
UND SMHS Strategic Plan Individual Unit Report for 2022

GOAL 1 for EDUCATION AND FACULTY AFFAIRS

Mission of Education and Faculty Affairs: *Education and Faculty Affairs sustains a vibrant, inclusive and dynamic environment that enables learners and educators to achieve academic and professional excellence.*

Education and Faculty Affairs and its units provide resources, services and support for academic units as each carries out its strategic initiatives in alignment with UND SMHS Strategic Goals and the OneUND Strategic Plan.

Units Reporting to Associate Dean for Education and Faculty Affairs: Education Resources; Library Resources; Information Resources; Simulation Center; Interprofessional Education; Medical Accreditation

LEARNING

One UND Strategic Plan Goal 1: *Provide a strong undergraduate liberal arts foundation*

UND SMHS Strategic Plan Goal 1: *SMHS Units that offer educational programs will expand their curricula to include learning outcomes that align with UND's Essential Studies goals.*

- *Critical Inquiry and Analysis*
- *Quantitative Reasoning*
- *Written Communication*
- *Oral Communication*
- *Information Literacy*
- *Intercultural Knowledge and Skills*

1. Describe if/how your unit has addressed this goal.

EDUCATION RESOURCES/MEDICAL EDUCATION

1. Small Group Leadership Curriculum: Oral Communication
 - a. Small group learning and leadership is a long-term goal of the medical curriculum.
 - b. We built an assessment tool for small group leadership
 - c. All students are evaluated as follows
 - i. Establish a checkpoint for mastery halfway through Phase 1
 - ii. Develop a method for measuring small group learning skills
 - iii. Train facilitators to mentor student leaders in these skills specifically
 - iv. Get students to identify learning goals in this domain, in consultation with their facilitator
 - v. Send the goals forward to the next PCL facilitator for continued mentoring
 - d. All students must achieve mastery of these competencies
 - e. This process is in its sixth year of implementation.
2. iSPIRAL 2.0: Critical Thinking
 - a. Students in PCL are evaluated using a competency-based milestone instrument modeled after ACGME assessments (used in residency programs, which students will be entering).
 - b. One dimension measured over the entire Phase 1 curriculum is Critical Thinking
 - c. Students are evaluated at the end of every unit (8 times in Phase 1)
3. Interactive Learning: SimTutor, VR and Captivate: Critical Thinking and Information Literacy
 - a. Students experience self-paced, interactive simulations built in SimTutor
 - b. They proceed through filmed versions of simulated patient cases

- c. They are tested on their ability to detect errors, gather patient data, diagnose problems, and proscribe treatment
 - d. We have provided and coordinated training for Medical Lab Sciences faculty to develop modules for their labs and as stand-alone curriculum to teach professionalism.
 - e. Students have complete the EpiPen online, interactive asynchronous training built in Adobe Captivate as a required part of the curriculum for the last three years. This module will be recreated in SimTutor this year.
 - f. We plan to purchase 360-degree video cameras to create video for SimTutor and Virtual Reality software to let students “explore” virtual worlds while learning from them
 - g. We are outfitting a video and audio production studio for faculty to create media assets to be used in interactive, asynchronous learning modules
4. Teaching Medicine: Critical Thinking
- a. We have input multiple PCL patient cases into a tool called “Teaching Medicine”
 - b. Students work individually on a case to identify key information, formulate diagnosis lists, evaluate (promote, demote) diagnoses based on new data, order tests, interpret results, and make a final determination in a patient case.

Curriculum 2.0 started in July, 2021 and this further emphasized all the Essential Studies learning outcomes. Select, brief examples of how we meet these goals below:

- 1) Taught and assessed through professor rounds, family connection exercise during required family medicine clerkship, and through selected EPA’s in the 4th year acting internship.
- 2) Taught and assessed through patient-centered learning, and team-based learning small groups and patient interviewing
- 3) Students to be offered opportunities for advanced oral communication about research

Of most recent interest, is the tremendous advance in Library Resources (AccessMedicine update) that will make tremendous impact on both the program and the students. Due to the concurrent preparation for accreditation, more data than usual have been collected and analyzed. Tremendous changes have been implemented as both response to this feedback and the curriculum revision.

