Central Michigan University College of Medicine
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Medical Education Program Highlights
Central Michigan University College of Medicine (CMED) was established with a mission to improve access to high-quality health care in Michigan emphasizing rural and medically underserved regions. The inaugural class was enrolled in 2013 and graduated in the spring of 2017. The CMED curriculum was developed on the framework of a 2 + 2 model, with the preclerkship curriculum taking place on the Mount Pleasant, Michigan, campus of Central Michigan University, and clerkship curriculum delivered in our main clinical affiliates, Covenant Healthcare and Ascension St. Mary’s Medical Center in Saginaw, Michigan. Since its founding, CMED has expanded from 64 to 104 students per class and grown to include 3 additional branch campuses: Ascension St. John Hospital in Detroit, MidMichigan Health in Midland, and Spectrum Health Lakeland in St. Joseph, Michigan. Most recently, CMED has added an affiliation with University Pediatrics at Children’s Hospital of Michigan in Detroit to expand educational opportunities in general and specialty pediatrics.

The CMED curriculum design is mission driven, with an emphasis on development of collaborative problem-solving skills in an active, experiential learning environment. Some key features of the program include:

- Basic sciences delivered using facilitated problem-based learning and nonfacilitated case-based learning/team-based learning (TBL) units.
- A longitudinal Essentials of Clinical Skills (ECS) course that integrates early clinical experiences with community preceptors, a community engagement project, and a formal interprofessional education program.
- A longitudinal Medicine and Society course that promotes appreciation and understanding of topics such as medical ethics, determinants of health outcomes, community needs assessment, epidemiology, and evidence-based medicine.
- An interdisciplinary medication-assisted treatment curriculum for second-year, third-year, and physician–assistant students.
- A 24-week longitudinal integrated clerkship in primary care (comprehensive community clerkship, CCC), with sites focused in rural or urban underserved areas. This curriculum highlights the specific access challenges these patients, communities, and their physicians face in the context of primary medical care.

Curriculum
Curriculum description

Assessment

Pedagogy
- The CMED curriculum is based on adult, self-directed learning methodologies.
- The basic sciences underlying medical practice and patient care are presented to students through a series of integrated, interdisciplinary, systems-based course blocks during the preclerkship curriculum. Each block incorporates a variety of educational methodologies including small-group, case-based discussions; interactive TBL; active lectures; and laboratory experiences.
- The longitudinal ECS course runs concurrently with preclerkship course blocks. In ECS, students learn to perform a clinical examination (history and physical), document patient encounters, and use appropriate communication skills in standardized patient interactions.
- The clinical curriculum consists of 5 separate 4-week hospital-based clerkships and a 24-week longitudinal integrated clerkship, which collectively provide clinical experiences in ambulatory and inpatient settings. A robust videoconference network connects students weekly at distributed sites for small-group discussions and didactic sessions.
- Students are trained using the latest medical simulation technologies at CMEDs-accredited simulation facilities in Saginaw and Mount Pleasant, as well as additional simulation centers at branch campus locations.

Clinical experiences
- Students first gain experience in controlled, simulated clinical encounters during the ECS course. ECS is an integrated clinical, diagnostic, and therapeutic skill development course using standardized/simulated patients. Emphasis is placed on history taking, physical examination, and diagnostic skills that align with the concurrent organ system being studied. ECS incorporates low- and high-fidelity simulation exercises to emphasize clinically relevant basic science concepts covered in the concurrent organ systems courses.
- Years 3 and 4 represent the logical extension of student learning into the clinical environment where students complete required clerkships in both the inpatient and ambulatory settings.
• The CCC is a unique longitudinal integrated clerkship in the third year of the medical school curriculum. The goal of the CCC is to immerse students in a longitudinal care experience to learn the values of comprehensive patient-centered medical care in the context of a community. Students are placed in primary care practices for a 24-week clinical immersion experience in a rural or urban underserved community, working 2.5 days per week with a primary care provider (a family or internal medicine physician) where they share in the provision of care for both acute and chronic conditions over the course of the clerkship. Students also have longitudinal exposure to community health resources and other medical and surgical specialty experiences, including pediatrics, obstetrics, and emergency medicine. Students learn the course of a patient’s illness and appreciate the context in which the patient lives with his or her illness. Students also explore and apply concepts related to population health via completion of a quality improvement project in the primary physician’s practice.

• The CCC is a mission-driven experience, offering unique opportunities for students including providing continuity of care, helping patients to navigate access to health care providers within diverse health care systems, and experiencing firsthand what it means to be a community responsive physician. However, such a model presents inherent challenges. The ability to recruit, train, and retain a large cohort of community physicians is a challenge that was magnified when the class size increased from 64 in the inaugural class to 104 students in each subsequent class. Increasing clinical and administrative demands on our community educator faculty, coupled with ever-increasing expectations associated with student assessment and comparability of educational experiences, makes it difficult for them to balance their volunteer educator commitment with clinical demands. Our distributed campuses provide outstanding inpatient educational experiences; however, this clinical training model also comes with unique challenges. These include maintaining comparability of educational experiences and student services across sites, incorporating clinical faculty at branch campuses within the governance structure of the school, implementing effective faculty development activities across sites, and mitigating the financial burden associated with duplication of services.

