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Administrative Officers
Joshua Wynne, MD, MBA, MPH
Interim President, Vice President for Health Affairs
Dean, University of North Dakota
Laura Block, CPA, CFP, MBA
Associate Dean for Administration and Finance/Chief Operating Officer
Marc D. Basson, MD, PhD, MBA, FACS
Senior Associate Dean for Medicine & Research
Kimberly Becker, PhD
Designated Institutional Official (DIO)
Director of Graduate Medical Education
A. Michael Booth, MD, PhD
Associate Dean, Southwest Campus, Bismarck
Patrick Carr, PhD
Assistant Dean for Medical Curriculum
Joycelyn A. Dorsch, MD
Associate Dean for Student Affairs & Admissions
Cornelius “Mac” Dyke, MD
Associate Dean, Southeast Campus, Fargo
Scott E. Krutson, MD
Assistant Dean, Northwest Campus, Minot
Tom Mohr, PT, PhD
Associate Dean for Health Sciences
Kenneth Ruit, PhD
Associate Dean for Education and Faculty Affairs
Stephen Tinguely, MD
Assistant Dean for Medical Accreditation
Chief Medical Accreditation Officer
Richard Van Eck, PhD
Associate Dean for Teaching and Learning
Donald Warne, MD, MPH
Associate Dean, Diversity, Equity & Inclusion
Director, Indians Into Medicine (INMED) Program
Director, Master of Public Health Program
Susan Zelweski, MD
Assistant Dean, Northeast Campus, Grand Forks

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David Molmen, MPH (Chair)
Northeast Campus Representative
Joshua Wynne MD, MBA, MPH (Executive Secretary)
Vice President for Health Affairs and Dean
Thomas F. Arnold, MD
Southwest Campus Representative
Misty Anderson, DO
North Dakota Medical Association Representative
Gretchen Dobervich
North Dakota House of Representatives
Robert Erbele
North Dakota Senate
Dean Gross, PhD, FNP-C
North Dakota Center for Nursing
Gary Hart, PhD
Center for Rural Health, UND School of Medicine & Health Sciences
Christopher D. Jones, MBA
State Department of Human Services Representative
Courtney Koebel, JD (Ex officio)
North Dakota Medical Association
John M. Kutch, MHSA
Northwest Campus Representative
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North Dakota Hospital Association
Tim Mathern, MPA
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North Dakota House of Representatives
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North Dakota State Board of Higher Education
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Southeast Campus Representative
Mylynn Tufte, MBA, MSIM, BSN
State Health Department Representative
Breton Weitraub, MD, FACP
VA Medical Center and Affiliated Clinics Representative

On the cover: Dr. Eric Johnson (right) and medical students give free blood pressure and blood glucose checks at University Park in Grand Forks in September 2019.
The primary purpose of the University of North Dakota School of Medicine & Health Sciences is to educate physicians and other health professionals and to enhance the quality of life in North Dakota. Other purposes include the discovery of knowledge that benefits the people of this state and enhances the quality of their lives.

—North Dakota Century Code (Section 15-52)

Educate
- More than 1,200 part-time or volunteer clinical faculty in more than 30 communities throughout the state help to educate medical students and residents.
- There are four clinical campuses located in Bismarck, Fargo, Grand Forks, and Minot.
- Health sciences students receive training not only in North Dakota but also across the country, including occupational therapy and public health programs in Casper, Wy., and a medical laboratory science program at Mayo Clinic in Rochester, Minn.
- The School’s patient-centered-learning curriculum is nationally recognized for producing caring, patient-centered, and dedicated practitioners.
- The School uses the latest in simulation technology for interprofessional teaching and serves as a valuable resource for health care professionals throughout North Dakota and the region.
- Interprofessional learning activities, including an interprofessional health care course and simulation activities, provide students with a strong practical understanding of the various health care professionals on their team.

Discover
Areas of Research Strength
- Aging
- Cancer
- Environmental influences on health
- Health disparities in rural and American Indian communities
- Infectious diseases
- Neurodegenerative disorders

The School has facilities for the study of drug addiction and neurodegenerative diseases such as Parkinson’s, Alzheimer’s, multiple sclerosis, and epilepsy. Faculty at the UND SMHS not only publish their research in leading journals each year but apply for and are awarded tens of millions of dollars in grants from agencies such as the National Institutes of Health, the Centers for Disease Control and Prevention, and the Department of Health and Human Services.

Among other awards given to the School in February 2019, Dr. Marc Basson, senior associate dean for Medicine and Research, was awarded the 2019 UND Foundation Thomas J. Clifford Faculty Achievement Award for Excellence in Research for his role in winning a $20+ million grant from the National Institutes of Health to build the multi-institution Dakota Cancer Collaborative on Translational Activity (DaCCoTA) research group.

