display a neurological problem, like the patient who could change his findings at will. In his first case in 1963, he taught the model to portray the signs, symptoms, and history of a paraplegic patient with MS. He also developed a checklist for the standardized patient to fill out on what was done by the trainee. This is similar to the process that is used today.

In a second landmark, Kretzschmar at the University of Iowa taught patients to be Gynecologic Teaching Associates (GTAs). The GTAs then taught the pelvic and breast examinations to students. This approach still is prevalent. Students liked this format because they were able to learn from the process.

The Objective Structured Clinical Examination (OSCE) was introduced by Harden and colleagues in 1975. Previously, encounters with patients for
education or evaluation had included a full examination. The OSCE format focused on the assessment of a specific competency, with a short encounter. In 1976, standardized patients first were sent into physician offices in unannounced visits. A study using this approach by Kopelow and colleagues in Manitoba asked physician faculty members to determine how many items on a checklist a competent physician should perform. Then, standardized patients were sent into these same faculty members’ practices. The physicians who set the standards, on average, performed 60% of the items that they said were essential for competent performance. This study highlighted the problems with developing reasonable standards of performance.

The introduction of the ATLS course (in 1976-1978) was an innovative, systematic use of standardized encounters for training and assessment purposes.

In 1984, Stillman and colleagues made the first report of a multi-institutional standardized patient examination, when a number of residency programs in the northeast gave the same examination to their residents. The first use of standardized patients in a licensure examination (by the Medical Council of Canada) occurred in 1993. This use of standardized patients in a "high stakes" examination is a significant landmark. The 1998 addition by the Educational Commission for Foreign Medical Graduates of an assessment of clinical skills was another such example.

ROLE OF SP IN MEDICAL EDUCATION

*Standardized patients (SP) portray an actual patient:* They are able to simulate the same symptoms and in some cases the same physical findings as those found in a real patient.

*Standardized Patients are carefully trained to provide feedback to the students:* The feedback which the standardized patient provides is unique since in many cases, it may be the only source of information which the student would receive from a patient regarding communication or clinical skills.

*Simulation ensures safety:* Standardized Patient encounters are a learner-centered rather than a patient-centered educational experience. Patient care in a clinical setting is not compromised. Clinical errors can be allowed to progress in order to teach the trainee the implications of and how to correct the error. Encounters facilitate learner transition to care of real patients.
Learners are given the opportunity to view their videotaped session: The performance of a student can be evaluated on a first-hand basis by the student, SP and faculty.

Curriculum Enhancement: Standardized Patient Encounters allow faculty to adjust the curriculum based on the results of the student encounters.

Professional Development and Research: Standardized Patient encounters can be utilized for faculty or professional development and research.

IMPORTANT OF STANDARDIZED PATIENT USE

- **Case specificity** – Since clinical performance is case-specific, there is a need to increase the number of cases and balance cases in order to make a general estimate about clinical competence. It also is important to give students broad experience, since performance may be related to experience.

- **Convenience** - Standardized patients provide the cases that you need at the time and in the place they are needed.

- **Direct comparisons of competence** - Standardized patient evaluations allow a direct comparison of students’ clinical skills. Previously, direct comparisons among students could only be done in the cognitive domain (for example, through USMLE results).

- **Compression/expansion of time** – Use of standardized patient simulations allows students to have a longitudinal experience with patients and to follow a case in a compressed time frame.

- **Safe practice** – Simulations allow students to be put in clinical situations that they could not manage alone in a real clinical setting.

- **Efficient use of physician faculty time** – A physician can train a number of standardized patients who can then teach/evaluate students. This leaves the physician free to concentrate on specific areas where his/her expertise is most useful.

- Standardized patient evaluations are responsive to real differences in performance.

WHAT IS LIKELY TO HAPPEN NEXT?

We are likely to see more of the same in the use of standardized patients. Cases have become stereotypical, and there is a need to build in more creativity. It is likely that there will be more use of standardized patients to make unannounced visits to physician practices to assess variation in practice for health care research.
WHAT SHOULD HAPPEN NEXT?