Education Staff

• The dean is the designated chief academic officer, but has delegated the day-to-day management of the educational programs to the senior associate dean for academic affairs (SADAA). The Office of Academic Affairs consists of the Office of Medical Education (OME), the Office of Student Affairs (OSA), and Admissions. In addition to the SADAA, OME leadership includes an associate dean for clinical education, an assistant dean for foundational sciences education, 3 clinical assistant deans who oversee regional campuses, a director of assessment and evaluation, and a director of academic success. The OSA includes an associate dean for student affairs, an executive director of OSA, and a senior associate director of financial aid. Faculty development is administered through the Office of Faculty Affairs, and includes an associate dean of faculty affairs and development who reports directly to the dean.

• The OME is responsible for ensuring that the UME curriculum, as developed by the faculty, is delivered and evaluated across all sites in a manner consistent with best practices and policies of the college of medicine and meets accreditation standards. Under the direction of the manager of the OME, curriculum coordinators maintain and update the curriculum database including coordinating content delivery; mapping of learning objectives to educational program objectives; and supporting course/ clerkship, faculty, and programmatic evaluation. Staff in the Office of Assessment and Evaluation manage the development, administration, and documentation associated with all student assessments. They ensure that assessments are appropriate for the cognitive domain being assessed and that they are valid and reliable. Administrative faculty (deans, directors) ensure that curricular guidelines, including pedagogy and academic standards, are consistently followed and that outcome data as well as student and faculty feedback inform curricular quality improvement.

• The budget for curriculum management, teaching, assessment, simulation, library services, and academic support is centralized to the Office of Academic Affairs. Each unit within the office develops an annual budget based on prior year expenditures and anticipated curricular needs and is responsible for the management of these funds.

See Figure 1—Curricular organizational chart.

Faculty Development and Support in Education

• CMED offers a variety of ongoing faculty development opportunities related to instructional methods, assessment and evaluation, educational program leadership, mentoring, and scholarly activity. Programming is available across all sites through workshops, seminars, webinars, and posting of enduring materials online. In addition, the university offers a wide variety of resources and programming through the Office of Curriculum and Instructional Support.

• CMED faculty may be appointed to 1 of 4 tracks: tenure, nontenure, community educator, or visiting faculty. Tenure is only available for those faculty employed by Central Michigan University. Each faculty member receives an appointment letter that outlines their responsibilities associated with clinical, administrative, research, and educational (CARE model) missions of the school. Promotion decisions within each track vary based on the faculty member’s achievement across their CARE model; demonstrated evidence of teaching quality is required for promotion and/or tenure for all tracks. While there are no specific promotion requirements involving educational scholarship, faculty in all tracks are expected to show evidence of ongoing research/scholarly activity.

• CMED is currently developing an Academy of Medical Educators that will consist of experienced medical school faculty to serve as a resource for the academic mission of the College of Medicine. The academy will support innovation
and scholarship in medical education, mentoring, leadership, and career development throughout the institution and affiliated clinical sites. Once fully established, the Academy of Medical Educators will provide an opportunity to recognize excellence, innovation, and effectiveness in medical education.

**Regional Medical Campuses**

- All students complete their preclerkship curriculum on the Mount Pleasant campus. Clinical students are assigned to either the Saginaw campus or one of 3 regional medical campuses to complete years 3 and 4. A clinical assistant dean is assigned to each regional campus with the responsibility to ensure the delivery of the curriculum, appropriate supervision and timely assessment of students, and the overall learning environment. The clinical assistant deans report directly to the associate dean for clinical education and indirectly to the SADAA. Clinical assistant deans are members of the Year 3–4 Subcommittee of the Curriculum Committee, and participate in monthly meetings of the group. There is a single clerkship director for each discipline, including the director for the CCC. Clerkship directors are responsible for providing faculty at each site with a single course syllabus outlining the clerkship-specific learning objectives. In addition, clerkship directors ensure that faculty involved in teaching are aware of the assessment methodologies and the grading system, the required clinical encounters and procedural skills for each clerkship, and the particular role(s) required of the faculty preceptors to assess student performance in the clerkship. To facilitate comparability, clerkship directors communicate with clinical assistant deans and onsite faculty at least quarterly and more frequently as necessary. Didactics are conducted centrally at the Saginaw campus and are videoconference to each regional campus in real time.

- Outcome data (student performance on NBME shelf exams and clinical evaluations, completion rate of patient encounters/procedures, distribution of final grades, mistreatment reports, student evaluations, etc.) are tracked and reported to the Year 3–4 Subcommittee semiannually and forwarded to the Curriculum Committee. Any variance across campuses is addressed by a required action plan and resolution monitored by the Curriculum Committee.

- Under the auspices of the Office of Academic Affairs, education and student affairs deans and directors are regularly scheduled to visit each campus to meet with students, coordinators, and faculty to discuss educational and support needs.

See Table 1—Regional Medical Campuses.

**Table 1**

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<th>Regional Medical Campuses</th>
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<tr>
<td><strong>Campus name</strong></td>
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<td><strong>Main campus</strong></td>
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<td>Saginaw</td>
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<td><strong>Regional campus</strong></td>
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<td>Ascension St. John Hospital</td>
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<td>MidMichigan Health</td>
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<td>Spectrum Health Lakeland</td>
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*Figure 1 Curricular organizational chart.*
Initiatives in Progress

- The third- and fourth-year curriculum is under review. As part of the review, we are looking at our current clerkship structure including the duration of each required clerkship.

- Clinical performance assessment rubrics are currently under review, with the goal of improved ease of use and alignment with Entrustable Professional Activities.

- CMED will be deploying a new comprehensive learning management system during academic year 2020–2021.