Serve
- The School improves the health and health care of North Dakotans through research, community engagement, and prevention programs.
- Direct primary care to North Dakotans is provided through the School’s family medicine clinics in Bismarck and Minot.
- The School leads the nation in rural health through the Center for Rural Health (CRH), which serves as the State Office of Rural Health for North Dakota. It is home to six national programs: the National Resource Center on Native American Aging, the National Indigenous Elder Justice Initiative, the Rural Health Information Hub, the Rural Health Research Gateway, the Rural Health Reform Policy Research Center, and TruServe, a web-based information tracking system that is now used by most state offices of rural health. The CRH works to develop capacity and skill at the rural community level through education, training, assessment, planning, program and workforce development, and evaluation. Primary focus areas include community development, research, indigenous health, evaluation, policy, and education.
The UND School of Medicine & Health Sciences is one of 28 medical schools in the country that is community-based, meaning we don’t own or operate our own hospital. Rather, we partner with health care providers in the community to educate our students.

**Graduate Programs**
Doctor of Philosophy (Ph.D.) and Master of Science degrees in Biomedical Sciences, with specializations in:
- Inflammation and Infectious Disease
- Neuroscience and Neurodegenerative Disease
- Epigenetics
- Molecular and Cellular Biology

Doctor of Philosophy and Master of Science degrees in Clinical and Translational Science, with specializations in:
- Molecular and Pathological Basis of Human Disease
- Bioinformatics and Human Population Genetics

**Medical Doctor (MD) Program**
All medical students spend their first two years in Grand Forks. They learn through lectures, laboratories, patient simulations, and in patient-centered-learning groups, where basic and clinical sciences are taught in the context of patient cases. They then spend two years of clinical training in Bismarck, Fargo, Grand Forks, Minot, or a rural community through the Rural Opportunities in Medical Education (ROME) Program.

**Master of Public Health**
The UND SMHS Master of Public Health program is designed to prepare students to respond to the growing demand for public health professionals who can promote health and wellness through population-based approaches.
- Ph.D. in Indigenous Health coming in 2020

**Health Sciences**

**Athletic Training**
- Four-year Bachelor of Science
- Master of Athletic Training coming in 2022

**Medical Laboratory Science**
- Four-year Bachelor of Science or post-baccalaureate certificate
- Categorical Certificate
- Master of Science
- More than 60 clinical training sites in 10 states with more than half in North Dakota and the surrounding region

**Occupational Therapy**
- Two-year pre-occupational therapy program and three-year Master of Occupational Therapy
- Three-year pre-occupational therapy program and three-year Occupational Therapy Doctorate

**Physical Therapy**
- Three-year pre-physical therapy program and three-year Doctor of Physical Therapy

**Physician Assistant Studies**
- Two-year Master of Physician Assistant Studies
Our biennial budget is $199,845,155. The majority comes from non-state sources such as grants, contracts, patient revenue, and tuition.

Estimated Expenditures: 2019-2021
Total: $199,845,155
- 25% Salaries: $49,389,983
- 25% Operating & Equipment: $49,650,207
- 50% Fringe Benefits: $100,804,965

Estimated Revenue: 2019-2021
Total: $199,845,155
- 5% Tuition: $10,550,208
- 33% State: $64,883,504
- 19% Grants & Contracts: $38,666,147
- 24% Mill Levy: $47,219,421
- 19% Patient & Education: $38,525,875

For every $1 appropriated to the School by the Legislature, the School generates over $2 in grants, contracts, tuition, and service revenues. The total direct economic impact of the SMHS over the next three biennia should exceed $750 million.

1st Year In-State Resident Tuition & Fee Rates for Regional Medical Schools
- North Dakota
- Nebraska
- South Dakota
- Minnesota
- AAMC Midwest Mean

“The generosity from donors like you allows our class to succeed in obtaining an excellent medical education at UND. I am beyond thankful for the support, and hope to follow your lead in becoming a donor in the future.”

MATTHEW AMUNDSON

Grand Forks, N.D.
MD Class of 2022
**Fiscal Year 2018**

- Retained Donors: 377
- Reengaged Donors: 133
- New Donors: 65

Total Donors: 575

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<th>Source</th>
<th>Amount</th>
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<tr>
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<tr>
<td>Friends</td>
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<tr>
<td>Other</td>
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<tr>
<td>Corporations/foundations/matching gifts</td>
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Total Donors: 575

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<td>Students $</td>
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<td>Educators (faculty)</td>
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<td>Programs</td>
<td>2,564,300</td>
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<tr>
<td>Priority Needs</td>
<td>2,350,432</td>
</tr>
</tbody>
</table>

Total: $ 6,635,795

**Fiscal Year 2017**

- Retained Donors: 401
- Reengaged Donors: 172
- New Donors: 47

Total Donors: 620

<table>
<thead>
<tr>
<th>Source</th>
<th>Amount</th>
</tr>
</thead>
<tbody>
<tr>
<td>Alumni</td>
<td>502</td>
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<tr>
<td>Friends</td>
<td>89</td>
</tr>
<tr>
<td>Other</td>
<td>20</td>
</tr>
<tr>
<td>Corporations/foundations/matching gifts</td>
<td>9</td>
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</table>

