



LOOKING BACK, LOOKING FORWARD

The impact of COVID-19 on
medical education at MSUCOM

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College of Osteopathic Medicine
Michigan State University



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Message from the Dean

A year has passed since COVID-19 came into our lives. The dramatic personal and professional effects it has had on so many across our nation, and within our own MSUCOM community, is oftentimes overwhelming.

While the gravity of the situation still weighs heavily on our minds, there is still much to be grateful for. Within our own college, we saw dramatic changes to our curriculum which required a tremendous amount of work and time from our faculty and staff. Our students had to readily adapt to a new online learning environment as well, a task not easily accomplished in medical school. We have seen our students, faculty and staff join together to develop creative solutions and innovative approaches to support the delivery of the osteopathic medicine curriculum.



For example, summer semester 2020 was a markedly different experience for the incoming Class of 2024. The typical on-campus orientation program was modified into a series of online webinars and presentations. This format allowed for the introduction of valuable and timely discussions to the standard slate of topics. Student communities with faculty mentors were established to help new matriculants feel welcome and establish connections within the college.

It also became clear that in-person instruction, including access to the gross anatomy lab, would not be feasible, so faculty rallied to adjust curriculum content to an online format. In addition to integrating new virtual dissection software, the course content was expanded to include osteopathic correlations delivered by faculty from the OMM Department. Each of these new approaches was born out of necessity in response to the COVID-19 precautions, and each has provided insights on instructional methods and the student experience here in our college. We may find that these efforts will shape the college for years to come.

This commitment to succeed from everyone within our community has amazed me. A true dedication that stems from a mission to provide a world-class osteopathic medical education that's focused on our students and fosters access to quality, patient-centered medical care.

Last March, 600 or so of our third- and fourth-year students had to step back from their clerkship experiences, as our [hospital partners](#) mobilized for the rise of COVID-19 cases. Yet despite this, our clerkship sites prioritized the return of our students to their campuses within weeks, as the training of our future physicians was recognized as an essential function.

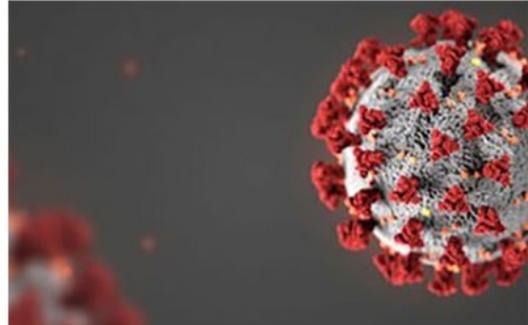
It is because of this incredible support from our MSUCOM community and partners that we have been able to continue our mission. The daily work that happens to strengthen our college and expand clinical opportunities for our students is so important and ensures our ability to provide bright and compassionate SpartanDOs well into the future.

Dean Amalfitano



Accreditation

The Doctor of Osteopathic Medicine program at MSUCOM is accredited by the Commission on Osteopathic College Accreditation, or COCA. Beginning in March 2020, the [COCA has issued guidance](#) for colleges of osteopathic medicine on meeting or adjusting accreditation requirements in response to the COVID-19 pandemic. Several key areas are listed below:



