

UND SMHS Strategic Goals – 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

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

Education Resources

- Education Resources (ER) plays a supporting role to all professional programs of the SMHS in addressing several of these areas.
- ER has made specific contributions to the medical curriculum in these areas through exploration of diagnostic reasoning curriculum reform, the embedding of librarians in the curriculum to promote information literacy, and through collaborating with the Dean for Diversity and Inclusion and clinical faculty in Family Medicine to create educational opportunities for medical students (e.g., Lunch and Learn).
- ER has made *Oral Communication* a specific focus in the form of small group learning and facilitation of learning. This process is in its third year of implementation, as described below.
 - Small group learning and leadership is a long-term goal of the medical curriculum.
 - We determined that our main modality for this outcome lies in the Patient Centered Learning events.
 - We identified several ways to improve this process:
 - Establish a checkpoint for mastery halfway through Phase 1 (one year)
 - Develop a method for measuring small group learning skills
 - Train facilitators to mentor student leaders in this skills specifically
 - Get students to identify learning goals in this domain, in consultation with their facilitator
 - Send the goals forward to the next PCL facilitator for continued mentoring

Two years of data collected have been collected on this initiative.

- We have analyzed data from the first year and found that students are indeed at novice levels at the start and that they achieve mastery by the end of the first year
- We have made incremental adjustments to the form to improve ease of use and compliance
- After the second year's data are analyzed, and if the data trends are the same, the program will be officially integrated into the curriculum by making it part of the promotion process

Curricular improvements are planned for 2020 and assessment of the improvements will be analyzed and reported in 2020-21.

Library Resources

Library Resources (LR) currently:

- Provides access to subscription databases that support the academic work of SMHS students and the original research of SMHS faculty and students.
- Maintains collaboration with departmental faculty in order to understand curricula and assignments.
- Utilizes knowledge of departmental activities to identify opportunities for relevant interactions between students and professional librarians; provides course-integrated library content through formal classroom presentations and/or individual consultations.

Library Resources (LR) plans to:

- Integrally involve librarians in the unit-design discussions related to critical inquiry and information literacy. Increased collaboration with liaison librarians will provide the opportunity for scaffolding and integrating skills of *locating and responsibly using information sources (information literacy)* in the advancement of *critical thinking*. These collaborations are happening in some units but not in others. Even those units that currently have a high level of librarian collaboration have not yet achieved true integration of information literacy with departmental assignments and learning goals.

Information Resources

Information Resources supports academic programs delivering course materials, instructions and assessments to students and faculty by implementing and maintaining appropriate technologies and systems.

Simulation Center

The Simulation Center has identified *critical inquiry and analysis* as a student learning goal for inclusion and assessment in simulation. Students are evaluated during each simulation and evaluations are collected. Evaluations include assessment of history-taking and physical examination skills. Data are analyzed and reported in after-action meetings. Opportunities for improvement are identified and improvements are implemented.

Interprofessional Education

Interprofessional education (IPE) at UND SMHS is designed to promote student learning about and achievement of the following competencies:

- Identify potential barriers to the effective coordination of care of patients with multiple health care needs and providers.
- Work with other health professionals to establish and maintain a climate of mutual respect, dignity, diversity, ethical integrity, and trust.
- Use the knowledge of one's own role and the roles of other health professionals to appropriately assess and address the health care needs of patients and to promote and advance the health of populations.
- Communicate with other health professionals in a responsive and responsible manner that supports a team approach to promotion and maintenance of health and the prevention and treatment of disease in individual patients and populations.
- Apply relationship-building values and the principles of team dynamics to work collaboratively with other members of health care teams in different team roles in order to provide both patient-centered and population-focused care that is safe, timely, efficient, effective, and equitable.

Interprofessional team dynamics in the context of the Interprofessional Health Care Course (IPHC), simulation and clinical setting will continue to promote and assess *effective oral and written communication, critical thinking, quantitative reasoning, problem-solving* and *gathering of appropriate information* related to clinical cases, including traditional sources, public media, and social media.