Total Donors: 620

<table>
<thead>
<tr>
<th>Category</th>
<th>Amount</th>
</tr>
</thead>
<tbody>
<tr>
<td>Students $</td>
<td>2,052,243</td>
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<tr>
<td>Priority Needs</td>
<td>1,519,488</td>
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<tr>
<td>Programs</td>
<td>1,078,400</td>
</tr>
<tr>
<td>Educators (faculty)</td>
<td>272,900</td>
</tr>
</tbody>
</table>

Total: $ 4,923,031
Student Enrollments by Major, Fall 2019

Biochemistry and Molecular Biology
(Graduate—Master and Doctoral, includes Pathology) 1
Biomedical Sciences
(Graduate—Master and Doctoral) 30
Clinical and Translational Science
(Graduate—Master and Doctoral) 2
Total: 33

Medical Doctor
Year 1—Class of 2023 77
Year 2—Class of 2022 75
Year 3—Class of 2021 78
Year 4—Class of 2020 76
Total: 306

Post-MD Degree
(Training in family medicine, geriatric medicine, hospitalist, internal medicine, psychiatry, surgery, and transitional)

Total 155

Health Sciences

Athletic Training
Pre—Athletic Training 43
Bachelor of Science 31
Medical Laboratory Science
Pre—Medical Laboratory Science Certificate 106
Bachelor of Science 101
Master of Science 41
Occupational Therapy
Pre—Occupational Therapy 88
Undergraduate 57
Master of Occupational Therapy 66
Occupational Therapy Doctorate 60
Physical Therapy
Pre—Physical Therapy 165
Doctoral 153
Physician Assistant
(Graduate—Master) 62
Public Health
Total 1,052

The School’s faculty also teach courses in biomedical sciences (anatomy, physiology, pharmacology, biochemistry, microbiology, immunology) that enroll over 1,000 undergraduate students each year who will become physicians, therapists, nurses, nutritionists and dietitians, exercise scientists, public health professionals, teachers, and forensic scientists.

Now that the School’s Healthcare Workforce Initiative (HWI) is fully implemented, 16 additional medical students, 30 health sciences students, and a variety of post-MD degree trainees are being educated through the UND SMHS each year, relative to 2012. And to house these dozens of new trainees (not to mention the requisite added faculty and staff), the new medical school and health sciences facility was completed on time and on budget in July 2016. In addition to expanding SMHS class sizes, the HWI utilizes a number of strategies to maximize success in increasing North Dakota’s health care workforce:

- Acceptance of students to medical school weighted toward those from rural areas of North Dakota.
- Tuition forgiveness for those who commit to practice in a rural community in the state.
- Increased longitudinal experiences in rural communities.
- Increased geriatrics, population health, and public health focus.
Our goal is for our students in the health sciences and medicine to meet or exceed the accepted standard on nationally recognized exams measuring academic progress.

### Student Performance on Nationally Recognized Exams

<table>
<thead>
<tr>
<th>Program</th>
<th>UND SMHS Pass Rate</th>
<th>National Pass Rate</th>
</tr>
</thead>
<tbody>
<tr>
<td>Athletic Training</td>
<td>100%</td>
<td>81%</td>
</tr>
<tr>
<td>Medical Laboratory Science</td>
<td>90%</td>
<td>75%</td>
</tr>
<tr>
<td>Occupational Therapy</td>
<td>100%</td>
<td>98%</td>
</tr>
<tr>
<td>Physical Therapy</td>
<td>92%</td>
<td>91%</td>
</tr>
<tr>
<td>Physician Assistant</td>
<td>100%</td>
<td>98%</td>
</tr>
<tr>
<td><strong>Medicine</strong></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Step 1</td>
<td>99%</td>
<td>96%</td>
</tr>
<tr>
<td>Step 2</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Clinical Knowledge</td>
<td>96%</td>
<td>98%</td>
</tr>
<tr>
<td>Clinical Skills</td>
<td>96%</td>
<td>95%</td>
</tr>
<tr>
<td>Step 3</td>
<td>99%</td>
<td>98%</td>
</tr>
</tbody>
</table>

Sources: Data are from the most recent examination in each respective area.

### Retention of UND SMHS Medical Student Graduates for Practice In-State (compared with other medical schools)

Source: Mismis Management Tool, 2019 AAMC
Completion rates* measure the percentage of students who enrolled in a professional degree program and completed their degree within the maximum allowable time, which varies based on the program. Tan bars represent the number and percentage of a class graduating relative to the initial number of enrolled students (brown) in a given year.

**Doctor of Medicine (four-year program)**
For Doctor of Medicine students at the School, the maximum time allowed to complete a four-year degree is six years. The national completion rate for medical students who graduate within seven years is 94 percent.

**Master of Physician Assistant Studies (two-year program)**
Beginning in 2006, the program accepted a new class every other year. It has returned to an annual admission structure effective with the class matriculating in 2013.

*Number Graduated/Number Admitted = Completion Rate*
Our goal is to exceed the national benchmark for completion.

