

# Clinical Education Faculty Development Curriculum



**Touro University-California**

College of Osteopathic Medicine

Division of Clinical Education

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## **Introduction**

Mentorship is one of the most important roles medical professionals can serve. While students do learn from classroom experiences and written resources, nothing can substitute for the opportunity to train under the supervision of an experienced clinician in a patient care setting. Sir William Osler, the renowned Canadian physician, once said, "To study the phenomenon of disease without books is to sail an uncharted sea, while to study books without patients is not to go to sea at all."

At Touro University College of Osteopathic Medicine 3<sup>rd</sup> and 4<sup>th</sup> year medical students complete the required clinical rotations at a variety of Core Clinical Facilities spread throughout Northern and Southern California. It is the school's responsibility to maintain and improve the quality of the clinical education for 3<sup>rd</sup> and 4<sup>th</sup> year medical students; and to this end, it is essential to engage in clinical site visitation and faculty development.

## **PART ONE: ADMINISTRATIVE BASICS**

### **I. The Touro System**

- i. Founder: Bernard Lander
- ii. Three Osteopathic Medical Schools in California, Nevada, and New York
- iii. Recently Acquired New York Medical College (MD program), founded 1860
- iv. Jacob D. Fuchsberg Law School in New York
- v. Pharmacy Schools in California and New York
- vi. School of Nursing in Nevada
- vii. Undergraduate and Graduate Schools in New York
- viii. 19,000+ students on Campuses in
  1. United States
  2. Germany
  3. Russia
  4. France
  5. Israel

### **II. Touro University-California**

- i. Mission Statement:

1. TUCOM prepares students to become outstanding osteopathic physicians who uphold the values, philosophy and practice of osteopathic medicine and who are committed to primary care and the holistic approach to the patient. The College advances the profession and serves its students and society through innovative education, research and community service.
- ii. Touro University-California Started in 1996 in San Francisco, then moved to Mare Island in 1999.
- iii. Jewish Non-profit Health Science University with Programs in
  1. College of Osteopathic Medicine
    - a. 135 students per class
  2. College of Pharmacy
  3. College of Health Sciences
  4. School of Education
- iv. Associated with Touro University-Nevada and Touro College-New York
- v. Global Health: Students Rotate at Sites Around the Globe
  1. Bolivia
  2. Taiwan
  3. Ethiopia
  4. Israel
  5. Tanzania
- vi. Clinical Education Department Responsibilities
  1. Recruitment & Development of 3<sup>rd</sup> Year Core Clinical Rotation Sites
  2. Coordination & Management of the 3<sup>rd</sup> and 4<sup>th</sup> Year Medical Students
  3. Development of Curriculum for the Clinical Clerkships and Student Educational Resources
  4. Clinical Faculty Development
- vii. Introduction to the Clinical Education Department: whom should I contact if I have any questions or concerns?

Any member of our department will be happy to help you with any question you have. If it does not fall within the expertise of the person you have contacted, he or she will direct you to the specific individual who can best handle your query.

JC Buller, M.D., Associate Dean  
Walter Hartwig, Ph.D., Assistant Dean  
Greg Troll, M.D., Director of Clinical Faculty Development  
Jennifer Weiss, D.O., Clinical Medicine Course Director  
Irina Jones, Department Manager  
Heather Page, Grades Coordinator  
Kaitlyn Jackson, Fourth Year Coordinator  
Andy Uchiyama, Third Year Coordinator

**III. A Brief History Of Osteopathic Medicine: What Is A D.O.?**

- i. The Osteopathic Profession began in 1892 by Andrew Taylor Still, M.D., a practicing physician in Missouri and Kansas. It developed during the pre-antibiotic era and massive flu epidemics of the mid 1800's as a drugless alternative to help reform the medical practices of the day, and better treat suffering patients.
- ii. Osteopathic medicine has evolved along with medical science, and today's Osteopathic Physicians are fully trained in all modern medical practices, including manipulative medicine. The next generation of DO's is trained at Osteopathic medical colleges, in hospitals and medical practices, both Osteopathic and Allopathic, across the United States.
- iii. There are about 64,000 active osteopathic physicians in the United States. The nearly 30 campuses with colleges of osteopathic medicine graduate approximately 4,000 osteopathic physicians each year.
- iv. There are about thirty applicants for each student who matriculates; TUCOM-CA received approximately 4000 applications for 135 available positions in 2011 - 2012.

**IV. What is a Clinical Faculty? (Benefits, Relationship to the University, and Other Policies)**

- i. Clinical faculty members are clinician educators who allow students to participate and observe their practices. To the extent they can, they may share didactic and informal instruction with the student, and are expected to fill out an evaluation for students doing clerkship rotations with them, reflecting the student's progress and an evaluation of their strengths and weaknesses in their evolution as a medical student. They also often mentor them on career choices along with other things.

- ii. Each member of our adjunct clinical faculty should consider themselves a vital and connected member of our department. If any should be interested in increasing their connection with the school through teaching, giving input on curriculum or involvement in faculty development, they should contact either the associate dean or the assistant dean in the clinical education department.
- iii. All of our adjunct clinical faculty members are entitled to access our online and on-campus medical library. This includes many book and journal titles, along with UpToDate, all free of charge. Our research librarian will be more than willing to assist in literary inquiries.

**V. Introduction to the Preclinical Curriculum: What Your Student Should Know**

- i. In addition to organ system oriented Basic Science coursework, during the preclerkship Osteopathic Doctoring course, students learn a variety of skills and procedures including interviewing techniques and content, physical exam skills (general and organ specific), case presentations, phlebotomy, suturing, IV insertion, injection techniques, basic dermatology procedures and others.

