

April 27, 2006 CME Minutes

1. Comments from the Vice Dean

Dr. Robert Daroff mentioned that he and Dean Horwitz discussed the new curriculum with board member and School of Medicine alumnus, Dr. Gregory Eastwood, who becomes interim President of the university June 2.

2. Introduction to the Mount Sinai Skills and Simulation Center

Dr. Kathleen R. Rosen, (Kathleen.R.Rosen@case.edu), Director of the Mount Sinai Skills and Simulation Center, provided a brief introduction/overview pertaining to uses of medical simulation in the new curriculum. Dr. Rosen, a professor of anesthesiology, has been at Case for the past five months. Her prior experience as both a clerkship director and residency program director at West Virginia University has been useful in assessing what medical students need. The Mount Sinai Skills and Simulation Center (phone: 216 368-0064) is located at 1551 East 105th Street on the VA campus. Access the Center by walking through Parking Lot D.

To find a complete listing of resources and URL links, see [Dr. Rosen's original PowerPoint presentation](#).

Dr. Rosen divided her presentation into three areas: 1) techniques, 2) tools, and 3) teams. She defines **simulation** as “the *representation of* the operation or features of *one process* or system *through* the use of *another*.” Simulation can be *technical* or *non-technical*. **Technical** simulation can be used to teach **procedures** and **skills** via *screen-based* simulation, *task trainers*, and *manikins*. **Non-technical** simulation can be used to teach **communication**, **professionalism**, and **decision making** via *role play*, *scripted role play*, *video vignettes*, *standardized patients*, and *virtual reality*. The highest degree of success comes from *mixing* different methods of simulation (**hybrid teams**), as some methods are better suited to certain tasks than others.

Medical simulation **applications** can be used for the following: education, evaluation, patient safety, and crisis resource management. **Education** encompasses formal standardized courses, “on demand” training, individualized programs, and faculty development (“train the trainer”). **Evaluation** can be formative and summative. **Patient safety** includes medical error, system-based practice, and practice-based learning and improvement. **Crisis resource management** deals with team function and communication skills. Simulation can be used in examining attitudes, knowledge, and skills.

Screen-based simulation can be helpful in teaching cardiovascular resuscitation, pharmacology, physiology, and Physical Diagnosis. Dr. Rosen cited examples of screen-based simulation programs suitable for laptop use. She singled out the University of Miami's U Medic. The software can be used with the Harvey manikin or as a stand-alone instructional. A Harvey's manikin was donated to the Louis B. Stokes Cleveland Veteran's Hospital for use in medical education without the corresponding curricular

software package. **Dr. Rosen invites Case School of Medicine faculty to evaluate the software package** http://www.crme.med.miami.edu/umedic_changes.html Based on their input, she will decide whether or not to purchase the UMedic software. UMedic offers tapes on cardiology and neurology and 15 cases in 3 different areas (common pathophysiology, management, congenital).

Dr. Rosen called attention to several excellent *free* screen-based simulations on the **Internet**. Of particular significance were Virtual Rat/Cat and the eye simulation.

Dr. Rosen defined **task trainers** as *part*-manikins, “partial-task manikins.” Task trainers do *not* react to everything as a human being, which is what manikins do. Task trainers are used in teaching Physical Diagnosis and surgery. Central Line Man, used in teaching vascular access, is also compatible with ultrasound technology.

Examples of **full-scale manikins** include Laerdal, SimMan[®], and BabySim[®], examples of which are already found on the Case campus. Dr. Rosen pointed out that the METI (Medical Education Technologies, Inc.) ECS[®] manikin breathes, blinks, can talk, and reacts to drugs. Manikins offer the opportunity for interactive learning as do their live standardized patient counterparts. Dr. Rosen mentioned that the METI BabySim[®] full-scale manikin will arrive at the Center in June.

Dr. Rosen described **team training** as the key to patient safety. She referred to the aviation industry and communication failures. This category encompasses responding to a critical event and patient management. Student performance is videotaped at the Center so that the students can review and reflect.