Doctor of Physical Therapy (three-year program)

Master of Occupational Therapy (three-year program)
Residency Training

After graduating from medical school, physicians must complete residency training, a period of advanced intensive training in a chosen medical specialty before independent practice as a physician. Depending on the medical specialty, medical school graduates complete anywhere from three to seven years of residency training after medical school.

Residency training throughout North Dakota is provided in eight areas:

- Family Medicine (Bismarck, Fargo, Grand Forks, Minot, Williston)
- Geriatrics (Bismarck, Fargo)
- Hospitalist (Bismarck)
- Internal Medicine (Fargo)
- Orthopedic Surgery (Fargo)
- Psychiatry (Fargo)
- Surgery (Fargo, Grand Forks)
- Transitional (Fargo)

Some of these residency programs have training specific to rural care. They are:

- UND Family Medicine in Bismarck (Fort Yates), Fargo (Jamestown, Detroit Lakes, and Wahpeton), Hettinger, Minot (Garrison), and Williston
- UND Psychiatry (Telemedicine)
- UND Surgery Rural Track (Minot and Williston)

* The Family Medicine Programs in Grand Forks is sponsored by Atru Health System.
** Transitional residency is a yearlong program designed to introduce graduates to a wide range of medical and surgical specialties. The goal is to build a broad foundation of clinical skills as a base for future training in a medical subspecialty.
In the fall semester of their final year of school, medical students apply to programs through which they hope to complete a residency—the period of advanced training in a medical specialty that students complete before engaging in independent practice as a physician. Residency interviews are conducted anywhere between October and January of that academic year for standard residencies.

In their last semester, medical school seniors across the country find out where they will complete their residencies on "Match Day," a celebration of residency placements coordinated by the National Resident Matching Program (NRMP). The NRMP is a private, not-for-profit corporation founded in 1952 at the request of medical students to standardize the residency selection process and establish a uniform date of appointment to positions in graduate medical education training programs.

The 2019 Main Residency Match was the largest in NRMP history. A record number of applicants submitted program choices for 35,185 positions, the most ever offered in the Match. The number of available first-year (PGY-1) positions rose to 32,194, an increase of 1,962 (6.5%) over 2018.

This year, 71 UND School of Medicine & Health Sciences MD students successfully matched with residency programs. In total, 41 percent of the UND MD Class of 2019 matched into primary care specialties, with 14 of 71 (nearly 20 percent) of the cohort alone set to enter family medicine, a figure more than double the national average of fourth-year medical students matching into family medicine.

Members of the MD Class of 2019 who spent their clinic-based fourth year in Bismarck, N.D., share their residency match result letters in March 2019.
Our goal is to exceed the national average of students specializing in family medicine by 100 percent.

A study recently completed by the American Academy of Family Physicians (AAFP) noted that the University of North Dakota School of Medicine & Health Sciences was again among the top three contributors to building the nation’s family physician workforce. This is the 36th national study conducted by the AAFP that reports retrospectively the percentage of graduates from U.S. Liaison Committee on Medical Education (LCME)-accredited; American Osteopathic Association (AOA)-accredited; and international medical schools who enter Accreditation Council for Graduate Medical Education (ACGME)-accredited family medicine residency programs as first-year residents.

Graduates Entering a Family Medicine Residency 2009–2019

Average 2009–2019
- UND SMHS 18.8%
- NATIONAL 8.7%
- UND SMHS Goal (double the national avg.)

Sources:
- Medical Education Division
- American Academy of Family Physicians
- Family Medicine, SFTM Journal
- Department of Family & Community Medicine
- University of North Dakota School of Medicine & Health Sciences 9/19

*U.S. seniors successfully matching in the National Resident Matching Program
More than 700 practicing physicians now serving North Dakota communities received their education at UND.

<table>
<thead>
<tr>
<th>Percentages of Physicians Practicing in North Dakota Who Graduated from the UND School of Medicine &amp; Health Sciences or Completed an In-State Residency</th>
</tr>
</thead>
<tbody>
<tr>
<td>All Specialties</td>
</tr>
<tr>
<td>Family Medicine</td>
</tr>
<tr>
<td>Internal Medicine</td>
</tr>
<tr>
<td>Obstetrics and Gynecology</td>
</tr>
<tr>
<td>Pediatrics</td>
</tr>
<tr>
<td>Psychiatry</td>
</tr>
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</table>

Percentages of Other Health Care Providers Practicing in North Dakota Who Are Graduates of the UND School of Medicine & Health Sciences

<table>
<thead>
<tr>
<th>Metric</th>
<th>Percentile Rank</th>
</tr>
</thead>
<tbody>
<tr>
<td>Athletic Trainers</td>
<td>26%</td>
</tr>
<tr>
<td>Occupational Therapists</td>
<td>52%</td>
</tr>
<tr>
<td>Medical Laboratory Scientists</td>
<td>47%</td>
</tr>
<tr>
<td>Physician Assistants</td>
<td>39%</td>
</tr>
<tr>
<td>Physical Therapists</td>
<td>51%</td>
</tr>
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Data were collected from North Dakota state licensing boards and academic departments.