**VI. Reasonable Expectations From Early Third Year Medical Students**

- i. Students just starting the third year are prepared but insecure
- ii. Stress will affect their performance
- iii. They have been instructed on the clinical basics: formal presentations, H&P format, P.E. techniques, SOAP notes; and the basic sciences
- iv. They are new to the clinical environment and clinical language (abbreviations etc.)

**VII. Grades, Student Evaluations, And 3<sup>rd</sup>/4<sup>th</sup> yr Schedules**

- i. On the last day of the student's rotation, please set aside time again to discuss and complete the clinical performance assessment form. Give the student a copy of their assessment, but please also send it to the department, via fax, email or regular mail.
- ii. Each of the 14 clinical competencies is evaluated on the form and has been applied to the Clinical Education course objectives. A grade should be marked for each competency section, and an overall recommendation for pass or fail for the rotation should be indicated. If the students receive below 70% average, they will be



required to remediate the rotation. Faculty should add narrative comment to give the most specific guidance possible to the student. The overall narrative, positive and constructive comments will be included in the Medical Student Performance Evaluation (MSPE; formerly the Dean's letter).

- iii. It is important to note that students are evaluated against the standard of what should be reasonably expected from a medical student at the same point in training.
- iv. These forms are the primary tool used to grade and rank third and fourth year students. As such they will be most useful if they are completed based on your experience of the students' skill and knowledge. Additionally, timely submission extremely important as it affects students' official transcripts, which in turn is critical for residency application, financial aid check distribution and matriculation. Please submit the forms, no later than 2 weeks from the end of the rotation.
- v. 3<sup>rd</sup> Year Core Rotations
  - 1. Internal Medicine – 8 weeks
  - 2. Surgery – 8 weeks
  - 3. Pediatrics – 6 weeks
  - 4. Family Medicine – 8 weeks
  - 5. OB/Gyn – 6 weeks
  - 6. Psychiatry – 4 weeks
- vi. 4<sup>th</sup> Year Requirements
  - 1. Critical Care
  - 2. Emergency Medicine
  - 3. Primary Care
  - 4. Internal Medicine & Pediatric Subspecialties
  - 5. Surgery Subspecialties

### **VIII. The Clinical Curriculum**

- i. The complete clinical curriculum can be found in section III of this manual of the clinical rotations manual.
- ii. The Clinical Clerkship Program provides students with education and training in the general areas of family medicine, internal medicine, obstetrics & gynecology, pediatrics, psychiatry, and surgery; as well as exposure to additional specialty areas, such as critical care, anesthesiology, emergency

medicine, geriatrics, pathology, and radiology. Rotations take place at a variety of clinical sites ranging from private, public and university based hospitals to private and community based clinics. In order to give students the opportunity to pursue individual interests, and to make decisions about options for residency training, flexibility is provided in both the third and fourth year schedules.

- iii. In order to have a clinical curriculum that was testable and of reasonable scope, a “focus topic” based clinical curriculum was designed in 2001. The overall pre-doctoral curriculum underwent a reform process between 2004-2007, resulting in a system based integrated curriculum. As part of this reform, a doctoring course was organized that integrated direct skills and clinical reasoning with specific objectives preparing students for rotations and early clinical experiences.
- iv. The clinical clerkship curriculum remained oriented around focus topics, though gradually these were expanded with linked post rotation tests and quizzes delivered through a distance learning system to enable the students to follow the didactic complementary material while serving in patient care rotations. With the availability of computer delivery of nationally benchmarked subject exams (the COMAT), we have substituted these for our locally generated post rotation exams. We also employ nationally standardized (MedU and CLIPP) cases to be reviewed with quizzes and (in some subjects) webinars for reinforcement. The adoption of the COMAT exam necessitated much further the need to expand the course objectives for the clinical rotations so that they would match the testable topics on the COMAT subject exams we are using for post rotation exams. The advantage of doing so is that the students are now being explicitly cued to learn the areas represented on the boards. The disadvantage is this decreases our ability to prioritize and emphasize subjects among the clinical rotation objectives we feel are most important or are developmentally critical. We felt that the advantages far outweighed the disadvantages in doing so.
- v. The training of primary care physicians is a critical necessity in the development and functioning of our health care system. In addition to this fact, we feel that primary care focused training is an excellent basis for further specialty training in those students who elect to go into specialties. At Touro University College of

Osteopathic Medicine, therefore, we focus our training on primary care, while recognizing that some students will choose other specialties. As such, our goals and objectives are designed to guide students to learn, through competency-based clinical education, the myriad dimensions of primary care. This includes recognition of their role as team leaders in providing comprehensive health care to the individual, to the family, and to the community. Throughout their training, students will develop an understanding of the role of the primary care physician while recognizing the need for consultation with other medical specialists when appropriate. The TUCOM-CA clinical curriculum is designed to ensure students:

1. Acquire basic clinical knowledge and essential clinical skills.
2. Foster analytic and problem-solving skills necessary for physicians involved in disease prevention, diagnosis, and treatment in individual patients, families, and communities.
3. Deepen their understanding of Osteopathic Principles and their application to enriching the health of their patients
4. Critically evaluate current and relevant research; and apply the results of the research to medical practice.
5. Demonstrate the ability to integrate behavioral, emotional, social and environmental factors of families in promoting health and managing disease.
6. Appreciate the differences in patient and physician backgrounds, ethnicity, beliefs and expectations.
7. Cultivate compassionate, ethical, and respectful, physician-patient relationships.
8. Develop an understanding of contemporary health care delivery issues.
9. Share tasks and responsibilities with other health professionals, including recognition of community resources as an integral part of the health care system.
10. Engage in reflection on his/her own practices and make changes as needed.
11. Develop the interest and skills necessary to continue lifelong learning.

vi. Educational tools

1. Online Curriculum on Black Board
  - a. Reading Assignments
  - b. Quizzes and Cases
2. Online Purchased programs
  - a. MedU and CLIPP Cases

