The ACE Curriculum

The ACE curriculum was launched in July of 2017. After dozens of CBCLs, PBLs, and clinical skills labs, hundreds of lectures and flipped classroom sessions and thousands of multiple-choice questions, we are nearing the completion of the first iteration of the entirety of Phase I. The question most often asked of educational leadership is “How’s it going?” It is fair to say that, overall, the pre-clerkship curriculum of ACE has achieved its eponymous goals: Active, Competency-based and Excellence-driven.

Active. Active learning sessions are the hallmark of ACE. We are nearing completion of 88 CBCL sessions, the last of which will be in the Reproduction, Development and Sexuality block, which runs from late November to late January. CBCLs have been a success in terms of orienting students to self-directed problem solving, with participating faculty serving as critical guides in the process, rather than providers of information. Student performance on exam questions related to CBCLs is as good as questions associated with other learning activities. Student satisfaction with the CBCL approach is highly positive. More importantly, students have become active investigators in clinical problem solving, using scientific and clinical concepts to work their way through often complex cases. The second iteration of M1 CBCLs are undergoing revision and refinement and the quality of materials continues to improve. Flipped classrooms have become common and will expand to a larger percentage of large-classroom activities in the coming years.

Competency-based. As part of the AAMC-required curriculum inventory, the approximately 4,700 learning objectives associated with ACE have been mapped to our school’s graduation competencies. These objectives stretch over 36 content threads and represent the knowledge, skills, attitudes and behaviors expected of our graduates, preparing them for day one of their internship. Clinical skills and simulation labs throughout Phase I have ensured that our students acquired and honed their ability to interact with patients in a productive and professional manner. The academic society coaches have been working individually with students, longitudinally, to ensure professional and personal growth during these critical, early years of training. The consensus is that ACE students are on an exceptional trajectory, well prepared to take on the demands of clinical duties. With respect to knowledge, ACE students have performed comparably to legacy students on the first two NBME Comprehensive Basic Science Examinations (CBSE), given mid- and at the end of the first year. The third exam is in mid-December of M2 year, and will yield important insight into their knowledge acquisition.

Excellence-driven. During the ninth week of each block, the Scholarship, Enrichment and Remediation (SER) week, our students fan out into dozens of locations on our three campuses, mostly in clinical settings, to put into practice the knowledge and skills they develop in the ACE curriculum. These experiences are very popular with students and feedback from faculty overseeing the experiences has been uniformly positive. Comments such as “The student I had was working like an M3!” are common. In addition, 78 students from the first ACE class (Class of 2021) and a nearly equivalent number from the second ACE class are enrolled in the Honors Program. To earn honors, students must maintain a minimum class rank as well as complete a scholarly project with a faculty advisor. Excellence also describes the faculty who have stepped up to create the thousands of documents, PowerPoints, exam questions and other materials necessary to make ACE work. They have attended hundreds of person-hours of faculty development and turned out in the small group rooms, labs and learning studios to guide our students’ education.

“How’s it going?” It is fair to give a simple answer: It’s going great. Though far from perfect, ongoing quality improvement in design and execution is a hallmark of ACE, and the curriculum continues to improve and evolve. The final block of the pre-clerkship curriculum, Medicine Capstone, is fulfilling a vision of a clinically-oriented, science-based unit to ensure integration and consolidation of the prior two years of work by our students. This highly innovative and unique block will prepare our students for the independent USMLE Step 1 study period.
Following the block and, critically, their entry into clinical care. The educational administration, faculty governance and clerkship directors are working hard to ensure that the roll out of the M3 year of ACE will continue to include innovative approaches for the clinical training of our students. Perhaps the most remarkable aspects of ACE are the commitment of faculty, students, staff and administration to making something great and to achieving the overall goal of producing outstanding physicians for the state of Kansas. ACE is not “done” after we complete the M2 curriculum in April of 2019. It will continue to evolve and improve, ensuring that the KU School of Medicine remains a center of educational innovation and achievement.

A Salina Perspective
The big news from Salina is the opening of the new education building. Designated the HEC (Health Education Center), this is a converted former bank that has been completely refurbished. The building currently houses both the medical and nursing schools which greatly facilitates IPE and other inter-professional activities. Everything inside the building is essentially new: furniture, fittings, lighting, IT equipment, art work, etc. However, what does remain is the old bank vault which adds another unique feature to the Salina campus of the KU-School of Medicine! KUSOM-Salina is very proud of its new house and especially proud of the people of Salina and surrounding areas who generously donated to achieve this great building. This will be a legacy to their far-sightedness, civic pride and support for education. We’re sure that they are as proud of this building as we are.