School of Medicine & Health Sciences Alumni

<table>
<thead>
<tr>
<th>School of Medicine &amp; Health Sciences Alumni</th>
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</thead>
<tbody>
<tr>
<td>Medical Laboratory Scientists</td>
</tr>
<tr>
<td>Athletic Trainers</td>
</tr>
<tr>
<td>Physicians</td>
</tr>
<tr>
<td>Physical Therapists</td>
</tr>
<tr>
<td>Occupational Therapists</td>
</tr>
<tr>
<td>Physician Assistants</td>
</tr>
<tr>
<td>Public Health Professionals</td>
</tr>
<tr>
<td>Biomedical Sciences</td>
</tr>
<tr>
<td><strong>Total</strong></td>
</tr>
</tbody>
</table>

UND SMHS Medical Doctor Program Outcomes

<table>
<thead>
<tr>
<th>Metric</th>
<th>Percentile Rank</th>
</tr>
</thead>
<tbody>
<tr>
<td>Graduates entering primary care</td>
<td>86th</td>
</tr>
<tr>
<td>Graduates practicing in rural areas</td>
<td>88th</td>
</tr>
<tr>
<td>Graduates practicing in family medicine</td>
<td>89th</td>
</tr>
<tr>
<td>Fraction of class identifying as American Indian</td>
<td>100th</td>
</tr>
</tbody>
</table>
Growing Our Own: Innovative Programs to Produce Health Care Providers for North Dakota

The School has implemented the Healthcare Workforce Initiative (HWI) and has constructed a new $124 million home. The HWI is a four-pronged plan to help address North Dakota’s health care workforce needs now and in the future by reducing disease burden, retaining more of our graduates for practice in North Dakota, training more practitioners, and improving the efficiency of our health care delivery system.

RuralMed

RuralMed is a tuition waiver program (or scholarship) designed to encourage medical students to select careers in family medicine and other shortage specialties and increase the number of providers for rural North Dakota. Students accepted for the RuralMed Program have the entire cost of tuition waived in return for their practicing in North Dakota. Students will not have to borrow money for tuition and accrue interest for medical education. Currently, 25 students are accepted or enrolled in the program, and all are destined for rural practice in North Dakota.

INMED

The Indians into Medicine Program (INMED), which was established in 1973, is a comprehensive program designed to assist American Indian students who aspire to be health professionals to meet the needs of our Indian communities and to serve reservation populations.

ROME

Rural Opportunities in Medical Education (ROME) is a 24–28 week interdisciplinary experience in a rural primary care setting that is open to third-year students at the UND School of Medicine & Health Sciences. Students live and train in nonmetropolitan communities under the supervision of physician preceptors. ROME students experience health care delivery in rural areas throughout the state of North Dakota, where providing access to health care is sometimes challenging. Students learn about problems commonly encountered in primary care, from routine health maintenance to medical emergencies and rare and unusual diagnoses. Each primary preceptor is board-certified in family medicine, but students also work with board-certified surgeons, internists, pediatricians, and other specialists available in the community.

Interprofessional Healthcare Course (IPHC)

The course includes nine allied health professions on campus and is run on a collaborative model that doesn’t assign a higher value to any one profession or specialty over any other. More than 4,000 students have completed the course.

The IPHC is modeled on the School’s acclaimed patient-centered-learning small-group curriculum. The focus of the course is to learn about the role of other healthcare professionals and how to interact as a health care team. Eight departments are involved in the course: medicine, nursing, occupational therapy, physical therapy, communication sciences and disorders, social work, counseling psychology, and nutrition and dietetics.

The goal of IPHC education is collaborative practice. Students learn every person on a team is a patient advocate, which significantly reduces errors in the health care system and leads to improved cost efficiency, an appropriately important issue for the 21st century.

Minot Integrated Longitudinal Experience (MILE)

A clerkship is a course of clinical training that third-year medical students undertake in specialty areas. In the summer of 2012 in Minot, the first cohort of medical students undertook an integrated, longitudinal experience. Students work with preceptors in each of the specialties. For example, a student might balance the work week with time in the primary care preceptor’s office, time in surgery, an obstetrics and gynecology shift, and emergency room time. An important feature of the new MILE is that students develop a panel of patients whom they follow throughout the year, accompanying them to consult visits and procedures, and following them through hospitalizations.

R-COOL-Health Scrubs Camps

Rural Collaborative Opportunities for Occupational Learning in Health (R-COOL-Health) Scrubs Camps are one-day learning experiences where students are able to explore health care careers from their local health care providers through hands-on, interactive activities. Since the program’s start in 2010, 7,485 students, 2,892 volunteers, and dozens of local communities have participated in 96 Scrubs Camps across the state. Students who have participated in Scrubs Camps have learned about various health care careers and participated in interactive activities, including dissecting pig hearts, typing blood samples, and participating in mock emergency scenarios.
R-COOL-Health Scrubs Academy
Eighty-four North Dakota junior high students participated in the ninth annual Scrubs Academy, held at the University of North Dakota campus in June. Since the Academy’s start in 2011, 512 students have attended from hundreds of communities (375 from rural communities). Students participated in a dissection, explored the inside of a 32-foot inflatable colon, and learned more about anatomy, medical laboratory science, emergency medical services, mental health, occupational therapy, physical therapy, public health, nutrition, music therapy, physician assistant studies, radiology, and other health careers. As part of the academy, students received Friends and Family CPR training and became certified in the Health Insurance Portability and Accountability Act (HIPAA). Most health facilities in North Dakota require that students be HIPAA-certified before allowing them to job shadow. Students also were given the opportunity to explore and learn more about the School of Medicine & Health Sciences, the UND campus, and the Grand Forks community.