- b. Online Library w/ Electronic Books
  - c. End of Rotations National Shelf Examinations (COMAT)
- vii. Didactics and Supplemental Clinical Education to the Clerkship Experience
  - 1. During clinical clerkship students are required to keep up with online reading assignments, quizzes, and possibly MedU cases.
  - 2. Also, there may be WebEx grand-rounds, small group discussions, and presentations depending on the rotation.
  - 3. All students must complete and pass an end of rotation national shelf exam within 10 days of the end of their rotation.
  - 4. Supplemental clerkship assignments given by preceptors:
    - a. Readings
    - b. Case based literature search
    - c. Presentations
    - d. Didactics (i.e. tumor board, grand rounds, morning report, etc.)
- viii. Reading Assignments
  - 1. Students have specific weekly reading assignments from a number of sources from textbooks, to journal articles, to UpToDate reviews depending on their clerkship.
- ix. Examinations
  - 1. Students may be required to complete a number of quizzes and/or MedU/CLIPP cases based on the specific rotations the student may be a clerk in.
  - 2. At the end of each 3<sup>rd</sup> year core clinical clerkship, every student must complete and pass a national Shelf examination (COMAT).
- x. The Clinical Rotations Manual
  - 1. 3 Sections
    - a. Section I, For Clinical Faculty  
Contains Faculty Development Curriculum

- b. Section II, For Students  
Contains Student Rotations Manual with rules, policies, and Procedures encompassing everything encountered by them in their 3<sup>rd</sup> and 4<sup>th</sup> year.
  - c. Section III, The Clinical Clerkships Curriculum  
Contains all curricular material found on Black Board for the core clerkships unless sensitive and not required. A select group of the most common 4<sup>th</sup> year specialty rotation descriptions are included in this section.
2. Revised every year before the new 3<sup>rd</sup> year class starts rotations.
  3. It is available online as a link off of our CED website within the [www.tu.edu](http://www.tu.edu) address. Bound copies will be available upon request to the CED.

**IX. What Should I Do And What Can/ Should My Student Do?**

Our students rotate through a variety of clinical sites and have the challenge of being new to their learning environment on multiple occasions throughout their two years of clinical education. Your assistance in helping them, as quickly as possible, get acquainted with facilities, regulations, faculty and personnel is greatly appreciated. Some general expectations of your site can be found below. Please contact us if any of these pose difficulties for you. Clinical sites, in coordination with TUCOM-CA, will define the degree of student involvement in their own institutions. While students are given general guidelines in terms of activities, professional behavior and requirements, it is understood that they must comply with the expectations and requirements related to patient care as established by the clinical site and that this supersedes, in most cases, any guidance from Touro University.

- i. Timeline for the Clinical Clerkship
  1. On the first day
    - a. Student introduction
    - b. Clerkship Expectations & Objectives
    - c. Model clinical skills: student observation (one day to one week)
  2. Middle of clerkship

- a. Mid-clerkship feedback and evaluation
    - b. Student should be expected to obtain initial evaluation of patient independently
  3. At the end of the clerkship
    - a. Student is expected to meet clinical objectives and be able to perform clinical skills
    - b. Verbal feedback is given to the student prior to the review of the formal evaluation
    - c. Evaluation is filled out during last week of student rotation and reviewed with student. (a copy of evaluation should be given to the student)
- ii. Clinical Skills Performance
1. H&P
  2. Case presentation both formal comprehensive and specific
  3. Physical Examination (this should be observed by preceptor)
  4. Specialty specific knowledge base
  5. Specialty specific skills: well child, adult health maintenance screening, EKG, chest X-ray, IV, phlebotomy, central lines, intubation, delivery, suture tying, etc.

## PART TWO: PRECEPTORSHIP

Physician preceptors may structure visits so that a student sees every 3rd-4th patient, preceptor can thus see and treat patients while student is performing their assessment, then presenting and getting supervision. Limiting factors may be the number of exam rooms, consent of patients and conflict with other preceptor responsibilities. Students may see primarily some patients and shadow on others, if this works better.

### II. Structuring The Medical Learning Experience In Your Practice

- i. Integrating Medical Students into Practices and Institutions
  6. Creating appropriate set roles and procedures for medical students allays the student and staff's anxiety and makes the preceptor's job much easier.
  7. This may reflect progressive "privileging" for students as they demonstrate basic competencies to your satisfaction.
  8. Having a system for allowing medical students to see patients with a minimum of delay to patient flow is one of the secrets to making preceptorships successful.
- ii. In inpatient rotations:
  9. Define a group of patients for whom the student is "responsible."
  10. The student should follow and round on these daily, presenting labs, studies and daily exams prior to your seeing patient.
  11. Student charts either in the chart or in separate cover as if he/she were documenting clinical care.
  12. Preceptor should read, sign off and modify students note.
  13. Every patient must be seen and charted on by preceptor.
  14. Students may write mock orders, but the preceptor should write actual chart orders.
  15. If questions come up during discussions of patients, or if a key concept seems to be missing for the student consider asking for a report in follow-up. This should reflect reading and some research. Ideally, this is an opportunity for the student to investigate something for you that you would have done for yourself. Obtaining an article from the

internet, looking up doses, side effects, epidemiology, differential diagnosis, evidence basis for a medical practice, etc. are all good uses of medical student time and represent a way for them to educate themselves and the rest of the team as applicable

iii. In Outpatient Settings

1. An appointment system in which the student sees every fourth patient is one model that often works.
  - a. Patient #1- seen by student following your introduction
  - b. Patient #2 seen by you while student is with patient #1
  - c. Following your seeing pt #2 you have the student present and see patient #1 with them.
  - d. While you see patient #3 the student charts on and discharges patient #1
  - e. Student then sees (with your introduction) patient #4.
2. In office practices that admit their own (or house back up) patients to the hospital, if feasible, have the student listen in on the ER report, have them go see the patient, if appropriate, while you finish in the office. When you arrive at the hospital the student will have already had a chance to do an initial work up and present to you. This scenario can be modified, of course, depending on the diagnosis and condition of the patient and their willingness to be seen by a student.
3. In surgical based practices, if possible, involve the student in pre-op planning and have the student involved in preoperative and post operative care.