- Distance education:** The usual federal regulations on distance education were waived by the Bureau of Education in spring 2020, in order to allow programs to adapt instruction into online formats without seeking additional approvals. MSUCOM has provided regular updates to the COCA on the status of curriculum delivery including use of distance learning methods. This waiver has allowed MSUCOM to pivot lecture-based learning to online modalities and maintain continuity in the program. It is anticipated that these waivers will continue while the COVID-19 national emergency declaration remains in place.
- Clinical experiences:** Regarding clinical experiences in the third- and fourth-year of training, the COCA has permitted COM's to seek a temporary waiver of the requirement that students have the opportunity to work with both osteopathic physicians and residents in at least one rotation. MSUCOM assessed whether COVID-19 had an adverse impact on our ability to comply with this requirement (Element 6.10), and we found that despite a temporary pause in face-to-face clinical rotations in spring 2020, MSUCOM students were still able to work with D.O.'s and residents during their assigned core rotations.
- COMLEX examinations:** During 2020, access to Prometric Testing Centers for administration of the COMLEX-USA Level 1 and Level 2-CE examinations was significantly impacted due to closures and reduced numbers of test dates to comply with social distancing parameters. MSUCOM was able to assist by serving as a temporary Prometric testing center. Additional challenges were faced with COMLEX-USA Level 2-PE, as the NBOME testing centers in Illinois and Pennsylvania were forced to suspend operations. At this point, the COCA required each COM to establish protocols for senior medical students who were unable to access the Level 2-PE as required under Element 6.12. MSUCOM developed a protocol that was utilized as a model by other COM's pathways to assess the competency domains tested on the Level 2-PE. When the NBOME indefinitely suspended the Level 2-PE, MSUCOM adapted the protocol and already had a tiered simulation model for student assessment in place.

MSUCOM has complied with regular updates to the COCA, reporting on college operations and describing the adaptations made in response to COVID-19. These reports have been submitted to the College Curriculum Committee, which has provided administrative oversight. The CCC also approved a change management process, in which significant modifications in preclerkship and clerkship courses would be documented, submitted for approval, and



tracked. This is to ensure that the CCC maintains its role in the approval and continuous evaluation of the program in keeping with Element 6.1.

MSUCOM successfully completed an accreditation mid-cycle review in 2020, receiving confirmation from the COCA in August 2020 that all elements were found to be in compliance.



Communication

Since the local emergence of COVID-19 in March 2020, communication efforts to faculty, staff and students took a number of forms to provide the essential information needed to help navigate through the pandemic. Beyond [email and website communications](#), as well as [Dean's Updates](#), also included in these efforts were organizing numerous online town halls, class meetings and our COM Preclerkship Roundup weekly vlog series. Below is a list of examples of these efforts.

- COVID-19 primers were developed for preclerkship and clerkship students, with an online attestation form.
- MSUCOM faculty participated in work groups to develop MSU's [Together We Will](#) program for addressing COVID-19. Archives of [university communications](#) are available on this site.
- MSUCOM launched a new semi-annual magazine in January 2021 called [SpartanDO Journeys](#), which went out to key stakeholders within and outside of the college. This new e-magazine chronicles the white coat journeys of our college's esteemed faculty, students and alumni, and captures their responses and impacts to current health and societal issues, including COVID-19, exemplifying their unique application of the osteopathic philosophy—treating patients with empathy and respect.
- The college's monthly newsletter, SpartanDO Insider, also has served as an additional communications platform to inform internal audiences within MSUCOM, as well as the greater university, of important initiatives and activities taking place within the college.



Curriculum

Preclerkship Program Recap

In March 2020, the State of Michigan began to experience an increase in cases of COVID-19. Within a few weeks, Governor Gretchen Whitmer issued Executive Order 2020-21, known as the “Stay Home, Stay Safe” order, on March 23, 2020. Following the initial order, Michigan State University worked with the governor’s office to determine the impact on university operations. It was confirmed that applicable federal guidelines on critical functions included “colleges and universities for purposes of facilitating distance learning or performing other essential functions, if operating under rules for social distancing.”

The university created a dedicated [Together We Will](#) website to provide a one-stop online resource to help inform other units and colleges across campus with the most up-to-date information from the university, state and local governments, and any other COVID-related efforts taking place.



With this guidance, MSUCOM pivoted its preclerkship D.O. curriculum to virtual instruction and assessment. In some respects, the existing model of delivering the lecture-based components of the preclerkship courses via a distance-learning model facilitated a rapid movement to delivering synchronous and asynchronous content to the students. Systems including Zoom, Microsoft Teams, the D2L learning management platform, and other applications were deployed to maintain college operations and curriculum delivery remotely.

