



2020 COMMUNITY REPORT VITAL SIGNS

Educate. Discover. Serve.



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Dean, University of North Dakota
School of Medicine & Health Sciences

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Operating Officer

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Senior Associate Dean for Medicine & Research

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Designated Institutional Official (DIO)
Director of Graduate Medical Education

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Assistant Dean for Medical Curriculum

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Associate Dean for Teaching and Learning

Donald Warne, M.D., M.P.H.

Associate Dean, Diversity, Equity & Inclusion
Director, Indians Into Medicine (INMED) Program Director,
Master of Public Health Program

Susan Zelewski, M.D.

Assistant Dean, Northeast Campus, Grand Forks

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VA Medical Center and Affiliated Clinics Representative

Dirk Wilke, M.B.A., J.D.

North Dakota Department of Health

Please note that photos in *Vital Signs* showing groups of people were taken before the COVID-19 pandemic had reached the United States.

OVERVIEW PURPOSE STATEMENT

EDUCATE

More than 1,300 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, Wyo., 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
- 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 and its faculty in 2020, the SMHS was given awards for both teaching and service at this year's UND Founders Day awards banquet. The Award for Departmental Excellence in Teaching was given to our Department of Pathology, and the Award for Departmental Excellence in Service was given to the Department of Occupational Therapy.

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. 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, behavioral and mental health, population health, quality improvement, evaluation, health policy and education.



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 15-52-01)

OVERVIEW DEGREE PROGRAMS



The UND School of Medicine & Health Sciences is one of 35 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 18 months 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 and one-half years of clinical training in Bismarck, Fargo, Grand Forks, Minot, or a rural community through the Rural Opportunities in Medical Education (ROME) Program.

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.

This year also marks the inauguration of the world's first doctoral program in Indigenous health, housed in our own Master of Public Health and Indians Into Medicine programs. The program offers specializations in either an academic or applied tracks. To learn more about this first-ever Ph.D. program, see page 17.

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

- 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

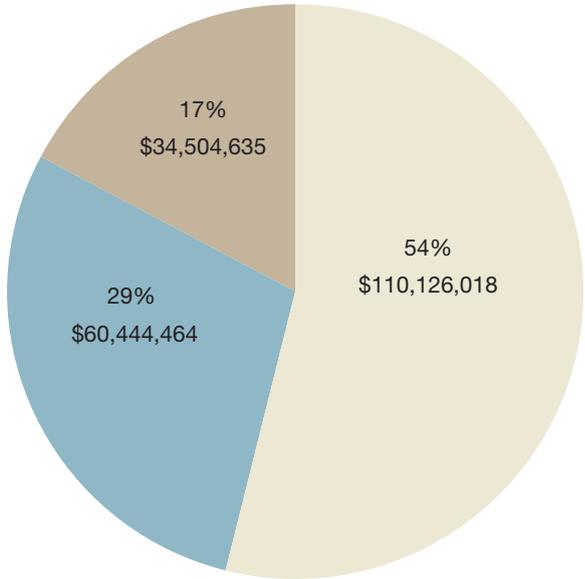


The UND Department of Physician Assistant Studies celebrated its 50th anniversary in 2020. Since its founding, the program has produced nearly 2,000 Physician Assistants trained to practice in rural areas.



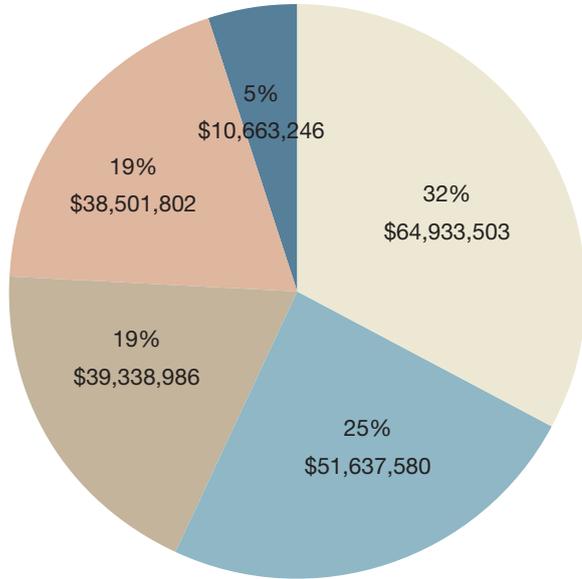
Our biennial budget is \$205,075,117. The majority comes from non-state sources such as grants, contracts, patient revenue, and tuition.

ESTIMATED EXPENDITURES: 2019–2021
TOTAL: \$205,075,117



- Salaries
- Operating & Equipment
- Fringe Benefits

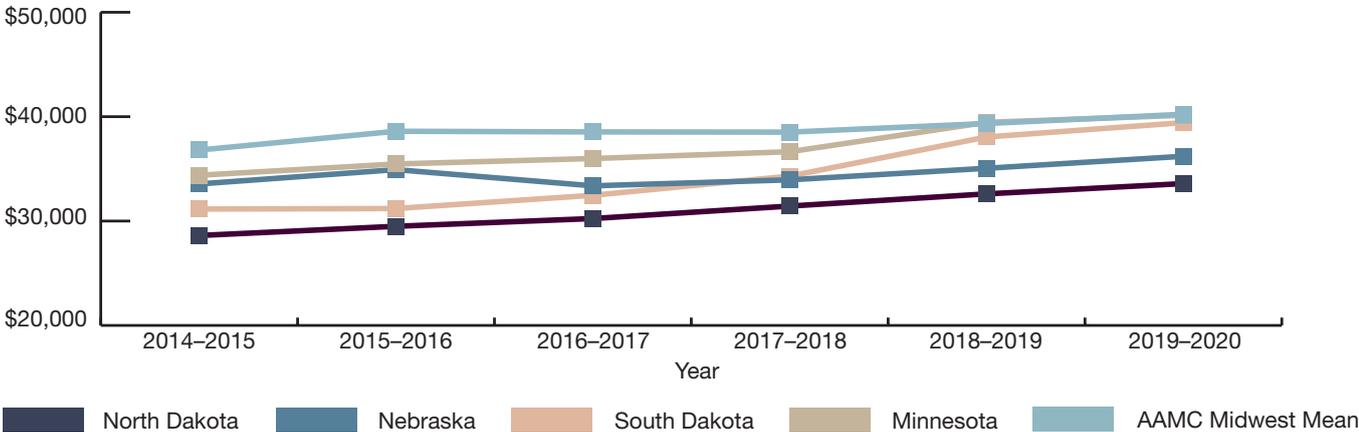
ESTIMATED REVENUE: 2019–2021
TOTAL: \$205,075,117



- State
- Grants & Contracts
- Patient & Education
- Tuition
- Mill Levy

For every \$1 appropriated to the School by the Legislature, the School generates about \$2 in grants, contracts, tuition, and service revenues.