**IX. The One (Or Five) Minute Preceptor**

This is a widely used, easily learned and a time efficient approach to the preceptor student interaction. It is meant to be applied for patient presentations in a clinical setting. One of its advantages is that it emphasizes and reinforces the development of clinical reasoning and stresses the engagement of the student in thinking about the patient as a diagnostic and treatment problem, rather than going through the motions. The five microskills in this practice include:

- i. Getting a commitment from the student to assert an assessment and plan



- ii. Probing for supporting evidence
- iii. Teaching general rules
- iv. Reinforcing what was done right
- v. Correcting mistakes

**X. Using The S.N.A.P.P.S. Model In Precepting**

[Taken from: Wolpaw TM, Wolpaw DR, Papp KK. SNAPPS: A Learner-centered Model for Outpatient Education. Academic Medicine: September 2003, Volume 78, Issue 9, pp 893-898.]

- i. A learner-driven educational encounter in the office setting emphasizes the roles of the learner and the teacher in a collaborative learning conversation. In this cognitive dance, one partner may lead but each must know the steps. In the office the learner can and should be taught to lead. The preceptor may coach the learner until the steps become automatic but should avoid taking over the conversation. The theoretical framework for this position is well established. Research has identified the learner's approach to learning to be the crucial factor in determining the quality of educational outcomes.
- ii. A six-step mnemonic called SNAPPS, structures the learner-led educational encounter that is facilitated by the preceptor. In this model, the learner's case presentation to the preceptor includes a concise summary of the facts followed by five steps that require the verbalization of thinking and reasoning. These steps are drawn, in part, from the cognitive activity rating scales developed by Connell et al. The model encourages a presentation that is intended to redirect (but not lengthen) the learning encounter by condensing the reporting of facts and encouraging the expression of thinking and reasoning. Though learners enter the office setting with diverse abilities and expertise, case presentations should generally not exceed six to seven minutes in length. The SNAPPS model depends on a learner-teacher continuum that should ultimately be learner driven, but may initially need the preceptor's coaching to help the learner gain ease and proficiency with the steps. It also depends on having faculty set the expectation that the learner can and should assume a central role and can and should ask questions.
- iii. Summarize Briefly the History and Physical Findings  
The learner obtains a history, performs an appropriate examination of a patient, and presents a concise summary to the preceptor. Though the length may vary, depending on the complexity of the case, the summary should not occupy more than 50% of the

learning encounter and, generally, should be no longer than three minutes. The summary should be condensed to relevant information because the preceptor can readily elicit further details from the learner. In this step, the learner should be encouraged to present the case at a higher level of abstraction (i.e., to use semantic qualifiers: yesterday becomes acute, third time becomes recurrent) because successful diagnosticians use these qualifiers early in their presentations.

iv. Narrow the Differential to Two or Three Relevant Possibilities

The learner verbalizes what he or she thinks is going on in the case, focusing on the most likely possibilities rather than on zebras. For a new patient encounter, the learner may present two or three reasonable diagnostic possibilities. For follow-up or sick visits, the differential may focus on why the patient's disease is active, what therapeutic interventions might be considered, or relevant preventive health strategies. This step requires a commitment on the part of the learner, similar to the microskills model of clinical teaching, and may initially represent early steps in the problem-solving process such as a hunch or best guess. In the SNAPPS method, the learner must present an initial differential to the preceptor before engaging the preceptor to expand or revise the differential.

v. Analyze the Differential by Comparing and Contrasting the Possibilities

The learner initiates a case-focused discussion of the differential by comparing and contrasting the relevant diagnostic possibilities and discriminating findings. A learner's discussion of the cause of a patient's chest pain might proceed as follows: I think that angina is a concern because the pain is in his anterior chest. At the same time I think that a pulmonary cause is more likely because the pain is worse with inspiration, and I heard crackles when I examined the lungs. Often the learner may combine this step with the previous step of identifying the diagnostic possibilities, comparing and contrasting each in turn. This discussion allows the learner to verbalize his or her thinking process and can stimulate an interactive discussion with the preceptor. Learners will vary in their fund of knowledge and level of diagnostic sophistication, but all are expected to utilize the strategy of comparing and contrasting to discuss the differential.

- vi. **Probe the Preceptor by Asking Questions about Uncertainties, Difficulties, or Alternative Approaches**  
During this step, the learner is expected to reveal areas of confusion and knowledge deficits and is rewarded for doing so. This step is the most unique aspect of the learner-driven model because the learner initiates an educational discussion by probing the preceptor with questions rather than waiting for the preceptor to initiate the probing of the learner. The learner is taught to utilize the preceptor as a knowledge resource that can readily be accessed. The learner may access the preceptor's knowledge base with questions or statements ranging from general to specific. The preceptor can learn a great deal about the learner's thought process and knowledge base by such interactions. In the first two interactions, the learner recognizes a need for help with knowledge or skill deficits. In the third, the learner demonstrates a more sophisticated level of knowledge. The preceptor may discuss steroid withdrawal protocols and introduce new learning issues such as the patient's risk for steroid osteoporosis.
  
- vii. **Plan Management for the Patient's Medical Issues**  
The learner initiates a discussion of patient management with the preceptor and must attempt either a brief management plan or suggest specific interventions. This step asks for a commitment from the learner, but encourages him or her to access the preceptor readily as a rich resource of knowledge and experience.

