UND SMHS Strategic Plan Individual Unit Report for 2020
GOAL 3 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

<u>LEARNING</u>
One UND Strategic Plan Goal 3: *Deliver more educational opportunity online and on-campus.*
UND SMHS Strategic Plan Goal 3: *The SMHS will identify opportunities to employ state-of-the-art technologies to enhance education.*

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

EDUCATION RESOURCES/MEDICAL EDUCATION
Teaching, Learning and Scholarship (TLAS) has doubled our faculty development offerings year-over-year to 23 workshops and 427 attendees (including a workshop on using Zoom for teaching); the curation of a website of teaching and learning resources of past offerings, articles, and handouts; dozens of consultations with faculty on course design, curriculum design, including a department-wide workshop on distance and online design practices; and leadership roles in identifying and proposing the addition of technologies for learning including SimTutor (interactive learning), virtual reality, recommendation for purchase and implementation of a new Learning Management System for the medical curriculum, coauthoring of telehealth curriculum, assisted with generation of more than 20 new interprofessional education objectives (which will spur creation of new learning opportunities), coauthoring of geriatric telehealth experiences for HRSA grant, and authoring of modalities principles document for medical curriculum redesign that will increase the amount of online and asynchronous learning events between 25% and 50%.

- 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.

INTERPROFESSIONAL EDUCATION/SIMULATION

IPE is actively engaged in this area with respect to the simulation experience with 3 current and separate IP activities in the state-of-the-art simulation center
- 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)

As well, our anchor course for IPE, the Interprofessional Health Care Course (IPHC), was converted from a 5 week in-person class to an online version in one week's time.

OFFICE OF MEDICAL PROGRAM ACCREDITATION AND QUALITY IMPROVEMENT

At the outset of the current pandemic the medical education program received guidance from the AAMC and the LCME regarding expectations of student learning in the clinical setting. UMEC and administration leaders created plans to deliver the medical curriculum online. The Office of Medical Accreditation became involved in communications with the national organizations to ensure that our modifications met accreditation requirements utilizing online education and state of the art technologies.

LIBRARY RESOURCES
Library Resources supports accomplishment of Goal 3 by educational programs, particularly *information literacy*, by continuing to explore electronic resources that best fit the needs of the SMHS community. We have established trials and temporary access to several new tools made available by vendors during the pandemic quarantine period. We have provided continued library instruction sessions to increase the information literacy levels of faculty and students. With the move to remote, virtual instruction, librarians have been creative and effective in providing content in new and engaging ways.

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.

2. Describe how your efforts are being assessed.

EDUCATION RESOURCES/MEDICAL EDUCATION
Number of outreach activities (30+), number of resources created and provided (50+), number of meetings and consultations with faculty (100+), purchase of learning technologies (3), hours of curriculum generated (TBD), number of students impacted (TBD).

Tactic: Exposure of students to telepsychiatry
Metric: # of students who have had an exposure to telepsychiatry

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Tactic: Exposure of clinical clerkship students to online or teleconferenced distance learning experiences. For example, in the Departments of Psychiatry and Family and Community Medicine, we will review of the benefit of the current Project ECHO Medication Assisted Treatment project. The Department of Psychiatry is also collaborating with the Mental Health Technology Transfer Center and will consider a Project Echo Collaborative Care Clinic in which medical students can learn.
Metric: Establishment of such a Project Echo Clinic. In subsequent years # of students exposed to it. We have a Project ECHO Clinic established, which occurs monthly. Currently the only opportunity for medical students to take part are those who might be rotating on sites participating, including UND Family Medicine.

Tactic: use of teleconferencing technology for student education to rural and remote community learning sites, as well as for coordination of learning across campuses
Metric: # of required hours of online or teleconferenced distance learning experiences / clerkship

Clerkship	Hours per clerkship
FM	7 hours teleconferenced
IM	1 hour traditional campuses, 3 hours ROME students teleconferenced
Neuro	0 hours
OB/Gyn	12 hours teleconferenced; 48 hours online activities
Peds	5 hours teleconferenced; 32 online cases to complete
Psych	8 hours teleconferenced
Surgery	13.5-18.5 hours teleconferenced

Tactic: Online CME and CE programs offer CME and CE to health care providers across the state
Metric: # of hours of CME delivered (CME office)

> For 2019, CME offered
> 39 online courses for a total of 47.75 hours of educational credit. There were a total of 341 participants in the online courses.
> 382 Live activities for a total of 504 hours of educational credit. There were a total of 7739 participants in the live activities.
> 7 Enduring programs for a total of 12 hours of educational credit. There were a total of 63 participants in the Enduring programs.

Metric: # of hours of non-CME CE delivered (Pathology)

Death investigation on-line courses: 291 enrollees for 1998 Continuing education credit hours

	Credits	Participants	Total Credits
Advanced Topics	5	38	190
Basics of Death Investigation	7.75	87	674.25
Cultural Competency	2.25	45	101.25
Forensic Pathology	18	31	558
Mental Health Issues	3.25	34	110.5
Terminology of Disease	6.5	56	364
		291	1998

Tactic: Exposure of undergraduate and ND High school students to STEM and technology through technology educational cores such as molecular biology, advanced imaging.