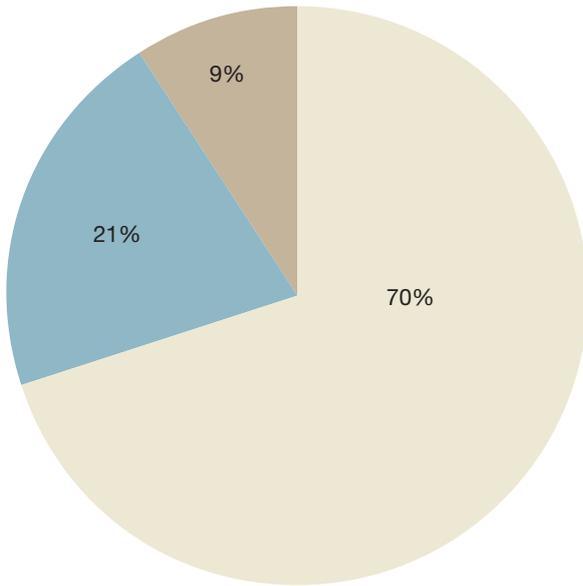
1ST YEAR IN-STATE RESIDENT TUITION & FEE RATES FOR REGIONAL MEDICAL SCHOOLS



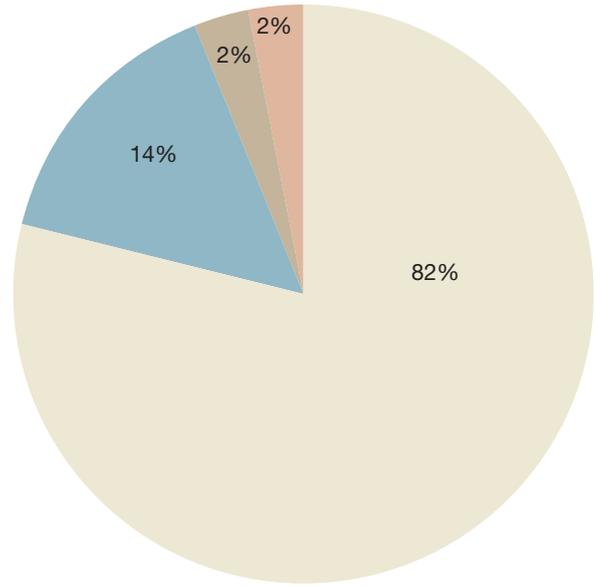
Source: aamc.org/data-reports/reporting-tools/report/tuition-and-student-fees-reports

OVERVIEW PHILANTHROPY

SOURCES OF DONATIONS, FISCAL YEAR 2020



Retained Donors	392
Reengaged Donors	121
New Donors	49
TOTAL DONORS	562

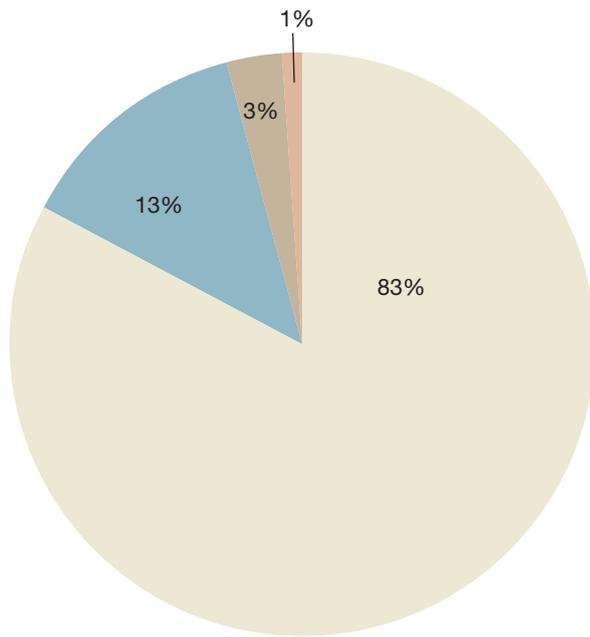


Alumni	461
Friends	75
Corporations/foundations/matching gifts	13
Other	13
TOTAL DONORS	562

First-year medical students show off the stethoscopes they received from our many generous donors to the School's Adopt-A-Med-Student program, which provides students both a necessary tool-of-the-trade and a faculty/physician mentor.



USES OF DONATIONS, FISCAL YEAR 2020



Students	\$ 1,457,537
Priority Needs	234,945
Programs	57,815
Educators (faculty)	4,513
TOTAL	\$ 1,754,810



“It has been a dream of mine to become a doctor since I was a 4-year-old boy who fell off the monkey bars and broke my arm. I’m the first one in my family who is pursuing this career, and your donation is a significant help in my journey.”

—ZACH PODOLL

VELVA, N.D.

MD Class of 2022

FISCAL YEAR 2019

Retained Donors	442
Reengaged Donors	174
New Donors	66
TOTAL DONORS	684

Alumni	541
Friends	103
Other	21
Corporations/foundations/matching gifts	19
TOTAL DONORS	684

Students	\$ 1,363,886
Priority Needs	232,993
Educators (faculty)	114,513
Programs	108,629
TOTAL	\$ 1,820,021

FISCAL YEAR 2018

Retained Donors	377
Reengaged Donors	133
New Donors	65
TOTAL DONORS	575

Alumni	435
Friends	95
Other	26
Corporations/foundations/matching gifts	19
TOTAL DONORS	575

Students	\$ 1,584,263
Programs	2,564,300
Priority Needs	2,350,432
Educators (faculty)	136,800
TOTAL	\$ 6,635,795

EDUCATE STUDENT ENROLLMENT

STUDENT ENROLLMENTS BY MAJOR, FALL 2020*

GRADUATE PROGRAMS

Biochemistry and Molecular Biology (Graduate—Master and Doctoral, includes Pathology)	1
Biomedical Sciences (Graduate—Master and Doctoral)	26
Clinical and Translational Science (Graduate—Master and Doctoral)	6
TOTAL	33

MEDICAL DOCTOR (MD) PROGRAM

Year 1 Class of 2024	70
Year 2 Class of 2023	75
Year 3 Class of 2022	77
Year 4 Class of 2021	75
TOTAL	297

Post-MD Degree (Residency)