## **XI. Clerkship Orientation And Medical Student Progress Assessment**

- i. Students should be provided appropriate orientation to the clinical facilities. The following should be included in the orientation:
  - 1. Faculty and Personnel
    - a. Students should be introduced to the supervising physicians. Students should be informed to whom they are responsible and how that person or persons may be reached when needed. Additionally, if anyone other than the supervising physician will be evaluating or grading the student, the student should be informed of this and introduced to these people.
  
    - b. Students should be introduced to staff, including nurses, technicians, and administrative staff with whom they are expected to interact. Roles and types of interactions should be explained.

## 2. Physical plant

We recommend students should be shown the following:

- a. Patient rooms
- b. Safety procedures and announcements (fire, codes, etc)
- c. Nurses' stations
- d. Ancillary services facilities (x-ray, laboratory, medical records, etc.)
- e. Rest rooms and locker areas
- f. Conference areas
- g. Lounges, cafeteria or coffee shop
- h. Library and Internet access if available

### ii. Patient interaction and Documentation

1. Interviewing and examining patients is one of the most critical parts of student training. Whenever possible the student should be allowed to perform these tasks. When it is not appropriate to leave the student with the patient, they should be allowed to observe the attending performing the H&P. Whenever possible, students should document their findings in the medical records.
  
2. It should be clearly defined initially whether students may document in the patient's medical record and, if so, what students are permitted to write (e.g. Progress notes and H&P, orders etc) if your clinic or institution does not allow students to write in official medical records, please have the student write notes outside of the official patient charting system, understanding they will need to comply with HIPPA requirements.

### iii. Procedures

Observing and attempting procedures is also a vital part of clinical training. It should be clearly defined initially whether students may participate in procedures, and at what level supervision is expected for all procedures.

### iv. Student Schedule

A schedule should be provided to the student at the start of the rotation.

1. Although patient care assignments take precedence over lectures and conferences, the hospital and attending

- physicians are encouraged to allow the students to attend scheduled lectures.
2. The director of the individual clinical service must clear absences from clinical duty in advance. If attendance at mandatory lectures and conferences is pre-empted by patient care assignments, this absence must be cleared by the DME.
  3. For more information about attendance expectations, see the student portion of the clinical rotations manual.
- v. It is recommended that the following be incorporated into the schedule for each rotation:
1. Meeting on the first day with attending to discuss expectations for rotation.
  2. Mid rotation meeting with attending to discuss performance, give student a written evaluation and make suggestions on where to focus during the rest of the rotation. Attending physicians should take the opportunity to assess what the student has done well, and also to offer advice on how the student can improve.
  3. Conferences and Educational Seminars: whenever possible students should attend conferences and lectures if they are accessible, such as grand rounds, M&M rounds, journal clubs and department meetings.
  4. Suggested rounding times – such as pre-rounding in hospital if appropriate, as well as times when student will make rounds or see patients with attending.
  5. Presentations or reports to be delivered by student, this includes case presentations, case study analyses or critiques.
  6. Working with adjunctive staff such as respiratory therapist, ultrasound technician, vaccination nurse etc.
  7. Final evaluation review at the rotations end:  
Every attempt should be made to review the student's final evaluation in-person. This is an essential formative component to the student's learning and maturation.

## **XII. Giving Effective Feedback**

Students learn best when they receive feedback on their performance in a way that helps them identify how they can change. Emphasize problem solving and competencies development (as outlined in the evaluation form), assessment of their knowledge level in the rotation subject, observed work ethic during the rotation, and evidence of the student's independent inquiry.

- i. Evaluation vs Feedback
  - 1. Evaluation:
    - a. Summative
    - b. Higher stakes
    - c. Generally standardized
    - d. Goal is to grade relative to peers or a gold standard
  - 2. Feedback:
    - a. Formative
    - b. Goal is to help student improve
    - c. Can be brief or formal
- ii. Types of feedback
  - 1. Brief
    - a. Focus on reinforcing or correcting specific behavior
    - b. Generally provided for directive teaching
    - c. Can be “public” unless of a sensitive nature
  - 2. Formal
    - a. Set aside a period of time (5-30 min) to discuss performance on a specific issue or to review overall performance
    - b. Generally used for:
      - i. Mistakes or to give constructive points
      - ii. Handling of a specific patient case
      - iii. Midpoint evaluation
      - iv. Often is private
      - v. Ask for permission
- iii. Reasons we don't do it regularly
  - 1. Time
  - 2. Faculty skills
  - 3. Poor learner ability to reflect and/or self-assess
  - 4. Fear of emotional reactions to negative feedback
  - 5. Perception is not reality
  - 6. Expectations unrealistic
  - 7. Learner doesn't recognize it as feedback
  - 8. Learner doesn't value feedback given
- iv. Principles of effective feedback
  - 1. Set clear objectives and goals upfront
    - a. What does the trainee hope to get out of your time together?

- b. What specific behaviors do you expect?
- c. When will you give the trainee feedback?
- d. When will you reassess their performance and reset goals?

## 2. Preparation

- a. Organize your thoughts and observations ahead of time.
- b. Negative or major feedback should always be given in private and without interruptions.
- c. Timing should be as close to event as possible.
- d. Make an appointment for midpoint feedback.
- e. Make sure learner is ready to hear it without distractions, physically or emotionally.
- f. Limit constructive feedback to 2-4 areas of improvement

## 3. The meeting

- a. Describe the Purpose
- b. Label it as feedback
- c. Elicit self-reflection
- d. Give both reinforcing and corrective feedback
- e. Be specific and use non-judgmental language
- f. Behaviors not personality
- g. Objective, observable and modifiable
- h. Provide suggestions for how to improve
- i. Allow student to develop own suggestions for improvement plan
- j. Elicit trainee understanding of feedback

## 4. Closing the Meeting

- a. Summarize
- b. Positives
- c. Areas for improvement
- d. Plan for improvement
- e. Plan for when meet again to reassess

## v. Summary

- 1. Timely: in the moment
- 2. Be specific
- 3. Be objective
- 4. Label It: "I'm going to give you some feedback"
- 5. Set an appropriate time and place

6. Elicit self-reflection
7. Be both reinforcing and corrective
8. Provide suggestions for improvement
9. Always listen to the person's perspective and feelings.