North Dakota Area Health Education Center
Since 2009, the North Dakota Area Health Education Center has utilized federal, state, and private funding to support learning opportunities for more than 23,000 participants reaching all 53 North Dakota counties. Of that total, more than 13,000 students have participated in health career awareness events and activities, and more than 100 students enrolled in health profession programs have completed rural clinical rotation experiences.

Summer Undergraduate Research
For 10 weeks each summer, more than two dozen undergraduate students from UND, as well as from rural and tribal colleges in Minnesota, North Dakota, and across the nation, conduct research and participate in a number of related educational activities at the UND School of Medicine & Health Sciences. Students work shoulder-to-shoulder with their mentor scientists from the UND Department of Biology, SMHS scientists and clinicians, Cankdeska Cikana Community College, and the Center for Rural Health. The research experience, under the direction of Professor Don Sens and the North Dakota IDeA Network for Biomedical Research Excellence (INBRE), culminates in a Summer Undergraduate Research Experience poster session in Grand Forks. One of the goals of the summer research program is to provide students with the opportunity to work directly with an established research scientist. An additional goal is to recruit students from rural and tribal colleges for future enrollment in UND undergraduate and graduate programs. The program is designed to bolster the workforce pipeline of biological research scientists and healthcare professionals. And the program has been successful in helping attract students to UND. In fact, 12 members of the MD Class of 2023 are INBRE summer research veterans. Funding for the students comes from a variety of organizations, including the National Science Foundation, the National Institutes of Health, and UND.
For fiscal year 2019 (July 1, 2018–June 30, 2019), total research funding was $20,785,319. Of the 28 community-based medical schools in the United States, the SMHS is ranked in the top quarter of schools in external funding for sponsored projects. The School’s goal is to be in the top four.

Through our research efforts in the realm of clinical & translational research (CTR), the School of Medicine & Health Sciences aims to take research from “lab bench to bedside.” Highlights from 2019 in this regard include:

In August 2019, the National Institutes of Health (NIH) awarded Department of Biomedical Sciences Professor Roxanne Vaughan a $10 million, five-year grant to expand the School’s epigenetics research program.

This NIH Center of Biomedical Research Excellence (CoBRE) grant, which will be delivered to UND in $2 million increments, builds on a similar grant the School received in 2013 that was directed toward scholars exploring the epigenetics and epigenomics of disease.

Researchers studying epigenetics explore the mechanisms that regulate gene expression and the activation and deactivation of specific genes. Understanding better how the human body can turn genes on and off during growth and aging and in response to its environment has important implications for the diagnosis and treatment of cancer, neurodegenerative diseases such as Alzheimer’s or Parkinson’s, and diabetes.

Department of Biomedical Sciences, where Dr. Geiger is a Chester Fritz Distinguished Professor. This five-year grant has a total value of about $2.2 million.

Making the award more remarkable is the fact that Drs. Chen and Geiger now have five active NIH R01 grants between them—three from the National Institute of Mental Health, one from the National Institute of Neurological Diseases and Stroke, and one from the National Institute of Drug Abuse. NIH R01 grants are considered one of the most prestigious grants for which researchers can apply, and funding for these grants is extremely competitive.

This latest grant will focus on determining the mechanisms responsible for neurological complications that occur in people living with HIV-1.

“It goes without saying that the outcome of the proposed studies could have a substantial, global impact economically, socially, and clinically,” said Dr. Geiger.

In September 2019, Saobo Lei, Ph.D., professor in the Department of Biomedical Sciences, was awarded a five-year, $1.5 million grant from the NIH. The prestigious R01 class grant, which is funded through the National Institute of Mental Health, will be used to explore new therapies for anxiety disorders in humans.