Offering of a Global Health Elective will promote *intercultural knowledge and skills*.

UND SMHS Strategic Plan Goal 2: SMHS Units will expand their current systems of student support to ensure continued high graduation rates and improve student satisfaction with the overall quality of their education.

Education Resources

- ER has identified and supported the need for a learning specialist
- A learning specialist has been hired and is working with students

Library Resources

Library Resources provides access to subscription databases that support the academic work of SMHS students and the original research of SMHS faculty and students. Library Resources also utilizes knowledge of departmental activities to identify opportunities for relevant interactions between students and professional librarians; provides course-integrated library content through formal classroom presentations and/or individual consultations.

Information Resources

Information Resources provides technical support for all students, faculty and staff. Information Resource houses systems that enhance the delivery of educational content at a distance resulting in improving student satisfaction and enhancing the quality of their education.

Simulation Center

- The SPETA program provides enhanced opportunity for supervised clinical skills practice. The corresponding desired learning outcomes are to increase the clinical skill examination scores at the national level.
- The simulation center supports student-led simulation activities in the center to enhance student learner outcomes and student satisfaction.
- SHaPE is a simulation and clinical skills outreach program that maintains and enhances medical student skills in Year 3. This promotes better scores on the annual Clinical Skills Assessment and USMLE Step 2, which supports continued high retention and graduation rates for medical students.
- The simulation center will continue to focus on developing more simulation and interprofessional experiences for medical, health science and nursing students at SMHS and UND.

Interprofessional Education

Collaborative, engaged learning environments employ high-impact practices of team dynamics, understanding of health care team member roles, relationship-building, communication skills and actively assessing and addressing the health care needs of patients and populations to enhance student learning and satisfaction with the quality of their education.

Medical Accreditation

Continuous quality improvement efforts incorporate student feedback through CQI student focus groups to address issues of concern identified through student opinion surveys and other means of collecting student feedback about satisfaction with the overall quality of their education.

UND SMHS Strategic Plan Goal 3: The SMHS will identify opportunities to employ state-of-the-art technologies to enhance education.

Education Resources

- ER has advocated for and is currently designing new curriculum that emphasizes the use of asynchronous educational materials in areas where face-to-face is not required
- ER has led the Interprofessional Telehealth Simulations Using Remotely Operated Biomedical Telepresence Systems (ROBOTS) initiative as part of the American Medical Association's Accelerating Change in Medical Education consortium
- ER is part of the Virtualist curriculum consortium and will be developing UME goals, objectives, and milestones for virtual care
- ER is leading the way in SMHS with VR technology with two VR computers with medical curriculum resources on them. ER is also experimenting with stand-alone VR headsets (no computer needed) that cost \$400 and could be deployed across the curriculum once appropriate VR learning resources are identified
- ER is working with a company that makes VR medical simulation environments that can record student and expert performance and evaluate and provide feedback on those recordings

- ER is exploring the use of VR technology to measure and promote situational awareness during VR patient encounters by measuring student gaze path and duration and comparing it to expert gaze path and duration. This could be used to create real-time algorithms
- ER is working with Geriatrics on a patient panel game to illustrate the long-term effects of geriatric interventions across a patient panel. This will be used by students and clinicians, thus making it also a means of reducing disease burden under Goal 8.

We designed and ran simulations that have resulted in three years of data on 339 students from 5 professions who have participated in telehealth simulations using various forms of telehealth technologies. We have used what we learned to outfit every simulation room with telehealth technology that can be used just-in-time with low technical support and skill levels. We have analyzed data and presented it at multiple conferences. Data collected is being used to modify simulations to account for learning outcomes that have emerged from analysis of the data.