**Table 1: Stages of Learning**

Stage	Learner's behavior	Teacher's behavior
Unconscious incompetence	Lacks knowledge of even what it is that cannot be done	Orients learner to skill; explains rationale for learning skill, objective, and performance outcome; demonstrates skill ("see one"); gives motivational feedback
Conscious incompetence	Cannot perform the skill but knows what it is that cannot be done	Guides initial attempts of learner to perform the skills; observes learner practice ("do one") and gives frequent and ongoing informational feedback
Conscious competence	Can perform the skill but has to work (hard) to get through the skill (because of demands of "cognitive processing")	Allows more independent practice ("do many more") and decreases learner's reliance on teacher feedback
Unconscious competence	Performs skill automatically and confidently (on "auto pilot")	Provides greater distance from the learner and interferes less

**Table 2: Expert vs Novice Problem Solving Skills**

Novice	Expert
Tends to get mired in details and treats every detail as equally important	Easily discerns important features and patterns ("pattern recognition")
<i>Fact laden, but retrieves relevant facts slowly</i>	Demonstrates content expertise that is organized in ways that reflect deep understanding
Has no context for application	Has conditional knowledge that demonstrates multiple contexts of application
<i>Exerts efforts to retrieve details</i>	<i>Effortlessly retrieves detailed knowledge</i>
Focuses on surface features of problem	Focuses on source of problem
Jumps to conclusions and demonstrates flawed thinking by faulty synthesis and ignoring key data	Avoids snap judgments and is willing to change mind; pays attention to clinically significant details

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### **XIII. Working With The Difficult Learner And Learner / Program Interaction**

- i. The following is a brief taxonomy of common difficulties and a concept of development across the competencies.
  1. **Medical Knowledge:**

A primary challenge for 3<sup>rd</sup> year students is that they need to re-organize their knowledge from a systems or discipline based association to an association with the clinical presentations provided by patients. Their knowledge is best assessed in their ability to generate differential diagnosis, to select and eliminate differential possibilities, to select and be able to discuss red flags for competing disorders, testing and treatment options. One Difficulty frequently encountered is a student who can cite facts without appreciating how they are connected to the differential diagnosis or decision making process for the patient. Another frequently seen is a student who doesn't seem to know the relevant facts or differentials, or is poorly oriented to the more realistic differentials or diagnostic or treatment approaches.
  2. **Interpersonal communication skills**, Students need to be able to present cases to peers and attendings, perform patient education at appropriate levels without jargon and summarize information covering their study of the patient's presentation in a clear and thoughtful fashion. Difficulties often encountered include poor organization of ideas, a tendency to use jargon that doesn't add clarity to their own understanding or that of their listeners, difficulty translating technical concepts into more common language, performance anxiety on rounds or more formal situations, and sometimes language difficulties.
  3. **Practice Based Learning and Improvement:**

This includes ability to find and interpret relevant medical and scientific literature covering patient care generated problems, learning from clinical errors and quality improvement paradigms (as appropriate). Difficulties frequently include limited ability to find appropriate resources of information, interpretation of clinical or other relevant science to the understanding of the patient

condition and lack of interest or speculation concerning the best way to approach a patient care problem.

4. System Based Learning:

This is about understanding the system and milieu in which health care takes place and its impact on decision-making and advocacy for patients. The roles of different members and professions in health care teams, limitations of medical student and other relevant team members are implicit in system-based practice and learning. A development of understanding concerning the structure of the health care system, reimbursement system and utilization and review functions are important for doctors in training to develop the skill to understand how to navigate a patient to receive maximal benefit. Difficulties in this competency include a lack of knowledge (or interest) in the other professions that share responsibility in patient care and the effective interface with them, a poorly developed ability to understand how to get services and mobilize resources for patients they are following.

5. Professionalism:

Manifesting as diligence, timeliness, respectful interactions with preceptor, staff, patients, appropriate dress, work ethic, honesty and perceived trustworthiness. This is discussed further in the section on modeling professionalism.

6. Patient care:

This consists of the ongoing application of medical knowledge, clinical reasoning, interaction skills, reassessment of differential diagnosis and other problem solving paradigms to new developments in a patient's clinical course, staying on top of details of a patient's clinical course and reviewing communications relevant to their care. Difficulties that students often experience involve lack of follow-up and attention to clinical details as they emerge, and difficulties in organizing new and pre-existing information in a dynamic assessment of the patient's condition. Patient care is a competency that involves ability to integrate and synthesize information, communication, critical and clinical reasoning and professional concern, and thus is a litmus test of the students' ability to "put it all together."

- ii. Principles of dealing with the troubled learner:  
[Adapted from the Mountain Area Health Education Center Office of Regional Primary Care Education, North Carolina]
  - 1. Primary Prevention: Prevent the problem before it occurs.
    - a. Know the course expectations.
    - b. Orient the learner well.
    - c. Set clear expectations and goals.
    - d. Determine the learner's goals and expectations.
    - e. Reassess mid-course
  - 2. Early Detection
    - a. Pay attention to your hunches/clues.
    - b. Don't wait for the problem to evolve and get larger.
    - c. Initiate SOAP early (see below).
    - d. Give specific feedback early and monitor closely.
  - 3. Manage a problem to minimize impact.
    - a. Seek help early if what you have tried is not working.
    - b. Don't wait till the end of the rotation and put up with the problem.
    - c. Do not give a passing grade to a learner who has not earned it.
  - 4. SOAP intervention  
[Quirk, M. E. (1994). How to Teach and Learn in Medical School]
    - a. Subjective
      - i. What was it that made you consider that there may be a problem?
    - b. Objective
      - i. What are the specific behaviors that are observed? (preferably written down)
    - c. Assessment
      - i. Your Differential Diagnosis of the Problem (see below)
    - d. Plan
      - i. Gather more data
      - ii. Intervene
      - iii. Get help
  - 5. Assessing what the trouble is:

- a. Cognitive: Knowledge base/Clinical skills less than expected. It is useful to map difficulty to the taxonomy previously given at the beginning of this section.
  - b. Learning Disability:
    - i. Dyslexia
    - ii. Spatial Perception Difficulties
    - iii. Communication difficulties
  - c. Lack of effort/interest
  - d. Affective disorder
  - e. Valuative: reality of experience is different from expectations
  - f. Clash in values between the student and preceptor
  - g. Medical disorder
  - h. Personality disorder
  - i. Substance Abuse
6. Plan
- a. Gather more data
  - b. Observe and record
  - c. Discuss with student
  - d. Contact School to intervene
  - e. Detailed behavior specific feedback
  - f. Specific recommendations for change
  - g. Set interval for reevaluation
  - h. Get Help
  - i. Get assistance from regional support or School
  - j. Transfer Student
7. Preceptor Issues
- a. Health Issues- Personal, Family
  - b. Practice Issues- Staffing, Over-scheduling
  - c. Financial Issues
  - d. Relationship Issues – Personality clash with learner
  - e. Important Questions:
    - i. Is the presence of the learner preventing you from doing what must be done?
    - ii. Are your issues seriously affecting the education of the learner?

#### **XIV. What Do We Want Students To Learn From Our Patients?**

- i. Successful medical students learn a great deal from the patients they see, and clinical rotations in medical school are their most intensive opportunity to do this learning. Interviewing, observing, examining and listening to patients, medical students learn about how sickness and health present in health care settings, how patients and their families live and cope with illness and adversity and what kinds of internal and external resources help to do so. Hearing the stories of patients and their families, students form an understanding of how professionals and the medical system have helped or failed them (at least from their perspective) and thus what kind of doctor they want to become and how they wish to develop as a resource for patients and the community.
- ii. Perhaps on a less conscious level, students also learn how to recognize patterns and cues associated with diagnoses and prognoses, to develop a sense of the degree of acuity or urgency in a patient's presentation. This is a crucial element of patient care and forms the basis of the "street smarts" that mark a student in their sub-internship rotations as being ready for internship and postgraduate education.
- iii. A key element of learning from patients is the development of respect and gratitude toward patients for their contribution to the formation of the physician from a medical student – and hopefully an acknowledgement and respect that will remain with that physician throughout their career.

**XV. Allowing Osteopathic Students To Practice Osteopathic Manipulative Medicine (OMM)**

- i. Your TUCOM-CA student has been carefully instructed in the use of OMM.
- ii. Your student is capable of providing OMM to your patients as an adjunct to your medical care, the goal being to enhance your patient's clinical outcomes. Your student may not apply OMM without your permission. Students should be encouraged to do structural examinations, render Osteopathic Manipulative Treatment (OMT), and document appropriately. OMM is generally well tolerated and appreciated by patients. It is reliably safe, and effective in a broad variety of clinical conditions. Your TUCOM-CA student should be able to ease a wide variety of musculoskeletal pains, as well as apply OMM to a variety of clinical circumstances such as, but not limited to, easing the

breathing of asthmatics, decongesting sinuses, decreasing peripheral edema, treating common post surgical complications such as ileus, and preventing atelectasis to name a few.

- iii. OMM RISKS: Osteopathic treatment is generally well tolerated, and has a low incidence of adverse outcomes when carefully applied.
- iv. OMM Backup: You and your TUCOM-CA student are, should the need arise, encouraged to consult with TUCOM faculty regarding the use of OMM in the various clinical settings
- v. OMM Procedure: We encourage you to ask your student: “how would you utilize OMM in this case?” Expect a rational answer that describes how the application of OMM might effect a positive physiologic & clinical change in your patient. Your student should write a procedure note that describes the OMM modality recommended OMM treatment time will vary, depending on the complexity of the case, the severity of the illness, and the experience of the student.

## IX. The Anatomy Of A Recommendation Letter

- vi. General Principles for LOR’s
  1. Function, not so much as an objective evaluation of an applicant, but as an interpretation of the applicants persona from someone experienced in the training process and the pool of applicants.
  2. Should be positive, but more importantly they should convey nuance and a sense of the person, rather than a summary of achievements
  3. Review the literature on residency LOR’s with research and evidence that relate to best practices.
  4. Think carefully before assenting to write one for someone. Questions you might ask yourself:
    - a. Do I know the applicant well enough to write a good letter?
    - b. Do I feel positively about recommending this applicant for a position?
    - c. Something to consider is that a lukewarm or negative letter is more damaging to the applicant than a non-acceptance of the task.

5. Ask the student to give you a CV and a cover letter, as if applying for a job, and if possible, ask them about the contents as a way of formulating the letter in alignment with the student's objectives and background.
  6. Discuss whether the student waives the right to see it, and whether you will copy them on it.
- vii. Literature review:
1. O'Halloran CM, Altmaier EM, Smith WL, Franken EA Jr. Evaluation of resident applicants by letters of recommendation: a comparison of traditional and behavior-based formats. *Invest Radiol.* 1993 Mar;28(3):274-7.
    - a. Conclusions: Traditional letters of recommendation are frequently deficient in data regarding noncognitive variables. A standardized statement is effective in eliciting information on noncognitive variables related to applicant performance.
  2. Dirschl, DR, Adams, GL. Reliability in Evaluating Letters of Recommendation.
    - a. Conclusions: Of the residents whose letters were evaluated, eight had performed at a superior level in the residency program and eight had had inferior performances. There was no significant difference in kappa values for rating letters for either the eight superior or eight inferior residents ( $p > 0.5$ ). While the superior and inferior groups had equal percentages of letters rated "poor" (15%), the superior group had a greater percentage of letters rated "outstanding" (33 versus 18%).
  3. Oyama LC, Kwon M, Fernandez JA, Fernández-Frackelton M, Campagne DD, Castillo EM, Lin M. Inaccuracy of the global assessment score in the emergency medicine standard letter of recommendation. *Acad Emerg Med.* 2010 Oct;17 Suppl 2:S38-41.
    - a. Conclusions: Standard letter of recommendation (SLOR) writers are inaccurate in estimating the rank order list position of the applicant using the global assessment score (GAS) tier criteria. The GAS tiers were accurate only 26% of the time. Because of the