(Training in family medicine, geriatric medicine, hospital medicine, internal medicine, psychiatry, surgery, orthopedic surgery, and transitional)

TOTAL	158
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HEALTH SCIENCES

Athletic Training	
Pre–Athletic Training	16
Bachelor of Science	26
Medical Laboratory Science	
Pre–Medical Laboratory Science	76
Certificate	99
Bachelor of Science	94
Master of Science	55
Occupational Therapy	
Pre–Occupational Therapy	114
Master of Occupational Therapy	59
Occupational Therapy Doctorate	112
Physical Therapy	
Pre–Physical Therapy	187
Doctoral	153
Physician Assistant (Graduate—Master)	63
Public Health	
Master of Public Health	55
Indigenous Health Ph.D.	21
TOTAL	1,130

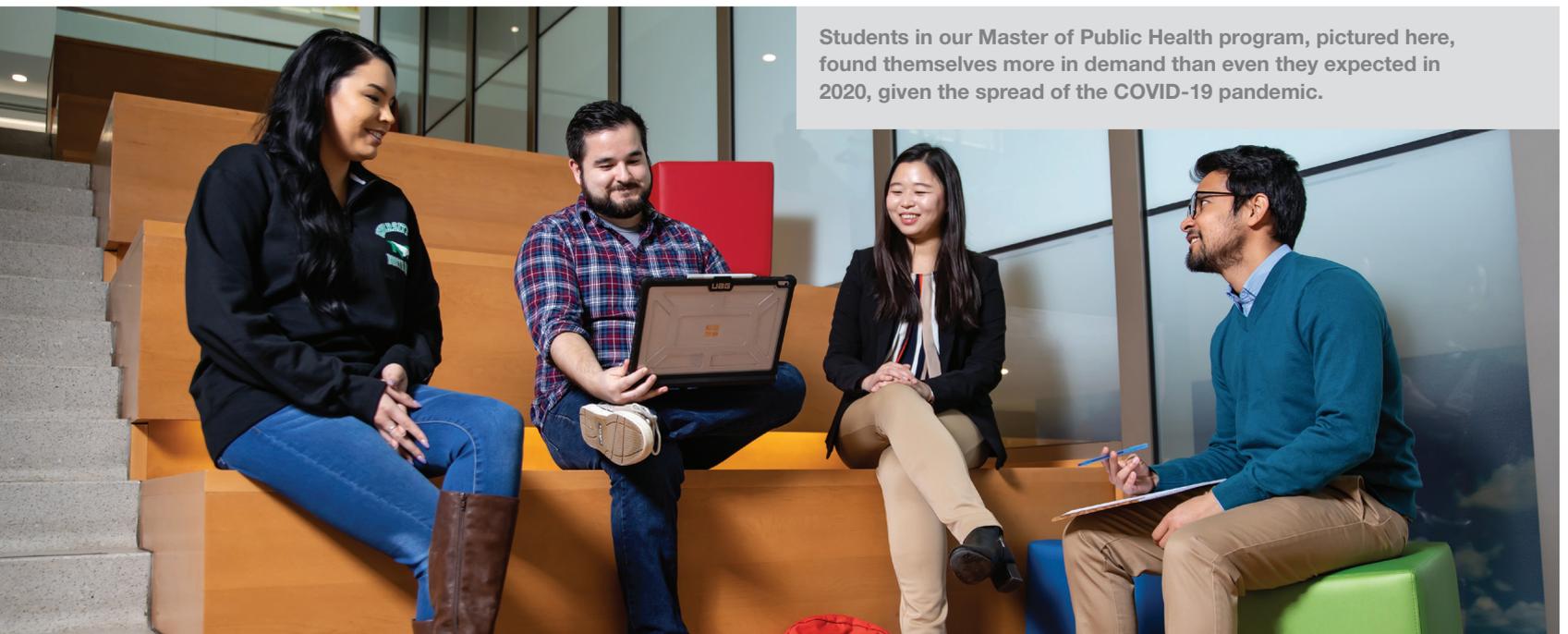
The School’s faculty also teach courses in biomedical sciences (anatomy, physiology, pharmacology, biochemistry, microbiology, immunology) that enroll over 1,000 undergraduate students each year who will become physicians, therapists, nurses, dietitians, exercise scientists, public health professionals,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

*Official fall 2020 enrollment figures per the University of North Dakota office of Analytics & Planning.

Students in our Master of Public Health program, pictured here, found themselves more in demand than even they expected in 2020, given the spread of the COVID-19 pandemic.



EDUCATE EXAM PERFORMANCE



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.

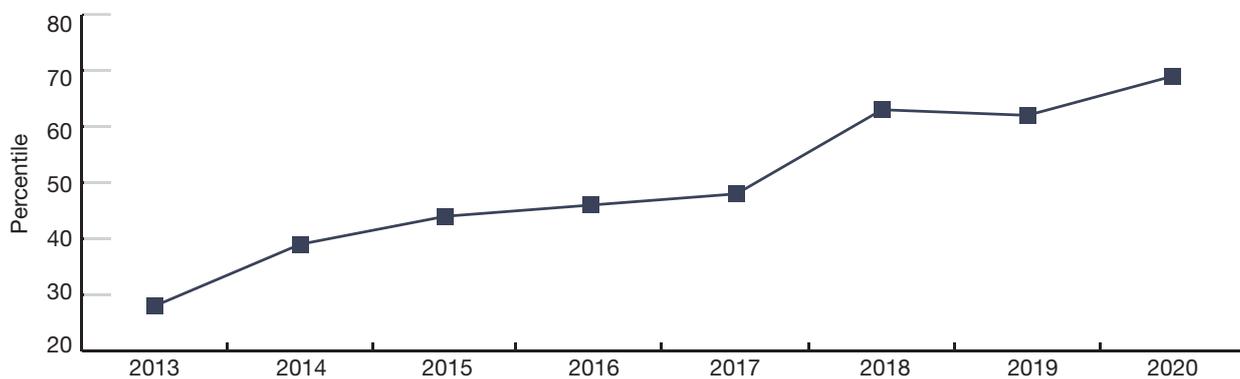
STUDENT PERFORMANCE ON NATIONALLY RECOGNIZED EXAMS

PROGRAM	UND SMHS PASS RATE	NATIONAL PASS RATE
Athletic Training	87%	78%
Medical Laboratory Science	97%	75%
Occupational Therapy	100%	98%
Physical Therapy	98%	93%
Physician Assistant	93%	93%
Medicine		
Step 1	96%	97%
Step 2		
Clinical Knowledge	97%	98%
Clinical Skills	94%	95%
Step 3	99%	98%