Library Resources

Library Resources provides access to subscription databases that support the academic work of SMHS students and the original research of SMHS faculty and students. In 2019-2020, the Online Dakota Information Network (ODIN), will transition to Alma, a completely cloud-based, unified library services platform to manage print, electronic and digital materials in a single interface. Library Resources is actively preparing for the migration from the current library management system to Alma.

Information Resources

Information Resources employs state-of-the-art classroom and telecommunication technologies to help deliver synchronous and asynchronous educational materials to students across the state and nationally. Information Resources operates and maintains an advanced videoconferencing network connecting all campus sites in Grand Forks, Bismarck, Fargo and Minot to each other and to non-SMHS sites. Information Resources develops specialized web-based applications contributing to the administrative and educational efficiencies and improving education through reliable technology support.

Simulation Center

- The simulation center is currently utilizing SIM-ND trucks, the SIM Tech online course and physical examination videos online as state-of-the-art technologies to enhance education.
- The center is exploring the use and integration of VR, AR and EMR (increased usage).
- Improvements to equipment and technology continue to be assessed and utilized as funding is available.

Interprofessional Education

- IPE is actively engaged in this area with respect to the simulation experience with 3 current and separate IP activities
 - PharmD (NDSU) student and Medical (UND) student opioid scenario
 - Nursing (UND) and Medical (UND) student sim experiences
 - Remotely Operated Biomedical Telepresence Systems (ROBOTS), a sim experience that introduces telehealth learning across a chronic disease multi-scenario case (Medical, PT, OT, Nursing, Social Work students from UND)

UND SMHS Strategic Plan Goal 4: The SMHS will enhance basic, clinical, and translational health sciences discoveries while focusing on its stated purpose “of discovery of knowledge that benefits the people of this state and enhances the quality of their lives.” The SMHS will support Goal 4 by increasing its extramural funding by 10% per year based on a three year rolling average.

<p>Education Resources</p> <p>Education Resources will:</p> <ul style="list-style-type: none"> • Continue to work with faculty to support grant initiatives, especially regarding those that involve educational programs and outreach, by helping to generate evaluation plans, design outreach, generate instruction and learning platforms, etc.: <ul style="list-style-type: none"> ○ Education Resources has worked with faculty in Geriatrics on a HRSA grant that was awarded in 2019 ○ Education Resources consulted on professional development and evaluation for the DaCCOTA CTR grant that was awarded in 2018 ○ Education Resources consulted with the Director of the Simulation Center on an AMA Innovation Grant that was awarded in 2018
<p>Library Resources</p> <p>Library Resources will:</p> <ul style="list-style-type: none"> ▪ Increase SMHS awareness of the importance of supporting research growth with appropriate information sources. ▪ Collaborate with the Research Committee to ensure that appropriate electronic databases and collections are provided to support SMHS research growth. ▪ Collaborate with the Research Committee to ascertain appropriate roles for liaison librarians in providing consultation for SMHS researchers
<p>Information Resources</p> <p>Information Resources provides infrastructure and computerized instrument support to research labs within the school. Information Resources offers computational and storage capacity to all faculty and graduate student in the labs.</p>
<p>Simulation Center</p> <p>The simulation center is continuing extramurally-funded grant work with the AMA on Accelerating Change in MedEd and continuing to identify grant opportunities to increase growth and new technologies.</p>
<p>Interprofessional Education</p> <ul style="list-style-type: none"> • IPE has 2 established activities (IPHC course, Interprofessional Student-Led Community based Learning Experiences (ISCLE) with evaluation components. <ul style="list-style-type: none"> ○ IPHC- MCQ for medical students, preceptor evaluation, student reflection ○ ISCLE-preceptor and student reflection • A number of other activities are under development (Table 1, Table 2) <ul style="list-style-type: none"> ○ “Competency checklists” with gamification components across a wide variety of IP settings will be used for many of these activities for the processes of evaluation and outcome measures, i.e., proficiency in IPE

- Done in conjunction of Dr. Richard Van Eck, Dr. Adrienne Salentiny, and Michelle Montgomery, MSW LCSW
- High priority to develop and implement evaluation and outcome measures that are meaningful.