Metric: Sponsorship of ND Science Fairs by UND

Graduate Students, Post-doctoral fellows, and Faculty yearly serve as judges for the State Science Fair. The Department of Biomedical Sciences yearly supports numerous Science Fair Awards for categories in the biology/health related areas. The ND INBRE provides registration support for student participants in the State Science Fair.

Metric: ND STEM teachers in secondary schools with access and training in STEM developed technology laboratory

The SMHS initiated a new program called Native Educator University Research Opportunity [NEUROscience] to help high school teachers at tribal schools improve their STEM curricula and create engaging lessons.

Metric: Talks and programs given by UND faculty and staff to elementary, middle and high school students

Graduate students in the Department of Biomedical Sciences provide approximately 12 SMHS tours and presentations to high school students from North Dakota and Minnesota. Medical Students in the SMHS hold a Teddy Bear Clinic for Grand Forks kindergarten students yearly. The SMHS Center for Rural Health hosts a Scrubs Academy for middle school and high school students yearly. The SMHS Indians into Medicine (INMED) offers a Summer Institute for students in grades 7-12. The ND INBRE program hosts multiple Biotechnology/AP Prep Teacher Workshops per year at various locations around the state.

INTERPROFESSIONAL EDUCATION/SIMULATION

Sim has standardized assessments, including for IPE sim experiences.

IPHC uses the standard RIPLS to assess student satisfaction with the course. The online asynchronous version scored with nearly identical high satisfaction compared to previous versions of in person.

OFFICE OF MEDICAL PROGRAM ACCREDITATION AND QUALITY IMPROVEMENT

Education success efforts are assessed primarily by tracking standardized examination student scores and by surveying student satisfaction.

LIBRARY RESOURCES

Data from a Library Resources survey conducted in AY2019-20 indicated satisfaction among survey participants with library resources and services and, particularly, the contribution of librarians to research and learning. Library Resources is developing a more formal method for assessing students' engagement and retention of information literacy competencies.

3. Describe how your unit analyzed these data and what assessments were determined.

EDUCATION RESOURCES/MEDICAL EDUCATION

Number of outreach activities (30+), number of resources created and provided (50+), number of meetings and consultations with faculty (100+), purchase of learning technologies (3), hours of curriculum generated (TBD), number of students impacted (TBD).

INTERPROFESSIONAL EDUCATION/SIMULATION

Sim experiences score well and will continue, with new opportunities for IP sims going forward. We anticipate that more IP telehealth learning will take place as this is more relevant in clinical practice for nearly all health science specialties and professions. In addition, opportunities are being explored for collaborations with other health care systems and health sciences schools.

OFFICE OF MEDICAL PROGRAM ACCREDITATION AND QUALITY IMPROVEMENT

UMEC has evaluated end of clerkship Shelf examination data and found that on whole student scores were stable or improved following on line learning. Student satisfaction and clerkship director survey data has yet to be collected.

LIBRARY RESOURCES

Survey data were compiled and reported by Dr. Clint Hosford. Regarding Goal 3 and instruction in information literacy, the survey revealed a high degree of satisfaction with librarians' professionalism, responsiveness, willingness to collaborate and knowledge and expertise. Survey participants agree that librarians are an asset to their research, professional development and learning.

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

EDUCATION RESOURCES/MEDICAL EDUCATION

We will work with faculty and programs to provide training and assist with the creation of asynchronous learning events using SimTutor and 360-degree interactive Virtual Reality modules. We are also piloting a Teaching Academy this year to provide training on curriculum design with a special emphasis on flexible hybrid online learning technologies and techniques, which will also be the focus of all of our faculty development across the school. The number of faculty who need this help and the number of courses and modules that can be created is limited significantly by staffing in the unit. We have requested a Media Specialist position to provide additional skillsets and capacity for these activities. While we are on track for what is possible at this time, the increased needs this next year and the current lack of support for media technology will present a significant risk in meeting demand, which if not addressed will result in Delayed status by next year.

INTERPROFESSIONAL EDUCATION/SIMULATION

Sim experiences are often re-evaluated for a possible IP component, it's certain more of those will be built, as well as increased telehealth teaching and learning.
Barriers include technology available for more telehealth teaching that is competency based. The Director of Interprofessional Education is on an American Medical Association subcommittee for the development of telehealth competencies for students and residents. The Director is also involved with a similar mission from AAMC.
Other barriers include developing consistent IP telehealth experiences across multiple health care systems, along with experienced trainers

OFFICE OF MEDICAL PROGRAM ACCREDITATION AND QUALITY IMPROVEMENT

Returning of medical students to the clinical setting and patient care necessitated readjusting the traditional third year clerkship schedule in an attempt to allow all students an opportunity to meet their educational patient related requirements prior to the event of another shutdown resulting in students again being removed from the clinical settings. The office of Medical Accreditation again served in the role of communications with LCME to ensure that this scheduling modification met the approval of the LCME (and which it did).

LIBRARY RESOURCES

Library Resources' has established the goal of communicating directly with each academic department to review current and improved information literacy integration. Virtual teaching and remote work has been a challenge in conducting this work. Staffing vacancies are also being addressed with the hope of being fully staffed with embedded librarians in fall 2020.

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 3**