INTERPROFESSIONAL EDUCATION

Interprofessional Education (IPE/C, interprofessional education/collaboration) was elevated to one of the 8 domains (Domain 7). As outlined in 2020, efforts resulted in the development of compliant program objectives by the Director and Assistant Director of Interprofessional Education that align with the core competencies of Domain 7 and the national standard [Core Competencies for Interprofessional Collaborative Practice: 2016 Update](#). These new objectives were written with the need to specifically address promotion and assessment of effective oral and written communication, critical inquiry and analysis, quantitative reasoning, problem solving, information literacy, and intercultural knowledge and skills in mind. That remains true, but due to the pandemic and new curriculum implementation, some of our rollout of other IPE, specifically the competency checklist/point system/badging (the identify and capture) portfolio recommendations was delayed for AY 2021-22, with plans for rollout in AY 2022-23. We have had very good success with the PharmD/MD match program, now in its third year, as this stayed on track virtually.

OFFICE OF MEDICAL PROGRAM ACCREDITATION AND QUALITY IMPROVEMENT

The medical education program’s accrediting body, the Liaison Committee on Medical Education (LCME), sets the expectation of what is considered the appropriate educational content of the curriculum of medical programs leading to the MD degree. Educational topics that relate to the UND Essential Study Goals (ESGs) are identified among the curriculum content expectation of the LCME. The LCME publication, “Functions and Structures of a Medical School” defines the standards and elements in which medical programs are to demonstrate compliance in order to receive accreditation.

The following elements found in that document correspond to the UND ESGs:

Oral Communication: (Element 7.8 Communication Skills) The faculty of a medical school ensure that the medical curriculum includes specific instruction in communication skills as they relate to communication with patients and their families, colleagues, and other health professionals.

Critical Inquiry and Analysis: (Element 7.4 Critical Judgment/Problem Solving Skills) The faculty of a medical school ensure that the medical curriculum incorporates the fundamental principles of medicine, provides opportunities for medical students to acquire skills of critical judgment based on evidence and experience, and develops medical students' ability to use those principles and skills effectively in solving problems of health and disease.

Quantitative Reasoning: (Element 7.3 Scientific Method/ Translational and Clinical Research) The faculty of a medical school ensure that the medical curriculum includes instruction in the scientific method and in the basic scientific and ethical principles of clinical and translational research, including the ways in which such research is conducted, evaluated, explained to patients, and applied to patient care.

Intercultural Knowledge and Skills: (Element 7.6 Cultural Competence and Health Care Disparities) The faculty of a medical school ensure that the medical curriculum provides opportunities for medical students to learn to recognize and appropriately address biases in themselves, in others, and in the health care delivery process. The medical curriculum includes content regarding the following:

- The diverse manner in which people perceive health and illness and respond to various symptoms, diseases, and treatments
- The basic principles of culturally competent health care
- Recognition of the impact of disparities in health care on all populations and potential methods to eliminate health care disparities
- The knowledge, skills, and core professional attributes needed to provide effective care in a multidimensional and diverse society

Information Literacy: (Element 6.3 Self Directed and Life Long Learning) The faculty of a medical school ensure that the medical curriculum includes self-directed learning experiences and unscheduled time to allow medical students to develop the skills of lifelong learning. Self-directed learning involves medical students' self-assessment of learning needs; independent identification, analysis, and synthesis of relevant information; appraisal of the credibility of information sources; and feedback on these skills.

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SIMULATION

Incorporation of Clinical Reasoning in Y2 instruction and testing. Class sessions, on-line practice sessions, end-of-block summative assessment using TeachingMedicine.com.

Students complete exams on Standardized Patients, document their History & Physical, record a 5-minute case oral presentation all receiving formative constructive feedback.

Interprofessional Simulations with NDSU Pharmacy, UND Nursing, PT, OT, Social Work, Med School including telemedicine component and with students of diverse intercultural backgrounds.

LIBRARY RESOURCES

Librarians continue to work on an inwardly-focused examination of the core information literacy and critical thinking competencies that will be incorporated across departmental curricula. This project has involved consulting multiple frameworks and theories of information literacy and critical thinking. The end product will be a sequenced information literacy program that can be customized with specialized tools and skills by each liaison librarian to fit the needs of their departments.

In parallel to this research and planning, librarians continue to build collaboration with departments and individual faculty members. This has resulted in increased student instruction and presentations by librarians that are focused and relevant to current academic work.

INFORMATION RESOURCES

Information Resources supports units with educational programs in carrying out educational goals but does not offer education program curriculum with learning outcomes that align with UND's Essential Studies goals.

2. Describe how your efforts are measured/assessed.

EDUCATION RESOURCES/MEDICAL EDUCATION

1. Small Group Leadership
 - a. Small Group Leadership Form (available upon request)
 - b. Administered by trained facilitators during PCL
2. iSPIRAL 2.0
 - a. A competency-based milestone assessment rubric
3. Interactive Learning: SimTutor, VR and Captivate
 - a. Student ratings of experience
 - b. Built-in assessment of learning
4. Teaching Medicine
 - a. Comprehensive student assessment dashboard to allow for data mining of entire pattern of choices and responses compared to expert performance.