To demonstrate the positive influence of simulation, Dr. Rosen cited its use at West Virginia University, where she headed an innovative program designed to fill the gaps in the medical student curriculum in fields such as oxygen therapy, airway management, routine monitoring, and invasive monitoring. For example, the patient resuscitation success rate defined as survival to discharge of 30:70:30 denotes *pre-simulation: introduction of simulation into the curriculum: discontinuation of simulation*.

Dr. Rosen concluded her formal presentation with a “floor plan” of the Center, which includes manikin rooms, the control room (where digital video records of student performance are stored), 8 clinical exam rooms per student core, and standardized patient support. Dr. Rosen presented a list of resources (textbooks, Websites, and societies/meetings) where one can learn more about medical simulation.

When asked for the **most recent publication on the topic of simulation for medical students**, this is her **recommendation: Goodrow MS, Rosen, KR, Wood J. *Using Cardiovascular Simulation to Teach Undergraduate Medical Students: Cases from Two Schools. Seminars in Cardiothoracic and Vascular Anesthesia 2005; 9:275-89.*** In addition to this article, Dr. Rosen has collaborated with University of Louisville faculty on several simulation workshops.

Dr. Rosen addressed **questions** from the CME. When asked about doing lumbar punctures, she mentioned that she plans to purchase the equipment. She has been offering individual programs as faculty request them. For the intern orientation in June, she plans to purchase the following task trainers: lumbar punctures, peripheral intravenous access, peripheral arterial sticks, Foley catheter insertions, and nasogastric tube insertions.

When asked about financing, Dr. Rosen replied that a retreat to formulate a business plan will take place next month. Currently, the Center uses a combination of methods— payment by department, on a program-by-program basis, and others. The first program at the Center will be on a cost-only basis covering standardized patients and occasional replacement of parts on the task trainer. It is anticipated that the Center will not be used 100% of the time during the first year. As the Center grows, perhaps by its third year, when there might be conflicting scheduling demands, reservations on a contractual basis may be considered.

When asked about permanent location, Dr. Rosen anticipates that within 36 to 48 months, the Center will move to the West Quad.

When asked about finding and training standardized patients, Dr. Rosen replied that eventually they will do both. Mr. Andrew Gross is the Center's technical manager. The search for a standardized patient trainer is underway. Realistically, Dr. Rosen anticipates the Center will be able to handle all the standardized patient requests by the end of 2006.

When asked about plans for the envisioned end-of-Year III OSCE, Dr. Rosen did not have any details. However, she added that the end-of-Year II OSCE for University Program students just finished today at the Center. College Program students had their end-of-Year II OSCE in March. Dr. Rosen explained that the specifications of the particular OSCE determine its length. For example, the 30 or so College students required four half-days, while, in comparison, the much larger group of 150 University students spent only 5 half-days. While Dr. Rosen has not yet met with the clinical immersion block leaders, there are plans for her to do so.

When asked for an existing list of agreed-upon competencies, Dr. Rosen explained that medical simulation is a relatively new frontier without established precedent. A very small number of medical schools have integrated simulation throughout their curriculum. The University of New Mexico was considered the leader. Both the University of New Mexico and the University of Louisville have already used simulation throughout their entire curriculum. Dr. Rosen was on the faculty of West Virginia University, where simulation was integrated into the second, third, and fourth year medical student curricula. She is a firm believer in the need to partner education and simulation.

Dr. Altose thanked Dr. Rosen for her enlightening presentation and looks forward to the establishment of a lasting link between the Skills and Simulation Center and the Case faculty.

3. New Curriculum Update

Dr. Amy Wilson-Delfosse, Basic Science Curriculum Council Chair, provided an update on curriculum renewal. **Textbooks** for the first 18 months of the new curriculum are being considered with the intent to consolidate recommendations into a “user-friendly” number for students. In the past, the Case syllabus eliminated the need for students to go directly to primary sources.

Dr. Altose recommended charging block leaders to decide very soon the specific resources that each block needs. Once the pared-down “laundry list” is ready, it needs to go to the dean. Time is of the essence, as there is much competition for finances. As there is no provision in the Cleveland Health Sciences Library budget to cover the list of desired resources, Mrs. Saha needs to get a sense of those resources requested and their cost in a timely manner.