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)



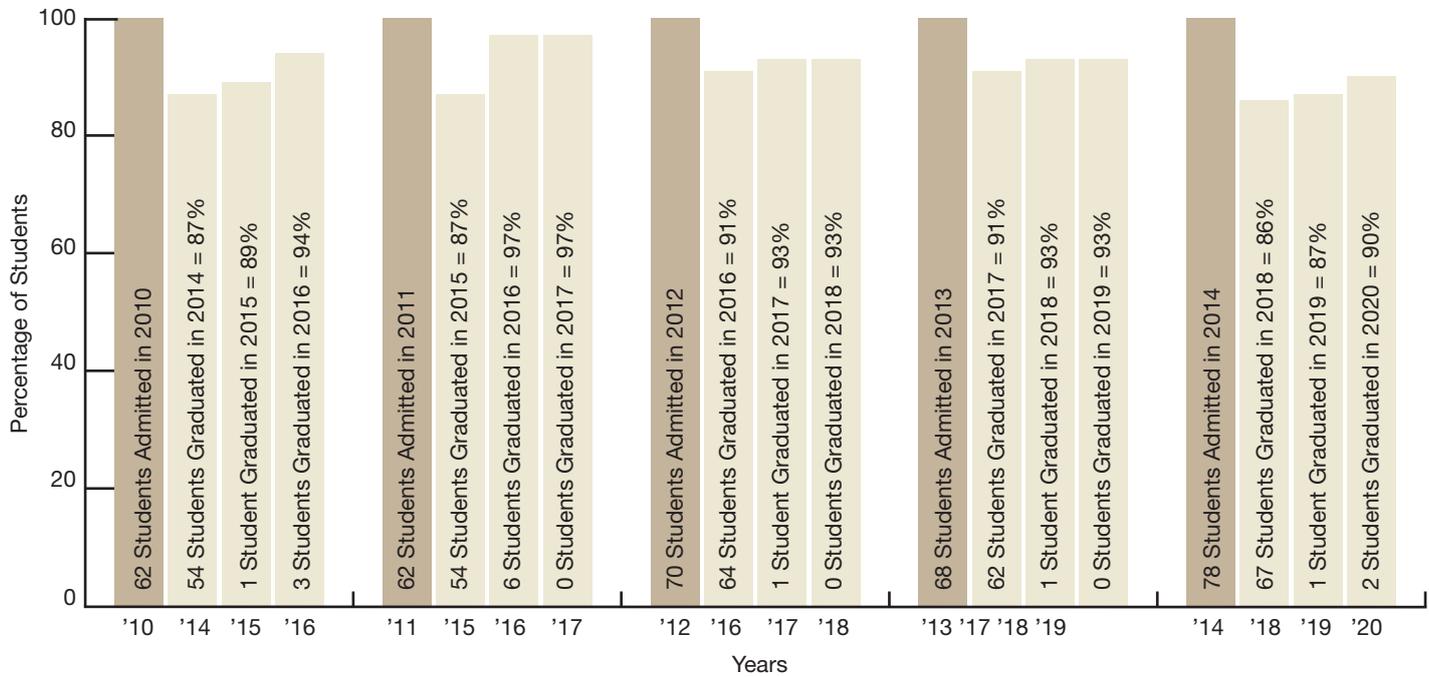
Source: Missions Management Tool, 2020 AAMC

EDUCATE COMPLETION RATES

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.

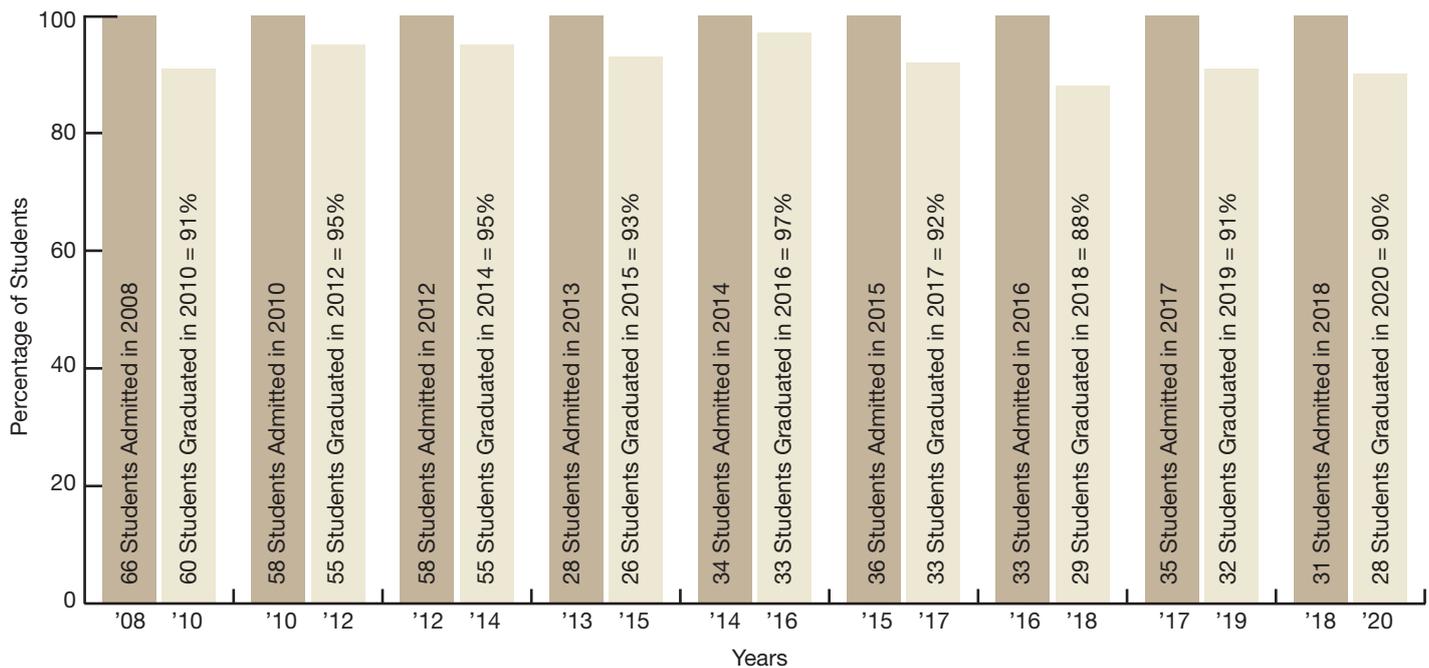
DOCTOR OF MEDICINE (FOUR-YEAR PROGRAM)