Metrics of achievement of learning goals by medical students include # of students who complete the EPA without attaining the designated level of competence, # of students with successful assessment evaluations in patient-centered learning and team-based learning and # of students with successful clinical skills assessment scores, and # of students presenting poster, platform or workshop presentations at regional, national and international meetings

INTERPROFESSIONAL EDUCATION

There are currently several IPE/C required activities for all medical students, all rich in IPE/C experiences.

1. Interprofessional Health Care Course- A 1-credit classroom experience for 8 professions, including medical students. Small group facilitators within the course do evaluation. This course was converted to online in the span of a week in March 2020. Student evaluations were very similar to the in-person version. This is a pass/fail course.
2. Simulation activities
 - a. ROBOTS- telehealth sim with medical students, OT students, PT students, Nursing students, and Social Work students
 - b. Medical students and PharmD (NDSU) students- opioid overdose
 - c. Medical students and Nursing students

Evaluation is done per usual simulation evaluations

3. Medical student/PharmD student “match”. Individual students are matched to each other from each program to serve as each other’s consultant through their education program. Evaluations are made on reflection by students and faculty.
4. IPE elective was rolled out in January 2021. A few students have taken this elective. Evaluation will be the same as other electives.
5. In addition, Interprofessional Student Community-based Learning Experiences (ISCLE) and the Global Health electives will promote intercultural knowledge and skills. Geriatrics is also implementing community experiences and clerkship that are purposefully interprofessional.

Ultimately, the competency checklist/identify and capture/point system will allow students to build a progressive and layered interprofessional portfolio across Phases 1, 2, and 3, which improves our ability to meet Element 7.9 in the LCME accreditation documents.

OFFICE OF MEDICAL PROGRAM ACCREDITATION AND QUALITY IMPROVEMENT

The effort to evaluate the how the medical education program is meeting its expectation to teach the skills listed above is undertaken by the work of the Education Standards Review Committee (EASRC). This faculty committee resides within the Office of Medical Accreditation (OMA) and reports its findings to the Dean’s Quality Improvement Panel (DQIP). EASRC uses a number of instruments to help determine how well the medical program is accomplishing its educational goals and accreditation expectations. Some of those instruments include the LCME data collection instrument (DCI), the AAMC Graduate Questionnaire (GQ), the Independent Student Analysis (ISA) and the SMHS medical student annual survey.

SIMULATION

Qualtrics surveys to all students participating
 After Action meetings for faculty/staff to debrief events
 Summative testing of students

LIBRARY RESOURCES

Within the medical education curriculum, individual librarian sessions are evaluated for student satisfaction and knowledge questions are included on multiple choice exams. Librarians working with other departments are gathering information assessment data following some sessions.

3. How were the data analyzed and what were the outcomes?

EDUCATION RESOURCES/MEDICAL EDUCATION

1. Small Group Leadership
 - b. Four years of data collected have been collected on this initiative.
 - c. We analyzed data from the first and second years and found that students are indeed at novice levels at the start and that they achieve mastery by the end of the first year. These patterns have been replicated each year and ongoing analysis is no longer required.
 - d. We made incremental adjustments to the form to improve ease of use and compliance
2. iSPIRAL 2.0
 - a. This form was redesigned in and implemented beginning in July of 2020.
 - b. Data indicate that faculty are able to complete the form more easily and that the data are more valid and reliable than the past version. Analysis is still underway.
 - c. This form is used for formative evaluation to help students improve in each area and analysis is not routinely conducted for that reason.
3. Interactive Learning: SimTutor, VR and Captivate
 - a. Multiple simulations were built by the MD program and are highly effective.

- b. Students reported that the tool was a very important addition to the curriculum and that they wanted many more simulations like it. Benefits included personalized feedback, multiple practice opportunities, time to reflect, process, and integrate learning into cognitive processes.
 - c. MLS has built multiple modules to support laboratory education, and will be creating modules on professionalism
 - d. Additional programs are now exploring building new simulations for their students.
 - e. The Captivate Epipen training will be ported to SimTutor this year.
 - f. The video production studio will be implemented to allow faculty to create media for SimTutor and VR applications
4. Teaching Medicine
- a. These cases have been entered into the tool and piloted with one class of students
 - b. Students report high value in these cases and they will be expanded in the curriculum moving forward
 - c. Data will be collected and analyzed and reported next year.

INTERPROFESSIONAL EDUCATION

The Interprofessional Health Care Course is pass/fail. It is a requirement for medical students. Student evaluations of the course are collected. A majority of students (80-85%) from all professions rate several parameters typically in the “agree” or “strongly agree” categories. These can be produced upon request. We have had some students take the IPE elective; this is evaluated per the usual elective assessment process.