“Our long-term goal with this grant is to explore novel mechanisms by which therapeutic strategies for anxiety disorders can be developed,” noted Dr. Lei. “Accumulating evidence indicates an important role for vasopressin, or AVP, in anxiety. Among other effects, AVP interacts with a class of receptors known as V1aRs that, when activated, contribute to the symptoms of what we call anxiety.”
The Center for Rural Health (CRH) at the School of Medicine & Health Sciences serves North Dakota, the region, and the nation. It focuses the majority of its resources on the state’s 53 counties and generally works with 100 or more communities each year. The CRH provides technical assistance to all 38 rural North Dakota hospitals, 36 of which are critical access hospitals. The CRH works closely with other groups too, such as public health, emergency medical services (EMS), and tribal health. Assistance is directed at improving access to quality health care services, the viability of rural health systems, and community engagement. The CRH administers a variety of funding sources used to support and assist rural communities in North Dakota totaling:

- $8,883,547 for FY 2019 (including appropriated funds)

**FY 2019**

**Federal Grants: $6,611,248** The CRH supports 22 grants in this category, including:

- Three national programs that focus on indigenous populations: the National Indigenous Elder Justice Initiative (NIEJI), NIEJI Innovation, and the National Resource Center on Native American Aging. These programs focus on improving health outcomes and the wellbeing of American Indian, Alaska Native, and Native Hawaiian elders. The CRH Native programs have a predominantly indigenous staff with expertise in geriatrics, elder abuse, mental health, suicide prevention, health disparities, community-based participatory research, tribal participatory research, resiliency, and wellness. The CRH works with nearly half of the 560 federally recognized tribes.

- Two other nationally sponsored projects, the Rural Health Information Hub and the Rural Health Research Gateway, provide resources, information, and dissemination of information regarding the latest rural health research and programs.

- The CRH receives federal funding for other programs that support health care, such as the Rural Hospital Flexibility Program, Small Hospital Improvement Program, and the State Office of Rural Health. This funding helps rural hospitals improve quality, finance, and operation; integrate EMS and innovative health care models; and engage communities.

**State Grants: $406,747** The CRH has sponsored contracts with the state of North Dakota for the Traumatic Brain Injury Network, and behavioral health and opioid work, including the Justice Reinvestment Initiative.

**Other Grants: $881,586** The CRH administers and supports other sponsored contracts that serve and enhance rural health in the state and regionally. Initiatives include Truserve, the Dakota Conference on Rural and Public Health, the Blue Cross Blue Shield Caring Foundation grant, the Native Urban Elder Needs Assessment Survey American Association of Retired Persons grant, the Native Aging In Place Program, the North Dakota Palliative Care Task Force, and Community Health Needs Assessments.

**FY 2018**

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**FY 2017**

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<td>Other Grants</td>
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Each year, faculty, staff, and students of the UND School of Medicine & Health Sciences engage in volunteer community service projects across the state. Service highlights from 2019 include:

Schmitz appointed to three-year National Advisory Council term for National Health Service Corps
In August, Professor and Chair of the UND Department of Family & Community Medicine David Schmitz, MD, was named to the National Health Service Corps’s (NHSC) National Advisory Council. The appointment is for a three-year term.

The NHSC looks to address America’s shortage of primary care providers by awarding scholarships and offering loan repayment services to providers in eligible disciplines in exchange for their service to underserved regions of the country. This shortage is especially acute in rural areas of the United States.

“This appointment will be a great opportunity to serve North Dakota in a national capacity regarding workforce allocation,” noted Dr. Schmitz, who came to the SMHS in 2017 after years of practicing rural medicine in Idaho. “The NHSC scholarship and loan repayment programs help provide services to some of the most underserved and vulnerable populations in the U.S., which certainly include some parts of North Dakota.”

Schmitz was nominated by both the American Academy of Family Physicians and the National Rural Health Association for consideration for appointment. He is board-certified in Family Medicine and earned his Doctor of Medicine degree from the State University of New York at Buffalo. He is recognized across the United States for his rural medicine scholarship and advocacy.

Tasked with advising the secretary of the U.S. Department of Health and Human Services and the administrator of the Health Resources and Services Administration, the National Advisory Council on the NHSC is a group of health care providers and administrators experienced in working with communities facing a shortage of primary care professionals. The group has been strengthening and growing the country’s primary care workforce since 1972.

North Dakota Statewide Cancer Registry recognized for contributions to NAACCR
The North Dakota Statewide Cancer Registry (NDSCR), managed by the UND Department of Pathology, once again received Gold Certification from the North American Association of Central Cancer Registries (NAACCR). This marks the seventh consecutive year that the NDSCR has received gold-level certification.

“The evaluation of central cancer registry incidence data recognizes population-based cancer registries that have achieved excellence in the areas of completeness of case determination, data quality, and timeliness,” noted UND Department of Pathology Chair Mary Ann Sens, M.D., Ph.D. “Achieving this level for seven years straight is a testament to the exceptional team we have in place in North Dakota doing this vital work.”

In addition to the registry’s Gold Certification, Yun (Lucy) Zheng, M.D., associate professor in the Department of Pathology, received recognition for her contribution as an NAACCR Committee Member in 2018-2019.

“It’s definitely an honor and a surprise to be awarded by the NAACCR,” Zheng said. “We take this role very seriously at UND and are happy that our efforts are being recognized nationally.”

Of the 50 cancer registries supported by the CDC, the NDSCR is one of only 18 that achieved this designation for the most recent data submission, indicating the high-quality data available for cancer prevention and control activities at the local, regional, and national levels. Meeting these standards allows the NDSCR’s data to be included in the United States Cancer Statistics report.
Faculty & Staff Turnover
The faculty turnover rate (faculty who left their jobs) at the UND SMHS for FY 2019 was 8.65 percent. The turnover rate for all North Dakota University System (NDUS) faculty for that same year was 13.3 percent.