There should be more use of standardized patients for health care research, for training, and for clinical performance appraisal. Current methods of performance assessment (such as observation by faculty members and residents) do not pick up differences in performance among trainees; standardized patient methods can accomplish this better. Better use should be made of clinical practice data, health outcomes research data, and patient safety data to identify problem areas that will guide the development of standardized patient cases. Finally, increased sophistication would be useful in what data are captured from standardized patient encounters and how these data are interpreted.

SUMMARY

● Clinical competence is highly case specific
● Standardized patients can ensure broad exposure to a variety of cases.
● Current assessment methods do not capture differences in clinical performance.
● Standardized patients allow direct comparison of trainees’ clinical skills.
● Standardized patients can be useful physician extenders, by sparing physician time.
● Scores in standardized patient encounters reflect real differences in clinical performance.

There is a need to broaden the scope of standardized patient use and to link the selection and design of cases to clinical data.
SOME IDEAS ABOUT SKILL-LEARNING

1. Some people believe that general intelligence and manual dexterity tend to be closely correlated, and that it is a myth that people who are not good at mental tasks will be "good with their hands" instead. However, Howard Gardiner's theory of multiple intelligence suggests that different abilities can be separately developed and that there may not be such a close link between different types of abilities.

2. Once acquired to the point of automaticity, a skill is believed to be a manifestation of subconscious thought-processes. A skill cannot be "unlearned", except by brainwashing: it can only be replaced by the learning of another skill. Therefore it is important to avoid trial and error learning, which may create bad habits that later have to be replaced.

3. Practice is an essential element in skill acquisition. The repetition establishes habit. However, it is important that the practice be guided: practice only makes perfect if what is being practiced is correct, otherwise wrong learning could interfere with the learner's progress. Practice also provides for knowledge of results, which can be both reinforcing and motivating.

4. Learning plateau seems to occur in most skill learning, but not predictably or with the same pattern or frequency for every learner. Several factors are involved, e.g. fatigue, need to practice, flagging motivation, complexity of material to be learned. Plateaus may occur as learners progress from one level of the psychomotor domain to the next higher level. It may help your learners to be told about plateau, so that they don’t get discouraged if their progress seems to slow down at some point.

5. Transfer of learning can be positive (helpful) or negative (hindering). Teachers should maximize transfer between similar learning tasks where possible. The degree of transfer depends on the relationship between two tasks: for example, reading music is common to learning different instruments, and provides positive transfer; whereas different positioning of the controls in two cars can cause negative transfer, interfering with previously learned responses.

It is suggested that learners be observed for progress through the following stages of skill development:
1. Have the learners the necessary prerequisites: knowledge of what should be done, why, and how? Have they the required perceptual awareness?

2. Are the learners applying correctly what they know, performing all necessary steps, in correct sequence?

3. Is their performance still jumpy and step-by-step, or have they started to transfer control to senses other than the eyes and achieve a smoother, more integrated pattern of work?

4. Do they still have to concentrate on the execution of the skilled work to the exclusion of all else, or have they started to "automatize" the skill?

5. To what extent are they capable of variety? Can they generalize the newly learnt skills to other similar situations? To what extent are they being creative in the execution of the skilled activity? How well are they planning the execution of the skilled activity?
M.I.T. FOR AFFECTIVE DOMAIN

1. Role plays followed by discussion and feedback
2. Simulated patients followed by discussion and feedback
3. Small group discussions
4. Constant role modeling
Western medical ethics have evolved from the ancient Hippocratic Oath and western principles of gentlemanly honor. Standards of professional behavior were codified in the late 17th century and officially adopted by medical associations as early as the mid-19th century. The ethics of medical research were more recently codified and adopted after abuses of ethical and moral standards by Nazi doctors in WWII concentration camps. Such abuses have not been exclusive to wartime. Doctors of the American Public Health Service committed ethical misconduct and racism in human research by denial of treatment for syphilis in 399 African-American men from 1932 to 1972 in Tuskegee, Alabama.

In the future medical ethics will adapt to changes in science and society, but must remain rooted in beneficence, respect for persons, and justice. Continuing evolution in medical ethics is occurring with the advent of new reproductive technologies, the Human Genome Project, cloning, stem cells, gene therapy and xenotransplantation. The origins of medical and research ethics are examined below.