On-campus clinical skills instruction was suspended during spring semester in compliance with the “Stay Home, Stay Safe” order. Additionally, computer-based testing in the preclerkship courses became remote in a self-proctored format. With extensions of the stay home order in April and May, the preclerkship curriculum remained virtual through the end of spring semester 2020.

Planning during spring semester for summer remained focused on delivering content remotely. For the incoming Class of 2024, the content in ANTR 510 was converted to an online didactic format, with the addition of two virtual anatomy software platforms to supplement remote learning. The decision for an online-only semester was based largely on university policies in place at the time, which in turn were informed by state and county health department regulations. A positive that emerged from this was that students did not need to relocate or establish a new residence for proximity to their assigned MSUCOM site in the midst of the pandemic.

For the class of 2023, on-campus instruction remained in suspension as students entered summer semester 2020. As summer semester progressed and as regulations and conditions permitted, on-campus hands-on instruction resumed in July 2020. Virtual proctoring of computer based exams was introduced, and students received access to online exam review sessions.



Planning for fall semester 2020 began under the restrictions noted in spring and summer semesters. At the university level, models for reduced class sizes and hybrid delivery were defined. MSUCOM proceeded with plans to maintain on-campus instruction in the OMM and OPC courses for first and second year students, while maintaining lecture-based content in an online model through a combination of live synchronous and recorded asynchronous presentations. This model was continued through fall semester 2020 into spring semester 2021, as Michigan saw additional surges in COVID-19 activity during the months of November, January and March.



Preventive strategies to reduce the risk of COVID-19 in the campus environment were initiated after the stay home orders were lifted and limited hands-on clinical skills instruction was resumed:

- Adjusted class sizes:** Pre-COVID, OMM labs were run as two-hour blocks. The first hour was used for didactic presentations across the three sites using distance-learning technology. The second hour was dedicated to hands-on practice with peer partners under faculty supervision. In order to reduce the number of students in the lab, and increase distancing between student pairs, the didactic portion of the lab session was moved online as asynchronous pre-lab preparation. We therefore were able to maintain the same amount of weekly OMM lab time while meeting the physical distancing and room capacity requirements.
- Health screening:** MSUCOM implemented a screening tool utilizing case definition guidelines from the CDC and local health departments. This included screening for symptoms associated with COVID-19; fever; close contacts; and travel history. The screening form was modified as the case definition and/or travel policies evolved. In spring semester 2021, we were able to leverage the university's health screening system and consolidated to use that form exclusively.
- PPE:** The college has conformed with university standards that masks or face coverings would be required at all times while in an MSU building. For clinical skills labs and OSCEs, more specific requirements on use of masks and eye protection have been implemented and adjusted over time. We secured and distributed PPE supplies to students and faculty.
- Early Detection Program:** MSUCOM students were able to participate voluntarily in the "Spartan Spit" Early Detection Program beginning in fall semester 2020. In spring semester 2021, weekly surveillance testing of all students with on-campus classes was required and supplies were made available at all three preclerkship sites.

Scheduling challenges that were met over the past year included rescheduling of major events, such as male and female sensitive exam training for the Class of 2023 that had been scheduled just prior to the "Stay Home, Stay Safe" executive order. Additional skills instruction and assessments were also rescheduled on a rolling basis. Interprofessional education (IPE) events that had been planned as face-to-face sessions with other health professions students were reformatted to be delivered as online webinars, meetings, and small group discussions using breakout rooms.