See #4 for proposed Identify and Capture/point system/badging proposal for identifying IPE/C across Phases 1, 2, and 3. There have been delays due to the pandemic and ongoing “fine tuning” of Curriculum 2.0. We are working closely with teaching and learning faculty. Planned launch upon approval will be AY 2022-23.

OFFICE OF MEDICAL PROGRAM ACCREDITATION AND QUALITY IMPROVEMENT

Even though ISA data shows that our students are generally satisfied, GQ national benchmarking data demonstrates that our students feel less prepared to care for patients different than themselves at less than the 10th percentile nationally.

SIMULATION

Staff member gathers all Qualtrics data, compiles and puts into document for all faculty and staff to review. Information used to make appropriate changes/improvements to sessions.

LIBRARY RESOURCES

To date, Library Resources has not analyzed assessment data in a formal way.

4. Describe how your unit will implement any further changes and what barriers may exist.

EDUCATION RESOURCES/MEDICAL EDUCATION

1. Small Group Leadership
 - a. The program has become a mandatory part of promotion decisions in the curriculum from Unit 4 to Unit 5.
 - b. Students who are not judged competent to lead group discussions by the end of Unit 4 are able to begin Unit 5 but must remediate during that Unit. There have been no failures of this program to date.
2. iSPIRAL 2.0
 - a. Baseline data for students may be analyzed and compared over time to see whether students achieve the desired competency, , but as the form is used for formative evaluation, this analysis is not done annually.
 - b. Discussions are ongoing about whether the form may become a part of promotion criteria and used as evidence of achievement of related program competencies too which it has already been linked.
3. Interactive Learning: SimTutor, VR and Captivate
 - a. A proposal to adopt SimTutor for the MD program, the MLS program, the PA program, and the Nursing program (through shared cost) was funded and implemented.

- b. We have held two workshops on the use of SimTutor and will be meeting with each of the new programs who have adopted it.
- c. MLS has implemented multiple SimTutor modules for their laboratory courses as a result and will be building additional modules.
- d. The MD program is proceeding with the design and integration of asynchronous, interactive learning modalities which will include SimTutor, assets created in the new video production studio, and VR

4. Teaching Medicine

- a. We have partnered with the developer of this tool and have access to it at no cost. We will integrate it into our PCL cases as a measure of diagnostic reasoning on an individual level.

INTERPROFESSIONAL EDUCATION

A novel Identify and Capture point system/badging system is proposed for the future to “mine” and document IPE/C interactions across Phases 1, 2, and 3. We anticipate these activities do occur in a variety of pre-clinical and clinical settings, and students should be credited for recognizing them in their usual workflow, as well as to seek them out for appropriate patient care (i.e., care plans, team-based care). (See Appendix 2). We anticipate that the previous (and still active) Interprofessional Student Community-based Learning Experiences (ISCLE) will be expanded as a model for clinical interactions to be identified and captured. As noted, we are working closely with teaching and learning faculty.

Gap analysis was completed to determine additional needs for IPE/C education across the curriculum. IPE/C will be progressive across all 3 phases.

Barriers will include the differentiation of true IPE/C from parallel activities, institutional barriers, and affirming uniformity in the capture and identify system. Our point system is close to ready for adoption in the new curriculum; we hope to get approved and launch in AY 2022-23. Delays in implementation remain due to pandemic and curriculum changes that were unanticipated. Lack of resources (i.e., administrative assistant) have become increasingly apparent as an issue as we develop more IP learning activities, particularly the portfolio.

OFFICE OF MEDICAL PROGRAM ACCREDITATION AND QUALITY IMPROVEMENT

Efforts are being made with increased emphasis on instruction related to cultural competence in the preclinical curriculum. Also, an elective course has been developed for students in the clinical phase of the curriculum intended to enhance students’ opportunity to increase their experience with caring for patients of different backgrounds.

SIMULATION

Use After Action reports, Qualtrics data to identify areas of need/improvement and apply appropriate changes as needed.

Utilizing nationwide reference material obtained from professional simulation and directors’ groups. We also contribute to the reference material.

LIBRARY RESOURCES

Librarians plan to share findings of the research they have been doing with the School. They hope to have conclusions to share during 2022. These conclusions will then become the foundation for liaisons to collaborate with departments on integrating skills of information literacy intentionally and seamlessly with departmental competencies.

PROVIDE A RATING OF YOUR PROGRESS ON THIS GOAL: ● On Track; ● Delayed; ● Behind



Education and Faculty Affairs units are on track with progress on Goal 1