**ORIGINS OF MEDICAL ETHICS**

**Hippocratic Oath (400 BC)**
Hippocrates is known as the Father of Medicine. Born in Greece (460 BC), he approached medicine and disease as something having a rational explanation rather than superstitious origins as was popular at that time. He pioneered many aspects of modern medicine that we take for granted; he accurately described the symptoms of disease, believed in preventative health practices, promoting personal hygiene and a good diet, and believed that the brain was the source of thoughts and feelings rather than the heart.

He founded a medical school and developed an Oath of Medical Ethics for physicians to follow. The Hippocratic Oath has formed the basis of more recent medical oaths taken by students as they begin the practice of medicine. The chief tenants of this Oath are:

- dedication, competence, compassion and respect
- honesty and duty to report fraud or deception
- respect for the law
- respect for the rights of patients and colleagues
respect for privacy and patient confidentiality
continued education, study, and consultation with other professionals
freedom of association and environment in the practice of the Art
responsibility to make efforts to improve the community

**Thomas Percival (1794)**
The English physician, Thomas Percival (1740-1804) published a code of medical ethics for physicians that was adopted by American doctors and later was adapted and adopted by the American Medical Association (AMA). This was the first code of ethics to be adopted by a professional organization replacing the variously interpreted ethics of gentlemanly honor and thus providing a standard of behavior for medical professionals. The Percivalian code asserted the moral authority and independence of physicians in service to others, affirmed the profession’s responsibility to care for the sick, and emphasized individual honor.

**AMA Code of Ethics (1846)**
The AMA Code of Ethics was adapted from the ethical code of conduct published in 1794 by Thomas Percival. This was the first code to be adopted by a national professional organization. The current AMA code of ethics (2001) has nine articles which is two more than the previous version (1980). These additions stress the responsibility the doctor has to the patient and the support of universal access to medical care. Provisions are also added to the revised Oath regarding a commitment to medical education and a responsibility for the betterment of public health. Other features of the Code are:
- dedication, competence, compassion and respect
- honesty and duty to report fraud or deception
- respect for the law
- respect for the rights of patients and colleagues
- respect for privacy and patient confidentiality
- continued education, study, and consultation with other professionals
- freedom of association and environment in the practice of the Art
- responsibility to make efforts to improve the community

**Nuremberg Code (1947)**
A result of the post-WWII trial of 23 Nazi doctors for crimes against humanity committed in the name of research, the Nuremberg Code represents the starting point in discussions about the ethical treatment of human subjects. German doctors, including the most infamous, Joseph Mengele, performed macabre medical experiments under the disguise of
scientific research in Nazi concentration camps where prisoners were used without concern for their welfare. The Nuremberg Code is a set of 10 principles outlining the ethics of medical research and ensuring the rights of human subjects. The principles include:

- informed, voluntary consent
- research must be purposeful and necessary for the benefit of society
- research must be based on animal studies or other rational justification
- avoidance and protection from injury, and unnecessary physical and mental suffering
- risks to the subject shall not be greater than the humanitarian importance of the problem
- investigators must be scientifically qualified
- subject may terminate the experiment at any time

**Declaration of Geneva (1948)**

This oath was adopted by the World Medical Association after the atrocities committed in the name of research in WWII Nazi concentration camps. Key features of this code are:

- service to humanity
- respect and gratitude for instructors
- conscience and dignity in the practice of the Art
- dutiful attention to the health of the patient, colleagues and traditions of the Art
- practice in accordance with the laws of humanity, respect for human life from conception
- duty takes precedence over racial, religious, political or social prejudices

**Declaration of Helsinki (1964)**

This document has been revised several times since its publication in 1964 as a response to unethical medical experiments of the Nazis during WWII. The latest revision of the declaration (2000) states that "the well-being of the human subject should take precedence over the interest of science and society." Other of the Helsinki principles are that the doctor should only act in the patients best interest and that the health of the patient is the first concern. Many of the principles are incorporated in national research regulations.

The revised declaration also discusses the use of placebo, recommends that ethics committees have the obligation to monitor ongoing trials, and requires that researchers disclose to subjects details of funding and possible conflicts of interest. Finally, there is a recommendation that publishers decline studies not carried out in accordance with the declaration.
EVALUATION AND ASSESSMENT

This handout revolves around the following questions:

1. What is evaluation?
2. What is assessment?
3. Who should evaluate?
4. What and who should be evaluated?
5. What are the tools of evaluation?