Much of the preclerkship curriculum has been successfully delivered in a modified format necessitated by the COVID-19 pandemic. There have been periodic disruptions to preclerkship courses. On two occasions during fall semester 2020 and on one occasion during spring semester 2021, a temporary suspension of on-campus clinical skills instruction was instituted at one or more sites. Indicators for pausing or rescheduling sessions in OMM and OPC courses were made based on observed increases in cases within the student populations at each site, defined as students with reported symptoms consistent with COVID-19, a confirmed diagnosis of COVID-19, and/or a close contact with an individual known to be positive for COVID-19, as well as community level activity of COVID-19. Changes to the schedule were managed by rescheduling or condensing sessions such that content was not lost. Decisions to pause on-campus activities were made by MSUCOM faculty and administrators across the three sites, and anchored by our philosophy that the safety and welfare of our students, faculty, and staff is paramount.

Clerkship Program Recap

In early March 2020, MSUCOM was closely monitoring the rise in COVID-19 cases in Michigan. At that time, PPE was in short supply and hospital partners were experiencing significant changes in patient volume. The college instituted a pause in clinical rotation assignments on March 15, 2020, and took immediate steps to modify the clerkship curriculum through utilization of online case-based learning platforms. During April, core rotations added faculty-led small group discussions to round out clinical instruction.

Clerkship students were enrolled in a newly developed course, designed to provide review of internal medicine presentations, as well as current available information on COVID-19.



COMAT examinations were continued on a self-proctored protocol made available by NBOME. Video-proctoring by MSUCOM staff was initiated for students wishing to attempt honors in a core rotation course or attempting remediation of a clinical COMAT.

During the pause in clinically based rotations, the college developed a strategy for the resumption of hospital and office-based rotations, utilizing guidance from the Michigan Department of Health and Human Services. Input was sought from clinical instruction sites across Michigan, including availability of personal protective equipment and readiness to support student clinical education. Meetings were held with clerkship students to keep them informed and receive their input, including their concerns for personal wellness.

Clinical rotations resumed in late June 2020, with local protocols determining use of masks and other PPE, and limited contact with known cases of COVID-19 unless appropriate PPE including N95 respirators were available. Informed by the Coalition for Physician Accountability, MSUCOM has developed protocols to restrict the use of away rotations. Students who were unable to secure rotations in a desired specialty within the college network, or who required a rotation to meet graduation requirements, were permitted to request a waiver. Health, exposure and travel screening is occurring at both the rotation sites and through MSUCOM.

In July 2020, the class of 2022 completed clerkship orientation and began rotations in August. PPE was provided to students prior to the start of core rotations. The rising fourth-



year students in the class of 2021 continued core and elective rotations and were able to complete requirements with minimal further disruption.

COMLEX-USA Examinations

During spring and summer 2020, COVID-19 forced Prometric Testing Centers to cancel or reschedule many COMLEX-USA Level 1 and Level 2-CE examinations. To increase access to these examinations, NBOME and Prometric developed a process to deploy temporary testing centers at colleges of osteopathic medicine. MSUCOM applied and was selected as one of two testing centers. Using Prometric equipment and protocols, a temporary center was established in Fee Hall, and during summer 2020, administered COMLEX-USA exams to MSUCOM students, as well as students from other COMs.



Additionally, the NBOME testing centers for administration of the COMLEX-USA Level 2-PE examination suspended their operations. MSUCOM developed a protocol for addressing students who were unable to schedule the Level 2-PE exam due to COVID-19 closures. We developed a comprehensive PE simulation, designed around the same competency domains as were tested on the COMLEX-USA Level 2-PE. When NBOME announced an indefinite suspension of this exam in spring 2021, MSUCOM adjusted its protocol and continued use of the comprehensive PE simulation for students who met defined criteria.

At present, scheduling of the Level 1 and Level 2-CE examinations has stabilized. We are awaiting further announcements from NBOME on the future of clinical skills assessment and the role that COMs may play. Pathways for those students who graduated in 2020 and will graduate in 2021 who were unable to complete the Level 2-PE examination have been issued by NBOME. Further recommendations from the Special Commission on Osteopathic Medical Licensure Assessment are anticipated in July 2021.