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)

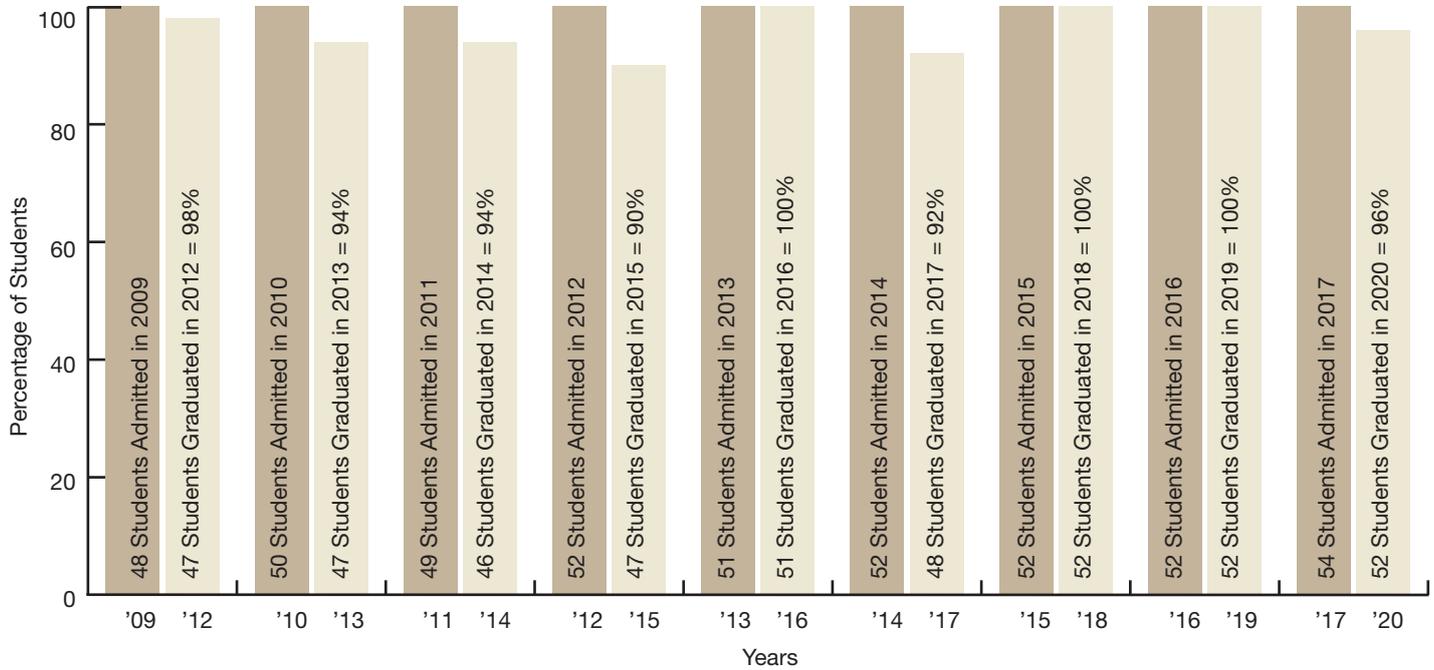
Beginning in 2006, the program accepted a new class every other year. It has returned to an annual admission structure effective with the class matriculating in 2013.



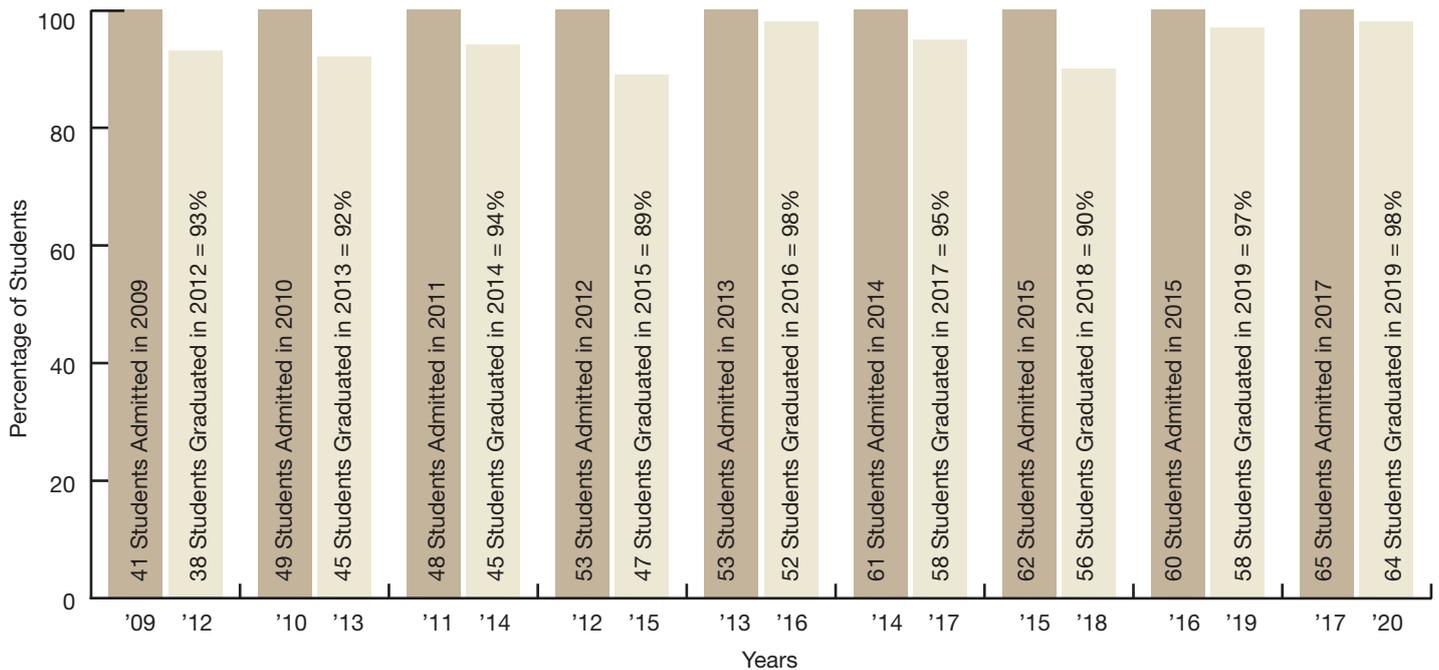


Our goal is to exceed the national benchmark for completion.