What is evaluation?
It is a process that attempts to systematically and objectively determine the relevance, effectiveness and impact of activities in the light of their objectives.

What is assessment?
A system of judgment of professional accomplishments using defined criteria and usually including an attempt at measurement either by grading on a rough scale or by assigning numerical value.

The purpose of assessment in an educational context is:
● to make a judgment about the level of skills or knowledge
● to measure improvement over time
● to evaluate strength and weaknesses
● to rank students for selection or exclusion or
● to motivate

Who should evaluate?
Unless evaluation is multifaceted, it will not be objective and comprehensive and will fail to provide a holistic, complete picture of the actual situation. The objectives of evaluation will be the main determinants of who should be included in the process.

Hence all those involved in the program should be involved in evaluating it. For example, regarding the quality of service provided by a ward, the following should be involved in providing opinion:
● Doctors of all levels
● Nurses
● Paramedical staff
● Students
What and who should be evaluated?
This again is determined by what the objectives are. Any one component or the whole program maybe evaluated.

Consultants
Junior and other senior doctors
Nurses
Students

What are the tools of evaluation?
1. Written Appraisals:
   This is a very commonly used method. Letters of recommendation are one type of written appraisals. Another common type are comments at the end of rating forms/ questionnaires. Open ended questions are a prime source of getting appraisals in writing.

2. Rating scales and check lists:
   Checklists are lists of behaviors, traits and characteristics for which respondents indicate the presence or absence of what they have observed.
   Rating scales contain a set of items with a range of responses for each. The range often includes three to seven responses representing a continuum from "strongly agree" to "strongly disagree" or from "not at all important" to "very important".
   Results can be used to quantify attitudes, judgments or perceptions of those being surveyed.
   Rating scales and checklists are efficient and cost effective methods for collecting useful, valid and reliable information from various audiences.

3. Interviews:
   Interviews vary in form from highly structured to completely unstructured. Different interviews include faculty colleagues, students, workshop participants, administrators etc.
Interviews, conducted both individually and in groups, are much more flexible than written surveys since they allow for verbal interaction. Interviewers can explain questions that the respondents might not understand, as well as ask follow up questions that probe and clarify vague responses.

Evidence collected from interviews has been found to be trustworthy and credible.

4. Observations & Videotaping:
Videotaping is an ideal observation method because it provides a record of the actual transactions and work activities. "One of the potentially most powerful forms of self-assessment is the opportunity to see ourselves as others see us through video recording".

The trustworthiness of evidence based on observation, particularly for use in personnel decision, is influenced by:
- who observes
- what is observed
- when observers are observing and
- why the activity is being observed

The most trustworthy are peer reviews who know the discipline content of the faculty member being reviewed. Faculty who are trained in observation techniques or have experience in observing and offering feedback to faculty are generally more competent. Without training or experience, many faculty do not feel comfortable judging the teaching or work of their colleague and it has been found that the degree of validity of their decisions drops.

In the hands of trained colleagues, peer observations have found to be highly beneficial for self assessment and improvement.
<table>
<thead>
<tr>
<th>TITLE OF PROCEDURAL SKILL:</th>
<th>LEVEL OF STUDENT:</th>
<th>INTENDED DURATION:</th>
<th>INTENDED LEVEL OF COMPETENCE TO BE ACHIEVED: P1 / P2 / P3</th>
<th>OBJECTIVE:</th>
</tr>
</thead>
</table>

<table>
<thead>
<tr>
<th>SUB SKILL</th>
<th>VENUE</th>
<th>TIME</th>
<th>DAY</th>
<th>FACILITATOR</th>
</tr>
</thead>
</table>

BY THE END OF THE DURATION, THE LEARNERS WILL BE ABLE TO:
Effectiveness and efficiency of action

Wishes of others

Legal right of others (the law)

Resources available

Increase of self good

Increase of social good

Intent to enable (beneficence)

Serve needs before wants

Minimise harm

Most beneficial outcome for a particular group

The degree of certainty of the evidence on which action is taken

Truth telling

Create autonomy

Respect autonomy

Respect persons equally

Promise – keeping

Individual good

ETHICAL GRID, TABLE

Educational Planning And Evaluation