As many of these activities and evaluation methods are novel, opportunity exists for scholarship. We have already received 2 separate AMA grants for a total of \$50,000 with respect to the ROBOTS project and the “Chronic Disease History and Physical”. We have already presented at several meetings nationally of some of these areas.

UND SMHS Strategic Plan Goal 5: UND SMHS will foster a welcoming, safe, and inclusive environment across all campuses.

Simulation Center

The center officially adopted the Society for Simulation in Healthcare *Code of Ethics* supporting the quality and ethical practice of healthcare simulation and affirming the *Code’s* six aspirational values: integrity, transparency, mutual respect, professionalism, accountability and results-orientation.

In student briefings before each simulation, students are reminded that everyone is here to learn and that the learning environment is a safe environment for everyone.

Age, gender and ethnic diversity among standardized patients is an ongoing goal. There are opportunities to write medical interviewing cases that reflect a greater scope of diversity. The center is exploring possibilities of more diversity in simulation and in Year 3 medical student SHaPE encounters, including religious beliefs that may impact medical decisions.

Information Resources

Information Resources ensures safe network and online practices are applied and provides cyber security tools to faculty, staff and students.

Interprofessional Education

A goal of IPE is to break down stereotypes, improve communication, foster understanding of roles and responsibilities, and improve safety for all in clinical scenarios. This is specifically addressed in IPHC course.

Faculty Affairs

Faculty Affairs will work collaboratively with the Associate Dean for Diversity, Equity and Inclusion in carrying out UND SMHS Strategic Goal 5 specifically in the self-study process and creation of a SMHS Diversity Plan and strategies to ensure a welcoming, safe and inclusive environment for all students, faculty, staff and visitors across all campuses and curricular changes to improve student confidence and skills in caring for patients different than themselves.

UND SMHS Strategic Plan Goal 6: The SMHS will determine how we may better meet the educational needs of active duty and reserve personnel, veterans, and their families.

Simulation Center

SIM-ND provides simulation training at no cost to the following military groups: Cavalier AF Station, GF AFB, Minot AFB; Army National Guard in Minot, Grand Forks; Navy Reserve in Fargo; Fargo VA Hospital. The center will continue to support training opportunities to the military community. Currently, the center has a working relationship with Dr. Snow at the GFAFB and Dr. Bryan Delage, who is the State Flight Surgeon for the AF Reserve.

UND SMHS Strategic Plan Goal 7: The SMHS will achieve the targeted fund raising goals set for the SMHS Dean and Vice President for Health Affairs.

Simulation Center

SHaPE utilizes over 70 MDs from around the state to facilitate simulation and precept for student learning of history-taking and physical examination. The center values the connection with these physicians, who are largely graduates of UND, in establishing good public relations for the school.

UND SMHS Strategic Plan Goal 8: The SMHS will enhance its purposes of education, service, and discovery by focusing additional, ongoing efforts toward achieving the broad goals stated in the School's Healthcare Workforce Initiative.

Education Resources

ER is working with Geriatrics on a patient panel game to illustrate the long-term effects of geriatric interventions across a patient panel. This will be used by students and clinicians, thus making it also a means of reducing disease burden.

ER has built a radon education game for the public that illustrates the principles of radon testing and remediation recommendations.

Simulation Center

SIM-ND and SHaPE improve the delivery of health care throughout the state by providing on-site, hands-on opportunities across the state to medical students, pharmacy students, rural critical care hospitals and EMS services. As they have in the past, the state Anesthesiology Conference will again use simulation hands-on training in the simulation center in the near future.

Interprofessional Education

ISCLE promotes a sense of team building in the rural environment. As a result, students have a better understanding of rural clinical practice and how to use available team resources to improve patient care and the clinician experience.