All blocks are involved in **writing cases**. Consultant Dr. Alan Neville of McMaster University is coming to Case again in mid-May for a few days to work with the blocks.

Representatives from the NBME are coming in mid-June to work on a cumulative **basic science examination** that students will take after each block of the new curriculum.

In mid-May, Dr. Wilson-Delfosse, Dr. Steve Ricanati, and Dr. Scott Simpson will attend a **PBL workshop at McMaster University**.

At the last two meetings of the Curriculum Monitoring Council, implementation plans and strategy for **student assessment** were reviewed. Dr. Klara Papp has laid out the basic assessment template:

- Relevant **multiple-choice questions and answers** from the medical school’s secure question banks will be released to students on a weekly basis for *formative* purposes.
- Students will be given a total of 20 **synthesis essay questions** per block. Two of these will be assigned each week with the requirement that one be turned in. However, it will be in the student’s best interest to reflect on both essay questions. At the end of the block, from three-to-five of the synthesis questions will be *summative*, appearing as *derivatives* (not in their original form) of the 20 questions.
- A *cumulative* test will be composed of *retired* **USMLE Step 1 multiple-choice questions**, with some questions for blocks referring back to content from previous blocks. This test will occur at the end of the block and will be *formative*.
- During their first 6 blocks, students will be assessed in **small groups** by their preceptor on the basis of *participation, preparedness, and professionalism*. *Clinical skills* will be assessed in clinical mastery learning activities.

Dr. Wilson-Delfosse explained that the student's performance during the first one and one-half years of the curriculum will be thoroughly reviewed. The student will provide evidence/documentation via some kind of portfolio mechanism that he/she has achieved the required benchmarks for the six blocks.

In response to a question about who will be the formative synthesis essay grader, Dr. Wilson-Delfosse explained that the small group facilitator, who is not necessarily a content specialist or author of the question, will be given an "ideal answer" as a template for grading. If the small group facilitator is unsure about a student's answer, the question can be referred to a content specialist. Dr. Wilson-Delfosse explained that the goal is to have assessment drive the curriculum so that students get used to integrating details and putting things together as will be required for lifelong learning. The multiple-choice questions are intended to keep students apprized of their own progress on a regular basis. While faculty have not yet begun designing a remediation strategy, remediation is viewed as linked to assessment.

Dr. Altose interjected that **recruitment of teaching faculty** by the Office of Curricular Affairs has been proceeding sequentially. Block 1 has benefited from a terrific response. Block 2 is making excellent progress. Block 3 is moving along well. Dr. Wilson-Delfosse added that to date, faculty have signed up for every block. She added, however, that **basic science departments—both faculty and chairs—have expressed the desire to see more detail**. Dr. Altose agreed that we need **more flexibility in teaching schedules. Two-to-three faculty could share small group representation in each block**. The intent is to **engage faculty in their areas of interest**. Dr. Previs pointed out that for teaching purposes, a **block is ten weeks**, not twelve. Dr. Wilson-Delfosse mentioned that faculty have the option of teaching for **five weeks**, as each block can be divided into **two successive five-week units**. She mentioned that no template exists yet for the Reflection and Integration week, the final week of the block. There are assessment needs to be considered there as well. No introduction of new material takes place in the Reflection and Integration week.

Dr. Smith expressed his own desire to be paired with a basic scientist when facilitating a small group as a non-content expert. He also supported splitting the block into two five-week teaching opportunities.

Dr. Altose views teaching in the new curriculum as a terrific learning experience for the preceptors. That is the reason faculty are encouraged to participate in areas where they have an interest.

4. **Flexible Program Council Update**

Dr. Kent Smith, Flexible Program Coordinator, announced **two new Type B electives: Acting Internships (AIs)** in 1) Anesthesia at MetroHealth Medical Center, and 2) Pediatric Nephrology at Rainbow, University Hospitals. An AI is a more intensive in-hospital experience when compared with other Type B electives. Dr. Altose added that the "softening" of the inpatient experience in the new clinical cores resulted in the requirement that AIs be "inpatient," "intensive," and "team-based" (the student as a

member of a ward team). While not required, there is an expectation that there be night call on an AI.