Alternative Formats for Clinical Rotations and Clerkships

On Wednesday, April 29, 83 instructors and 4 panelists convened to discuss strategies for effective online instruction throughout UMN clinics, clerkships, and rotations. Ideas and effective practices generated during that discussion are documented here. Contact cei@umn.edu to suggest an addition to this resource.

Facilitators:

- Deborah Wingert – Center for Educational Innovation
- Christina Petersen – Center for Educational Innovation
- Bill Rozaitis – Center for Educational Innovation

Panelists:

- Christine Mueller – School of Nursing & CAHP
- Jessamina (Jess) Blum – Medical School
- Elise Sarvas – School of Dentistry
- Margaret (Peggy) Root - College of Veterinary Medicine

Recording and resources

- YouTube video recording of the session
- Virtual Clinical Teaching in the College of Veterinary Medicine - Provided by Peggy Root

Organization of ideas

The strategies suggested by panelists are organized by whether students respond to an actual or simulated patient. Technology tools and tips used to support strategies are listed in the next section. Suggestions for effective practice are summarized in the last section.

Strategies for alternative formats for clinical instruction provided by panelists

Formats involving actual patients

- **Intentional observation**

  This is employed in the Medical School. A doctor goes into a patient's room and makes a first-person video; students look at all of the data in the patient chart and other things in the environment to set the stage. In canvas, students create a FlipGrid video to answer prompts posed by the doctor. Students then respond to each others' videos with feedback, support, and suggestions. The instructor reports that there is good interaction between students.

- **Telemedicine**

  The Medical School has created experiences that use telemedicine practices. Students do different types of telemedicine. Zoom attendees include a doctor, med student, others; the student interacts with the patient (with the doctor present) in their hospital room via computer. These sessions are monitored by faculty and they can assess student performance.

- **Treatment cases**

  In Dentistry, we give students patient radiographs and other information that they would have received during an intake interview, after which we discuss.

- **Videos of patient exams**

  In Veterinary Medicine, faculty provide neurology service videos of patient exams, material uploads, information about the case, and electronic patient records. The professor asks students to work through the case. Students and faculty meet later during Zoom to debrief. Vet Med is changing the evaluation tool they use; they are moving to a competency based model which is pass/fail, which makes assessment easier for faculty.

Formats involving simulated patients

- **Professor as client**

  In Veterinary Medicine, the professor serves as the "client" via Zoom and FlipGrid to provide student practice talking to owners about euthanasia or other difficult topics.

- **Virtual simulation**

  In Nursing to focus on simulation, we did virtual simulations from the M Simulation Center. A nurse did a home visit, and the patient was a standardized patient; all was scripted. A debrief followed. Students think out loud. Faculty question students during case studies and monitor students' understanding through their answers. We aren't able to assess hands-on skills like IV insertion, but we can have students talk through what they will do and the order in which they'll do it. We also can teach physical exam skills using Shadow Heath, which uses an avatar.

- **Unexpected simulated patient**

  In Nursing we did an interesting experiment with interaction in remote instruction: students worked with a case in Zoom; during this, a simulated patient showed up unexpectedly in the session. The clinical faculty guided students to talk to the patient

and to do the assessment in real time. This resulted in a revised care plan as students were able to talk and troubleshoot with the patient in real time.

Technology tools used in the different strategies

- Zoom - Zoom is a UMN supported online video conferencing system. It features meeting and webinar capabilities, along with real-time messaging and content sharing.
    - Use Zoom chat for students to ask questions in real time. Some instructors are finding that students are more likely to ask questions using the chat feature of zoom than they were in face-to-face clinical encounters.
    - Use Zoom polls to keep students engaged and collect quick feedback from them.
    - Use Zoom breakout rooms to foster student-student interaction and engagement. Students seem to be more on task here. Some students say it's like being in an active learning classroom. Instructors can drop-in on breakout groups.
    - Know that the Zoom version used by UMN is HIPAA compliant.

- Flipgrid - Flipgrid is a cloud-based, video student engagement and assessment tool that integrates with Canvas. It enables students to record, upload, view, react, and respond to each other's short videos. Instructors can provide feedback and respond to students' videos.

- M Simulation Center - This UMN center works collaboratively with faculty and providers to design, implement, and assess impactful educational experiences. They support the spectrum of simulation, specializing in the integration of standardized patients, human patient simulators, and task trainers.

- Shadow Health - Shadow Health is a third party resource that provides healthcare simulation products for experiential patient-centered learning for nursing and allied health care fields.

- Aquifer - Aquifer is a third party resource that provides case studies and vignettes for health science educators. Note: In response to COVID-19 Aquifer is offering free access to cases through June 30, 2020.

- UMN library resources for medical case vignettes.

Suggestions from panelists for effective practice

- **Provide clear communication and instructions**

  Be clear about what you want from students and what the milestones for completion are. Make clear to students why you're using certain tools or approaches - for example, explain why you're using Zoom for one activity but not another.

- **Provide structure for activities**

  Plan carefully for the timing completion. Be clear about how much time students have to complete tasks. Provide clear directions that students can refer back to.

- **Use active learning**

  Be interactive. Use simulations, gaming, role playing, and small group work. Things that are not good to do in the physical classroom are also not good in the virtual classroom, like 3 hour lectures. In nursing, the move to remote instruction has resulted in huge advances in active learning. Faculty had to come up with ways to engage students during the clinical experience, and they turned to active learning to do it.

- **Be clear about your learning outcomes**

  Be thoughtful as an instructor about what you want from your course and your students. Communicate your outcomes to your students.

- **Be kind to students**

  They are under a lot of stress at this time and we don't know what they are dealing with at home.