valuable role that the SLOR plays in determining an applicant's competitiveness in the National Resident Matching Program (NRMP) in EM, future discussion should focus on improving the consistency and accuracy of the GAS section. Furthermore, there needs to be a national dialogue to reassess the utility of the criterion-based GAS within the SLOR.

viii. Anatomy of a good LOR:

1. Paragraph #1 (the head)  
The greeting and purpose of the letter
2. Paragraph #2 (the thorax)  
This should explain the nature of your relationship and involvement with the student. What rotation the student worked with you in and how often the student was with you. What were the student's responsibilities?
3. Paragraph #3 (the heart)  
Here is where you evaluate the student's abilities and performance while under your supervision. Try to give illustrative examples.
4. Paragraph #4 (the abdomen)  
Try to give a brief history of the student's achievements or specific life events/struggles that he/she has overcome. One can give specifics about research or leadership experience.
5. Paragraph #5 (the extremities)  
This is the summary and concluding statement and level of the recommendation. Try to be as specific as possible as to what the student's goals are and at what level you feel he/she will function within their organization.
6. Key words  
In general, the studies failed to find specific words that distinguished mediocre students from the really good ones. Most writers expect that the terms poor correspond to a "D" grade student, good correspond to a "C" grade student, very good correspond to a "B" grade student, excellent correspond to a "A" grade student, and outstanding correspond to a "A+" grade student. However, the only



resident performance correlates were those students recommended by the word “outstanding” vs all the rest except the word “poor” or a negative letter which worked in the opposite way. Other terms that seemed to correlate with residency acceptance were the statement of “this student performs at the level of a first year resident” or “in all my years of teaching, this student is the finest . . .”

ix. Conclusion

1. Providing a Letter of Recommendation to a student is a tremendous and vital service we do for them, and it is required for their residency selection process.
2. Think of the letter as not only a recommendation but a characterization of the student, focusing on their unique attributes rather than just placing them on an achievement scale, something accomplished by other components of their transcript and application

## PART THREE: MENTORING AND MODELING

### IV. How Doctors Think: Clinical Reasoning Skills

One emphasis drawn from looking at the past and future development of the physician role in the health care team is on the distinguishing feature of physician training- clinical reasoning. While all health care team roles use algorithmic and protocol driven practice, it is pre-eminently the role of the physician to solve problems that are unique to the patient or illness and to identify where algorithms or guidelines may not apply or function well. Effective clinical reasoning requires a higher level of development of medical knowledge than just the recognition of facts or even citing of new findings in clinical practice- it requires familiarity with the inductive reasoning applied to patient care and ability to critically analyze research that informs us about the significance of variations of presentations, application of treatment options, evaluation of patient progress and unexpected findings in diagnosis and monitoring of patients. We don't expect students to develop this level of sophistication solely in their third year, as the basic skills in clinical reasoning are part of pre medical and preclinical medical education and familiarity with clinical reasoning is developed throughout their pre-doctoral and postgraduate training. But the third year, when students develop critical habit patterns of approaching patient care thinking and practice, is a critical developmental step and the expectation they develop clinical reasoning skills needs to be reinforced and modeled. Doctors also use pattern recognition, generation of differential diagnosis, formulating exclusions, and develop skills in researching relevant sources of information pertinent to patient care.

### V. How To Model And Assess Professionalism

There is almost universal agreement that professionalism is a critical competency in the development of physicians, but the focus and understanding of the most important aspects of professionalism varies with the background and philosophy of the beholder. Given the diversity of opinion on the definition and key aspects of professionalism, it is not surprising that assessment of this competency is more challenging than the others, and consensus on good tools has lagged behind other aspects of competency based medical education.

#### i. Modeling professionalism

Students learn by what we do, who we are or what we talk about, and to a lesser degree from what we teach. Most of us consider our own professionalism to be a lifelong work in progress and it may

intimidate even the most highly professional of us to be reminded about the importance of modeling. But modeling doesn't have to await our being perfect- it rather requires sharing our thoughts and formulations from philosophy and experience regarding how to fulfill our role and vocation as physicians. Sometimes it might involve sharing our dilemmas and challenges as well as our aspirations, how we negotiate emotional and logistical conflicts we face in practice and patient care decisions as well as the principles we aspire to follow. Modeling, of course, also reflects our work ethic, how we follow schedules, talk to patients, staff and other professionals, how we dress etc. In addition to our modeling, as teachers, we can emphasize important expectations we have of students and give them feedback positively and negatively about how they are doing in this regard.

**VI. Career Mentoring For Students**

Students overtly and covertly seek mentoring from physicians they work with on their career directions and options, and how best to achieve them. This is especially true for those that inspire them to follow similar specialty or practice choices to the students' own aspirations. To some extent, this can be a daunting task, given the continuously changing developments and options, but your advice to them is likely to be valuable notwithstanding. Clinical faculty should feel free to contact Drs. Buller, Hartwig or Troll and other members of the clinical education department to discuss and share their career mentoring of our students- we are all passionately interested in our students' success and attainment of their aspirations.