Likewise, the staff turnover rate at the UND SMHS for FY 2019 was 10.84 percent while the rate for all NDUS staff was 12.2 percent.

In FY 16, 17, and 19, UND offered a voluntary separation program for faculty and staff. Eight SMHS employees accepted voluntary separation in FY19.

Benefited Faculty and Staff for Fiscal Year 2019

<table>
<thead>
<tr>
<th>Total Benefited</th>
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<tbody>
<tr>
<td>Faculty – 185</td>
<td>Staff – 249</td>
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<tr>
<td>Full-time – 174</td>
<td>Full-time – 236</td>
</tr>
<tr>
<td>Part-time – 11</td>
<td>Part-time – 13</td>
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<td>Part-time – 16</td>
</tr>
</tbody>
</table>

* Benefited appointment is 20 hours/week or more.

Dr. Joshua Wynne, UND Vice President for Health Affairs and Dean of the School of Medicine & Health Sciences, gives a lecture to his colleagues on the UND campus.

THANK YOU TO THE FOLLOWING UND SMHS STAFF FOR YOUR SERVICE AND DEDICATION:

The University of North Dakota’s annual Staff Recognition Ceremony was held on Tuesday, May 9, 2019. As usual, the SMHS is home to many of the honorees recognized at the luncheon for their service to the University, including the following staffers:

40-Year Honorees
MaryBeth McGurran, Medical Laboratory Science

35-Year Honorees
Michelle Graba, Center for Rural Health
Diane Roney, Surgery
Tracey Staffes, Obstetrics/Gynecology
Laurie Young, Biomedical Sciences

30-Year Honorees
Rhonda McDaniel, Physician Assistant Studies
Cindy Stromme, Student Affairs & Admissions

25-Year Honorees
Cynthia Carlson, Minot Center for Family Medicine

20-Year Honorees
Stacy Sailer, Biomedical Sciences
Margaret Smith, Biomedical Sciences

15-Year Honorees
Maxine Johnson, Southwest Campus (Bismarck)
Naomi Leim, Center for Rural Health
Kylie Nissen, Center for Rural Health
Originally conceived by SMHS Dean Joshua Wynne and his spouse Dr. Susan Farkas nine years ago, Joggin’ With Josh has been working to raise awareness among faculty, staff, and students, as well as the Grand Forks community, about healthful lifestyle choices, focusing on how exercise can reduce one’s likelihood of developing disease. On September 24, 2019, the 5K, 10K, or one mile run/walk/jog was completed on a course around the neighborhood of the School.

10-Year Honorees
Linda Anderson, Education & Faculty Affairs
Donna Baumgartner, Bismarck Center for Family Medicine
Sandra Christianson, Pathology
Jennifer Duffy, Student Affairs & Admissions
Stephanie Flyger, Simulation Center
Debra Fossum, Family & Community Medicine
Terri Lannoye, Bismarck Center for Family Medicine
Jolej Lee, Center for Rural Health
Hongyan Wang, Pathology

Nicole Livedalen, Center for Rural Health
Kristin Melby, Bismarck Center for Family Medicine
Eric Souvannasacd, Center for Rural Health
Rebecca Strandmark, Family & Community Medicine
Shelly Syverson, Bismarck Center for Family Medicine
Darielle Thompson, Indians Into Medicine
Dawn Wuori, Bismarck Center for Family Medicine

5-Year Honorees
Makenzie Atherton, Center for Rural Health
Shelby Beyer, Minot Center for Family Medicine
Lisa Davis, Bismarck Center for Family Medicine
Ashley Everson, Master of Public Health
Julie Frankl, Center for Rural Health
Kara Hendrickson, Physician Assistant Studies
Julie Knutson, Biomedical Sciences
Stacy Kusker, Center for Rural Health
EDUCATE. DISCOVER. SERVE.
Keep your finger on the pulse of the latest news and events from the UND School of Medicine and Health Sciences

FOR YOUR HEALTH
Read Dean Joshua Wynne's weekly column in For Your Health, the School’s digital newsletter delivered to your inbox.

Subscribe to North Dakota Medicine, the School’s quarterly magazine available on the SMHS website: med.und.edu/ or through a print subscription.

To subscribe to For Your Health or North Dakota Medicine, please contact Kristen Peterson, kristen.peterson@UND.edu or 701.777.4305.

If you would like further details about the information in this Community Report or the programs, departments, or research at the School, please contact Brian Schill, assistant director, Office of Alumni & Community Relations, UND School of Medicine & Health Sciences, 701.777.4305, brian.schill@UND.edu

Vital Signs 2019 represents the good-faith effort of the UND School of Medicine & Health Sciences to provide current and accurate information about the School. Numerous sources were used in gathering the information found in this community report. We welcome corrections, which we will incorporate in subsequent issues of Vital Signs.