Student Life

An entirely new approach to Match Day and commencement activities was taken last year as we celebrated our students in virtual settings. As the pandemic continued, MSUCOM still achieved a [99% match rate](#) and attracted over 1,100 live views and more than 4,000 views overall during our [virtual commencement ceremony](#). MSUCOM also [assisted the university](#) in efforts to open up early licensure opportunities to recent graduates who wanted to help in COVID relief activities. This year, we reached a [98% match rate](#) and currently are planning both in-person and virtual commencement ceremonies.



Despite the COVID-19 pandemic, MSUCOM received 8130 applications for admission, which represents over 19% increase in the application pool from the 2020 cycle. This year, the college hosted various admitted student events, developed a pre-orientation website, and mailed admitted students an MSUCOM flag, with a college look book, a MSUCOM sticker, and a signed admission letter. The flag is also used to promote our social media

“I am admitted to MSUCOM” campaign. The incoming class will consist of approximately 300 students with an average MCAT of 507 and GPA 3.7.

Pre-college programs were also active, with the [Future DOcs](#) and [OsteoCHAMPS](#) programs being delivered virtually and offered at no cost to students. [OsteoCHAMPS-UP](#) is set to launch this summer in Michigan’s Upper Peninsula.

A [weekly vlog](#) (video blog) entitled CPR (COM Preclerkship Roundup) was launched, in partnership with the first- and second-year class presidents.

Student organizations were active in a number of COVID-19 volunteer efforts, as described below. In conjunction with AACOM’s [Students Assist America](#) initiative, MSUCOM’s SOMA chapter is leading an effort to provide vaccination training to MSUCOM students.

Academic and career advising appointments continued over Zoom or phone calls. The new On Target site was launched to centralize information on academic success, learning styles, career planning, residency application, and other topics. Students who were completing virtual residency interviews were able to practice a mock interview with an MSUCOM faculty member.

Wellness and personal counseling services also continued in a virtual space. In addition to one-to-one counseling, the Office of Wellness and Counseling offered Kuro mindfulness sessions, pre-exam meditations, and virtual question-persuade-refer (QPR) training. Students were surveyed on the academic, social, and emotional impact of COVID-19, with information used to make adjustments to college operations.



Notable Accomplishments

Throughout the past year, MSUCOM has had a number of notable accomplishments, many of which were in direct response to the pandemic. Several examples are listed below.

- MSUCOM was selected to serve as a [temporary NBOME testing center](#) for delivery of COMLEX-USA Level 1 and Level 2-CE examinations. At a time when Prometric centers were canceling and rescheduling exams due to COVID-19 restrictions, the college was able to provide access to these licensure exams at its East Lansing location in Fee Hall.
- A number of students and faculty engaged in several volunteer efforts including [PPE drives](#) and the [production of face shields](#) throughout the pandemic. Hospitals and clinics were experiencing severe shortages in this equipment and the MSUCOM community pulled together to help.
- Student research and outreach efforts continued to thrive, even while COVID-19 restrictions were in place. MSUCOM created [new opportunities](#) for faculty and students to work together to help advance research and scholarly activity efforts and also saw students take their own initiative to advance research efforts around new [COVID testing methods](#). Several students, including [fourth-year Megan Carrilo](#), found themselves winning top prizes for their research as well. Additionally, a number of students put their medical education to work and continued to [reach out into their communities](#) to help those in need during the pandemic.
- MSUCOM's faculty, physicians and alumni served as [expert sources for media outlets](#) across the state and nation. Whether offering their expert advice around COVID or other timely health-related topics, they helped drive the reputation of the college as a trusted and reliable source of information.
- During closures necessitated by COVID-19, the college completed several Fee Hall renovation projects, including a major upgrade to E-105 with new charging station tables and new flooring, updates to student study rooms throughout the building, and a refresh of the main corridor.