DOCTOR OF PHYSICAL THERAPY (THREE-YEAR PROGRAM)

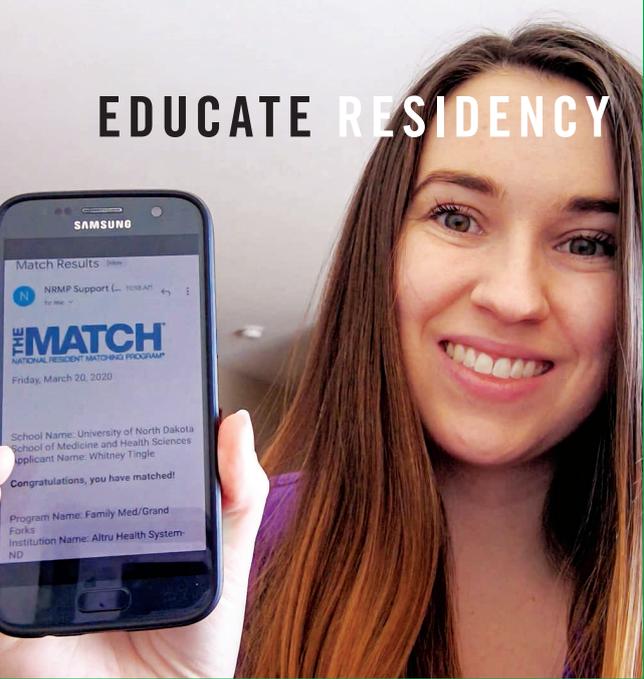


MASTER OF OCCUPATIONAL THERAPY (THREE-YEAR PROGRAM)



* Number Graduated/Number Admitted = Completion Rate

EDUCATE RESIDENCY



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:

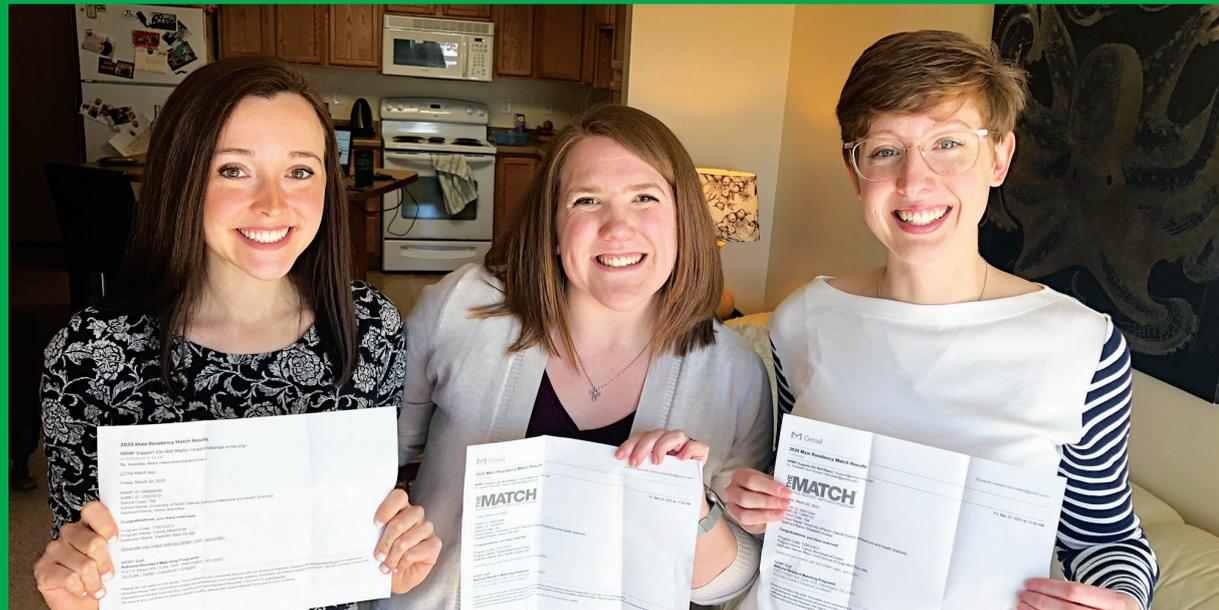
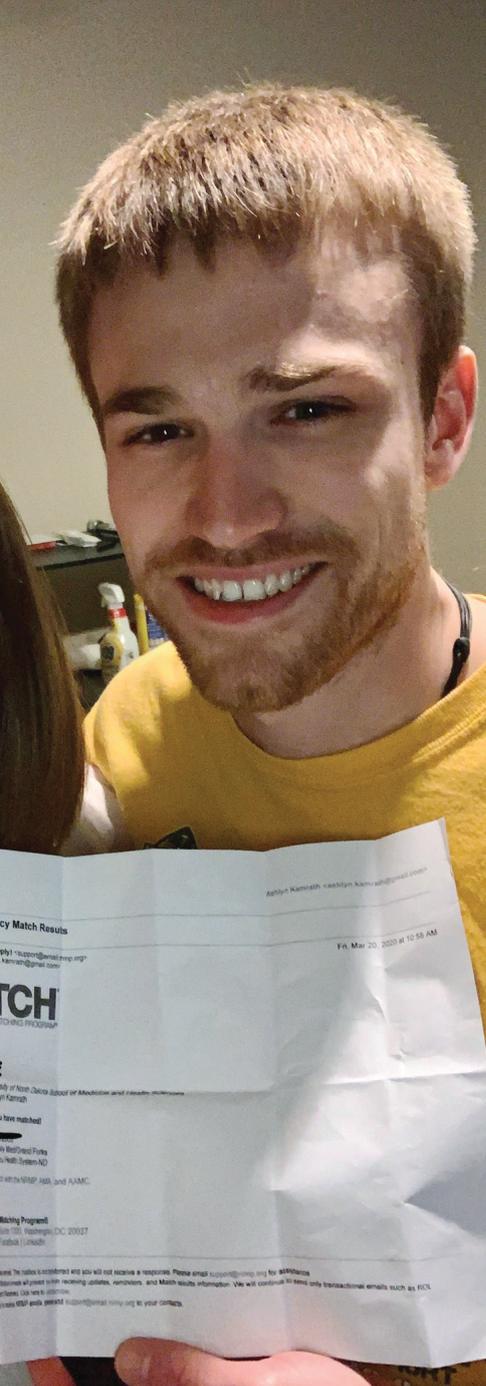
- UND Family Medicine in Bismarck (Fort Yates), Fargo (Valley City, Detroit Lakes, and Wahpeton), Hettinger,

Minot (Garrison), and Williston

- UND Psychiatry (Rural Outreach and Telemedicine)
- UND Surgery Rural Track (Minot and Fargo, N.D., and Perham, Minn.)

