



# Adapting the Pre-Clerkship Curriculum at KU SOM to Pandemic Conditions

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**Good news:** We built a case-based curriculum (and education building) based upon small group, in-person interactions.

**Bad news:** We built a case-based curriculum (and education building) based upon small group, in-person interactions.



We built a case-based curriculum (and education building) based upon small group, in-person interactions...



Launched in 2017 – outcomes:

- improved licensing exam scores
- improved readiness for clinical duties
- improved faculty and student satisfaction
- **(potentially) improved sharing of viral respiratory pathogens**

# Learning activities in ACE (first two years)

## **Large Group (~66% contact hours)**

- **Lectures (~29% of contact hours)**
- **Flipped classroom (~15%)**
  - Learners are provided with 'prework' to complete prior to attending in-person session where students address cases and solve problems, facilitated by faculty member.
  - A variety of techniques are used including PollEverywhere (audience response system), 'think-pair-share', and basic question and answer approach.
- **Large group portion of Case-based Collaborative Learning (~8%)**
- **Active case-based sessions (~14%)**
  - Only in final course before clerkships in 3<sup>rd</sup> year
  - Active 'flipped'-like clinical cases

# Learning activities in ACE (first two years)

## Small Group (~34% contact hours)

- **Case-based Collaborative Learning (CBCL) small group ~15% of contact hours in phase I)**
  - Sequential small- and large group active learning sessions with both expert and near-expert facilitation.
  - Learners are provided with 'prework' to complete prior to in-person session.
  - **Small group activity:** (2/3 contact time) students are provided with cases and associated tasks that they address through group discussion, facilitated by near-expert faculty facilitator.
  - **Large group activity** (1/3 contact time): similar to flip classroom where additional cases are presented by the CBCL author(s) and students apply their knowledge and skills to address them
- **Problem-based Learning (PBL, ~12% of contact hours in phase I)**
  - Small group session facilitated by clinician that remains with group the entire year.
  - Open-ended inquiry to develop clinical reasoning skills and consolidate scientific, clinical and social knowledge to help patients and populations.
- **Clinical Skills Labs – (~3% of contact hours in phase I)**
  - Physical exam and procedural skills and assessment
- **Anatomy dissection labs (~3% of contact hours in phase I)**
  - Cadaveric dissection and/or pro-section (peer teaching)

## March 13, 2020 - Move everything off campus

- Re-scheduled laboratories until the Fall semester
  - Conducted clinical skills assessments under strict conditions
- Utilization of large group materials recorded in AY2018-19 when possible
  - Completely lost the interactivity for flips and active cases
- Shift small groups online
  - Blackboard Collaborate
  - Steep learning curve and rapid faculty development
- Assessments: computer testing (as before) relying on *Honor Code*
  - Quarantining questions used for the three exams
  - No performance data suggested cheating occurred

# AY2020-21: Launch July 20, 2020

- Planning principle: maximize in-person interactions while balancing safety of students, faculty and staff.
- Prioritize activities where in-person attendance provides 'biggest bang for the buck'
  - Clinical Skills Labs
  - Anatomy dissections
  - Assessment
- Time + spacing + protection + frequency

# AY2020-21: Launch July 20, 2020

## **Advantages:**

- **Facilities**
  - Access controlled, non-public
  - Three campuses with excellent, SOM-controlled facilities
    - Kansas City: large learning studios (60 ft ceilings, movable tables, excellent ventilation) for each class that 'belong' to SOM
- **Technology**
  - Recording and streaming of large-group activities prior to pandemic: three campuses (KS, Salina and Wichita)
- **Students**
  - Only 422 total in pre-clerkship curriculum
  - Health/science oriented so understand the risks and need for infection control
- **Faculty**
  - Many deal with technology in their non-educational work
- **Staff**
  - Well-trained, resilient and committed to student success
  - Even under 'normal' conditions, ACE is a complex machine

# AY2020-21: Launch July 20, 2020

## **Challenges:**

- Active learning sessions using unfamiliar tools
- New first-year class: ensure connections/cohesiveness?
- Assessment security
- Managing student expectations/pandemic fatigue
  - Optimal vs. Effective
- Patient contact during pre-clerkship phase

# AY2020-21: Launch July 20, 2020

## **Solutions:**

- Large-group activities
  - Pre-pandemic: only 15-30% of students attended large group in-person
  - Pandemic: option for in-person attendance for ~80% of the class – faculty are in-person, onsite live-streamed via BB Collaborate (also recorded, pre-pandemic)
  - Faculty development on conducting synchronous, interactive sessions online
- Small-group activities
  - Continue on-line sessions using BB Collaborate – standing ‘classrooms’
  - Leverage all facilities to maximize in-person meetings of small groups
- Clinical skills labs
  - Leverage expertise of staff and physicians to use universal precautions
- Anatomy labs
  - PPE and high levels of ventilation are SOP
  - Minimize time spent in close-proximity

# AY2020-21: Launch July 20, 2020

## **Solutions:**

- Assessment
  - Fortunately we have sufficient facilities for in-person assessments unless we move to more stringent lock-down conditions
  - Strain on proctoring staff (students are in multiple rooms)
  - Piloted proctoring of exams using Zoom (BB Collab is limited to number of participants visible at any given time)
    - Goal: keep the honest students honest
    - Students use phones to connect to zoom meeting (examination software locks down computer)
    - Proctors watch 25-30 students on their screens

# AY2020-21: Launch July 20, 2020

## **Outcomes:**

- Effective (if not optimal)
- Student resilience and buy-in has been solid
- Flexibility – changes based upon students exposed/infected
- No good solution to replacing patient/clinical experiences
- Concerns remain
  - M1 class ‘gelling’
  - Professional development
  - Sustainability – doing our regular jobs *plus*
- Communication with students and faculty/staff has been key