Next Steps

After over a year of having COVID-19 impact nearly every aspect of our lives, our focus is turning to resuming a sense of normalcy at our campuses and clinical educational sites. Plans to begin reopening our buildings and revisiting changes to instruction and assessment are in motion. Learning experiences that were delayed or deferred during the past two semesters will be scheduled in the next two semesters, and decisions about the balance of synchronous and asynchronous content will be made.

COVID-19 Vaccinations

Beginning in January 2021, the college worked with clinical sites and county health departments to assist with access to COVID-19 vaccinations. In the initial phases, priority was being given to frontline health care workers, and the college established this could include



students who were on rotations at hospitals and clinics. Availability of vaccine doses were fluctuating, and demand was high. Over the past several weeks, access has improved, and the university has opened a vaccination center in cooperation with Ingham County. As access to vaccination is more widely available, the college is recommending vaccination for all eligible individuals as an important step to suppressing COVID-19 transmission and disease burden. We are currently working with MSU leadership, including the University Physician's office, to determine whether COVID-19 vaccination will be required or tracked as we do for other immunizations. We anticipate that clerkship sites will ask that incoming third-year students be vaccinated.

Access to Campus Facilities

Plans to resume access for students to our East Lansing, Macomb University Center and Detroit Medical Center sites are already underway. Phase 1 of this plan was resumption of clinical skills training in summer 2020. Phase 2 began in April 2021, with limited access to on-campus study space at each site by reservation. We anticipate that Phase 3 will begin this summer, with broader access to classrooms and study spaces. Phase 4 will include resumption of some on-campus delivery of lectures and other learning events and is expected to take place in fall semester.

Faculty and staff remain under MSU and MIOSHA regulations that work should be remote, if possible. We have maintained on-campus support at all three sites since last summer and will bring back additional personnel as policies permit.

Summer Semester Curriculum

During summer semester 2021, MSUCOM will welcome the **Class of 2025**. Incoming students will have a hybrid orientation program that includes opportunities to spend some time at their assigned site in East Lansing, Macomb University Center and Detroit Medical Center. The



ANTR 510 course will include online learning plus on-campus experiences in the gross anatomy labs at each site. The BMB 516 and OST 598 courses will be delivered online with synchronous and asynchronous content. Supplemental Instruction sessions for the BMB 516 course will be offered as on-campus events.

The rising second-year students in the **Class of 2024** will continue to have on-campus clinical skills instruction in OMM and OPC courses. The systems courses will continue to have online delivery of content using synchronous or asynchronous lectures. Students will also be able to sign up for access to on-campus study space at each MSUCOM site beginning in June.

The **Class of 2023** has completed their on-campus preclerkship courses and is preparing for COMLEX-USA Level 1 and entry into clerkship. On-campus training will include basic life support and advanced cardiac life support certification, as well as other hands-on workshops. The new third year class will join the **Class of 2022** in clinical assignments across the MSUCOM base hospital network.

Fall Semester Curriculum

The first- and second-year students will be on campus for OMM and OPC on a weekly basis. Faculty in the foundational biomedical sciences courses (semester 2) and systems courses (semester 5) will determine whether content will be online or on campus. As student feedback seems to favor a hybrid approach that was already part of our distance-learning protocols prior to COVID-19, we expect to retain some options for students to access the curriculum in ways that work best for them. We know many students are eager to return to the classroom, and faculty are making plans for selected learning events to be offered on campus. We hope that the combination of vaccinations and other preventive strategies will flatten the curve and create a safer campus environment for all students, faculty and staff.



Establishing a “New Normal”

The COVID-19 pandemic required changes at many levels of the D.O. program. Online technology has been a benefit to some activities and learning, and despite being apart, we have found ways to stay connected. Over the next few months, the college will hold additional town halls and focus groups to seek input from students, faculty and staff on our future operations - where changes should become part of our standard operations, and where we should return to methods used pre-COVID-19. We look forward to hearing from the entire MSUCOM community.