* The Family Medicine Program in Grand Forks is sponsored by Altru Health System. The Family Medicine and Orthopedic Surgery Programs in Fargo are sponsored by Sanford Health.

** 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 2020 Main Residency Match was the largest in NRMP history. A record-high 40,084 applicants submitted program choices for 37,256 positions,

the most ever offered in the Match. The number of available first-year (PGY-1) positions rose to 34,266, an increase of 2,072 (6.4%) over 2019.

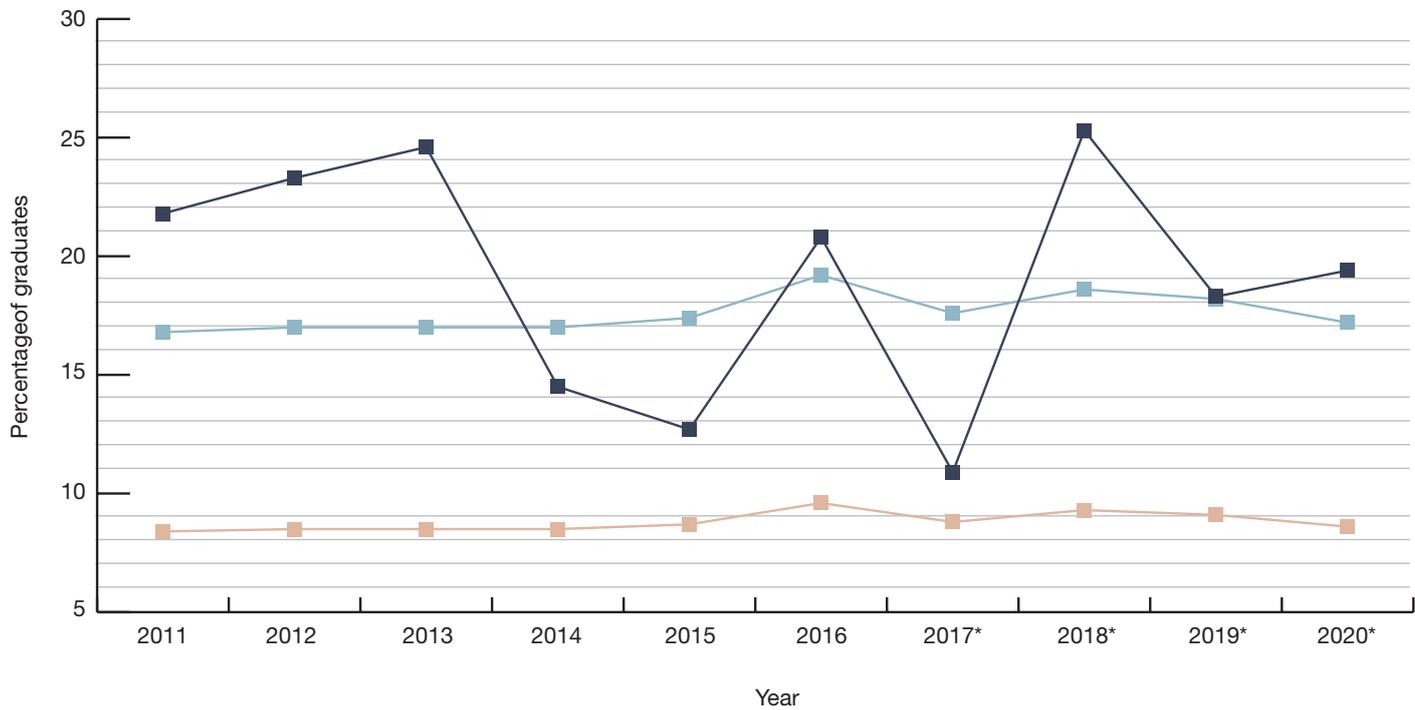
This year, 72 UND School of Medicine & Health Sciences students successfully matched with residency programs. In total, 55 percent of the MD Class of 2020 matched into primary care specialties, with 14 of 72 (19.4 percent) of the cohort alone set to enter family medicine, a figure more than double the national average of students matching into family medicine.

EDUCATE FAMILY RESIDENCY

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 2011–2020



Average 2011–2020

- UND SMHS 19.2%
- NATIONAL 8.8%
- UND SMHS Goal (double the national avg.)

Sources:
 Medical Education Division
 Missions Management Tool, 2020, AAMC
 American Academy of Family Physicians
 Family Medicine, STFM Journal

Department of Family & Community
 Medicine
 University of North Dakota School of
 Medicine & Health Sciences 6/20
 *U.S. seniors successfully matching in the
 National Resident Matching Program



EDUCATE RETENTION

More than 700 practicing physicians now serving North Dakota communities received their education at UND.

PERCENTAGES OF PHYSICIANS PRACTICING IN NORTH DAKOTA WHO GRADUATED FROM THE UND SCHOOL OF MEDICINE & HEALTH SCIENCES OR COMPLETED AN IN-STATE RESIDENCY

All Specialties	46%
Family Medicine	74%
Internal Medicine	41%
Obstetrics and Gynecology	66%
Pediatrics	41%
Psychiatry	41%

Source: Medical Marketing Service. (2019). *AMA Master File*, 2019. [Data file]. Wood Dale, Ill. Medical Marketing Service.

PERCENTAGES OF OTHER HEALTH CARE PROVIDERS PRACTICING IN NORTH DAKOTA WHO ARE GRADUATES OF THE UND SCHOOL OF MEDICINE & HEALTH SCIENCES

Athletic Trainers	30%
Occupational Therapists	52%
Medical Laboratory Scientists	47%
Physician Assistants	39%
Physical Therapists	50%

Data were collected from North Dakota state licensing boards and academic departments.

SCHOOL OF MEDICINE & HEALTH SCIENCES ALUMNI

Medical Laboratory Scientists	2,498
Athletic Trainers	274
Physicians	2,315
Physical Therapists	1,968
Occupational Therapists	2,063
Physician Assistants	1,901
Public Health Professionals	63
Biomedical Sciences	242 (since 1995)

TOTAL 11,324

UND SMHS MEDICAL DOCTOR PROGRAM OUTCOMES

METRIC	PERCENTILE RANK
Graduates entering primary care	94th
Graduates practicing in rural areas	99th
Graduates practicing in family medicine	99th
Fraction of class identifying as American Indian	100th

Source: Missions Management tool, 2020 AAMC



EDUCATE PIPELINE PROGRAMS

GROWING OUR OWN: INNOVATIVE PROGRAMS TO PRODUCE HEALTH CARE PROVIDERS FOR NORTH DAKOTA

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, 27 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.