Enrichment
During the ninth week of each block, first- and second-year students have the opportunity to participate in three and a half consecutive days in an enrichment activity. Students may select from almost 200 activities across three campuses that fall into the categories of Career Exploration, Professional Development, Scholarship and Discovery, Community and Beyond, and Leadership. In addition to experiences in clinical departments, students are offered a broad range of opportunities, such as Public Health in Wyandotte County; clinical experiences in Rural Medicine and the Sedgwick County Regional Forensics Center; Introduction to Bioethics and Medical History, and EMS training. Students rank their choices and are assigned by lottery. Student and faculty feedback have been overwhelmingly positive. There are still opportunities for faculty to develop and offer enrichment activities. If you are interested, please contact:

Kansas City: Benito Berardo
Wichita: Alley Turner
Salina: Laura Easterday

Technology
In addition to normal ongoing support of medical education during the past year, the Office of Medical Education Technology team participated in three major projects.

➡️ Curriculum Mapping and Inventory:
Five M1 ACE blocks were mapped to ACGME Core Competencies. This involved the creation of templates and the standardization of learning outcomes. A script was developed to import mapping information from standard overview sheets that is displayed in a tree view within the OASIS learning management system. Learning events were also updated to include standardized instructional methods, assessment methods and resource types. OASIS was then used to produce the 2018 curriculum inventory XML file that was successfully submitted to AAMC. A SharePoint site was created to assist in continued curriculum mapping for years 2-4.

➡️ Office Support for Curriculum Design and Development:
Continued adoption of Office 365 and SharePoint online capacities in support of curriculum design and development of M1 ACE blocks. This included creating and managing curriculum libraries, establishing workflows around publishing ACE content, and creating an automated script to schedule release of case-based assignments for small-group events.

➡️ Joint Office 365 Implementation Project:
Working with IT governance and security across the university and hospital to improve collaboration among clinical and science faculty. The cloud nature of Office 365 presents major challenges in protecting sensitive information and understanding how best to deploy or implement Office 365. The School of Medicine is currently the only medical school using Office 365 SharePoint Online to manage the ACE curriculum making KUSOM a valuable partner in the joint implementation effort across the campus. There are currently over 30 sites used in managing content for students, faculty, and staff for Phase I and Phase II of the undergraduate medical education program. KUSOM’s experience with the technology will greatly inform the implementation and adoption strategy of KUMC.
Years 1 & 2
In May 2018, the M1 class successfully completed a true year of “firsts”...the first year of the ACE curriculum, first year in the Health Education Building (HEB), and first year of testing on their own devices in the learning studios located in the HEB. As second-year students they continue their experience with the ACE curriculum which will culminate with the unique Capstone block. This block will provide opportunities to apply the knowledge and skills learned in the first two years of medical school to almost 100 different clinical cases.

Years 3 & 4
The ACE curriculum for the clinical years will begin in June 2019. All clerkships will be 8 weeks in length, with the exception of Neurology and Psychiatry clerkships. These clerkships will be 4 weeks in length and will occur in tandem. Student performance assessment will be: Pass, Fail, Pass with Distinction. The Clerkship directors have revised the clinical performance rating to a clinical performance assessment that will be used by evaluators. Each of the clerkship directors will have a grading committee that will assign the final grade for each student. The clerkships will also adopt a common syllabus with unique sections based on campus and assignments. The clerkship directors are working on a proposal for a 4th year preparatory course that will be piloted this year and implemented in 2020. The curriculum includes an Honors Track which is separate from the pass with distinction grading, providing students with scholarship and research opportunities starting with 1st year students and ending after the 3rd year.

Assessment and Evaluation
Assessment and Evaluation by the Numbers...

At the end of academic year 2017-18, the 1st year medical students in the ACE curriculum had completed:
Learning activities
- 152 lectures
- 77 flipped classrooms
- 49 Case-Based Collaborative Learning Small Groups
- 6 Dissection Labs
- 15 Clinical skills/simulation experiences
- 4 Enrichment weeks
Assessments
- 2,550 formative questions
- 16 summative exams (800 scored items)
- 5 Clinical Skills Exams
- 1 Objective Structured Clinical Exam (OSCE)
Evaluations
- Weekly feedback through the student communication liaison evaluation process
- Over 13,000 individual block and faculty evaluations (two times that of the previous year 1 class)
- Faculty completed over 15,500 individual student evaluations (5 times the previous year 1 faculty)

Academic year 2017-18 was a very busy year for everyone!

KU Medical Alumni Societies
The Medical Alumni Societies support academic and student wellness programming throughout the academic year. Coaching appointments are underway for the fall semester. Students meet with their academic coach two times per 8-week block. With the combined engagement with students by Assistant Directors serving as PBL leaders and academic coaches, we have observed earlier student intervention for student professionalism and mental health related issues. Additionally, the Societies program in partnership with Student Affairs, have markedly increased student wellness programming. A 4-year longitudinal wellness curriculum was built and implemented in ACE. The programming focuses on meeting the student where they are. Target areas include resiliency training, surviving versus thriving, and heavy promotion of the on-campus Counseling & Educational Support Services team. In addition to wellness, the communities participate in service activities. Annually, the Societies support six families in need for the winter season.

As we look forward to the new year, the School of Medicine is very excited to announce our designation as the host site for the 2019 Learning Communities Institute (LCI) national meeting. The LCI is a professional organization of medical schools with learning communities. At the 2018 conference in September at Mount Sinai School of Medicine, seven presentations from KU School of Medicine were accepted for a combination of oral presentations, workshops, and posters. Scholarly engagement for 2019 continues.
Clinical Skills
The Neis Clinical Skills Lab (NCSL) has updated their KUMC web page to include updated staff photos and bios for new and senior faculty and staff. The NCSL is also encouraging Standardized Patients, staff and faculty to promote the facility, programs and events through its new social media page on Facebook (www.facebook.com/neisclinicalskillslab). The Facebook link is referenced throughout the site and endorses trainings and learner events – without giving anything away.

The NCSL has simplified its application process for those interested in becoming a Standardized Patient. Instead of attaching a word document to an email or requesting that applicants physically drop off a profile form, candidates interested in becoming a Standardized Patient can now just click the “Standardized Patient Application” link and fill out the optional survey. Once the survey is completed, the information goes directly to a NCSL Staff email where the applicants are able to be immediately considered for phone interviews; hiring for the NCSL is entirely dependent on the present-day needs of the program and its faculty. Additionally, what was initially the “FAQ” page has transformed into a comprehensive “Standardized Patient Guide”. This virtual guide provides the same information as The Neis Clinical Skills Lab Standardized Patient Handbook, which was finished in October 2018.

Aside from its virtual upgrades, the NCSL has been running its Barney Smith 3 program for clerkship learners. This event is unique because it uses a teleconnection system called Zoom to connect clerkship learners at the NCSL in KC, with pharmacy students at KU’s Lawrence campus. High video conferencing capabilities and mobile screen sharing allows participants to communicate and share information in real-time.

Publications


Posters and Presentations

Bonaminio, G., Fontes, J., Doolittle, G. “Mapping and Competencies and Integration, Oh My! The Kansas Curricular Change Experience.” Session presented at the International Association of Medical Science Educators Annual Meeting, June 9-12, 2018, Henderson, NV.


Becker DW, Mack J, Naylor DG, Shaw P. Intro to Doctoring, Using the Clinical Skills Lab to Put Care of the Patient Before Science in a New Curriculum. Association of Standardized Patient Educators National Conference 2018 June 19: Kansas City, MO
Faculty Affairs and Development
Faculty Affairs and Development (FAD) is dedicated to providing guidance and development opportunities throughout the academic careers of School of Medicine (SoM) faculty members. FAD strives to meet the needs of all SoM faculty, from their first faculty position to emeritus professor. The department has the resources and expertise to help faculty members achieve their professional goals. Faculty Affairs and Development offers an array of training opportunities. To see a list of upcoming events, please visit the training calendar.

Salina and Wichita Campuses
For information about the Salina and Wichita campuses, including all the latest news, please visit their web sites.

KUmedicine
News from the University of Kansas School of Medicine

KU Medical Alumni Innovative Teaching Fund (MAITF) Recipients, 2018-19
Evaluation and Assessment of Neurologic History and Examination in Third-Year Medical Students
Sherri Braksick, MD- Co-PI, Department of Neurology, Kansas City
Yunxia Wang, MD- Co-PI, Department of Neurology, Kansas City

Surgical Education Technology Suite
Peter J. DiPasco, MD- PI, Department of Surgery, Kansas City

Implementation of a Blackboard Mediated Education Tool: An Online Instructor-Student Interphase
Tiffany Schwasinger-Schmidt, MD, PhD- Co-PI, Department of Internal Medicine, Wichita
Sean Jahansooz, MD- Co-PI, Department of Internal Medicine, Wichita

Incorporating Essential Geriatric Skills into a Family Medicine Clerkship
Hannah Maxfield, MD– Co-PI, Department of Family Medicine, Kansas City
James Birch, MD– Co-PI, Department of Family Medicine, Kansas City

Pediatric Standardized Patient Encounter: Failure to Thrive
Lore Nelson, MD- Co-PI, Department of Pediatrics, Kansas City
Grace Brouillette, DO, MBA- Co-PI, Department of Pediatrics, Kansas City

For more information about MAITF, please visit their website.

Academy of Medical Educators (AME) Medical Education Grants, 2018-19
The Academy of Medical Educators is pleased to announce the recipients of the 2018-2019 Medical Education Grants:

Evaluating Cultural and Structural Competence: Impact of the ACE Curriculum and PBL Group Diversity
Joseph LeMaster, MD, MPH
Department of Family Medicine

ACE v. Legacy: Impact of Pre-Clinical Curricula on Impostor Syndrome in Third Year Medical Students
Beth Levant, PhD
Department of Pharmacology, Toxicology and Therapeutics

Understanding the Impact of Year 1 of the ACE Curriculum from the Perspectives of Frontline Teachers and Leadership: A Qualitative Study
Joanna Brooks, PhD, MBE
Department of Health Policy & Management

Office of Medical Education
Phone: 913-588-8220
Fax: 913-588-7235
Is there something you would like to see featured? If so, please email Melissa Quearry at mquearry@kumc.edu.