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. An important feature of the new MILE is that students develop a panel of patients whom they follow throughout the year, accompanying them to consultant 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 healthcare careers from their local healthcare providers through hands-on, interactive activities. Since the program's start in 2010, 7,866 students, 3,050 volunteers, and dozens of local communities have participated in 104 Scrubs Camps across the state. In 2019–2020 only eight Scrubs Camps were held due to the COVID-19 pandemic; an additional eight Camps had to be cancelled.

R-COOL-Health Scrubs Academy

Since the annual Scrubs Academy started in 2011, 512 students have attended from numerous communities throughout North Dakota (375 students from rural communities). Students participate in a dissection, explore the inside of a 32-foot inflatable colon, and learn more about anatomy, medical laboratory science, emergency medical services, mental health, occupational therapy, physical therapy, public health, nutrition, music therapy, physician assistant studies, radiology, veterinary medicine, and other health careers. As part of the Academy, students receive Friends and Family CPR training and become 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 are also given the opportunity to explore and learn more about the School of Medicine & Health Sciences, the UND campus, and the Grand Forks community. The 2020 Scrubs Academy was unable to be held due to the COVID-19 pandemic.

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 23,700 participants reaching all 53 North Dakota counties. Of that total, more than 13,750 students have participated in health career awareness events and activities, and more than 130 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 has been successful in helping attract students to UND. In fact, 12 members of the MD Class of 2023 are INBRE summer research veterans!



WORLD'S FIRST INDIGENOUS HEALTH PH.D.

The North Dakota State Board of Higher Education made history in 2020 by approving the world's first doctoral program in Indigenous health to be housed at the UND School of Medicine & Health Sciences (SMHS).

The Ph.D. degree launched in May, and the program's inaugural class consists of 21 students, said Dr. Donald Warne, director of the Indians Into Medicine (INMED) and Master of Public Health (MPH) programs at UND, who led the push for the new program.

"There is a need for well-trained administrators with a deep understanding of Indigenous health issues," Warne said. "Up until now, there were no training programs like that in the world."

Warne, who also serves as professor of family and community medicine as well as associate dean of diversity, equity and inclusion at the SMHS, has a history of "firsts."

As of May 2020, INMED has graduated 250 American Indian/Alaska Native physicians, making it the most successful Indigenous

medical training program internationally and in history. The new program will be linked to the INMED and MPH programs.

"This will be a high value degree that's unique in the nation," Warne said. "We have eight Indigenous health scholars at the School, which is an unprecedented number. Through national and international collaborations, we will offer distance education opportunities for students across North Dakota, the region and around the world."

"I am so proud of the University of North Dakota for taking leadership on this important endeavor," said Dr. Nicole Redvers, assistant professor of family & community medicine and a First Nations person from Canada.

"This program will lead the globe, integrating both Indigenous and Western knowledge to prepare a new generation of health scholars to tackle the health issues facing Indigenous people everywhere. I am very proud to be a part of this program, and look forward to working toward better health for our people."

Dean of the SMHS Dr. Joshua Wynne agreed.

"Over his career, Dr. Warne has been a tireless advocate to ensure that our health care delivery team — both at the state and national level — reflects the rich diversity of our populations," Wynne said. "This new program offering at the UND School of Medicine & Health Sciences is another big step in developing a truly inclusive and equitable makeup of those involved in the health care delivery enterprise."

There is a global need for advanced training in Indigenous health, and Warne expects robust demand for graduates of the program.

"At the international level, the coordination of health needs across Indigenous populations is greater now than at any point in history," Warne said, adding that the Indian Health Service, Centers for Disease Control and Prevention, and National Institutes of Health all need well-trained administrators with a deep understanding of Indigenous health issues.

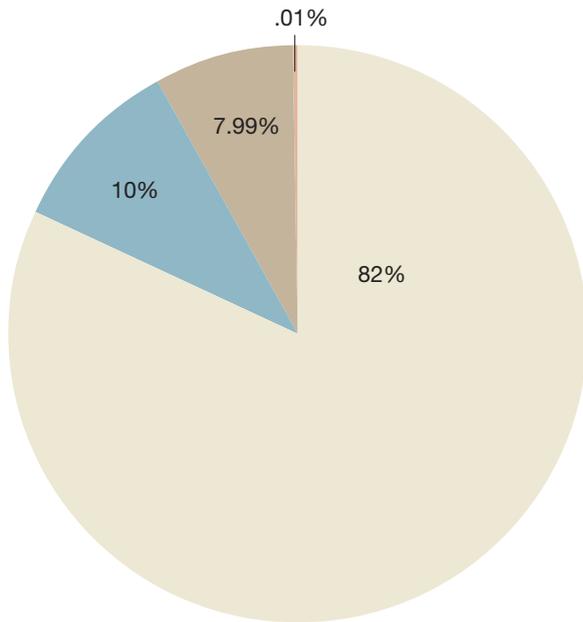
DISCOVER



For fiscal year 2020 (July 1, 2019–June 30, 2020), total research funding was \$30,805,926. Of the 35 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.



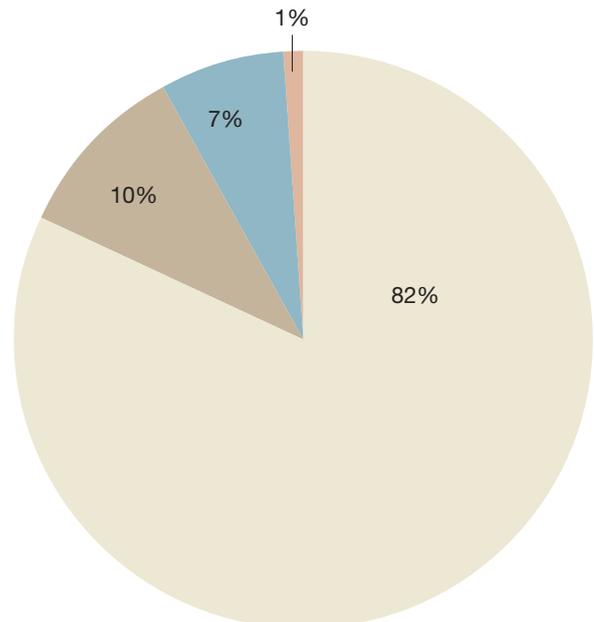
FY 2020 SPONSORED PROJECT AWARDS BY SPONSOR TYPE



Total number of proposals 155
 Total number of awards 102

TOTAL FUNDING \$30,805,926

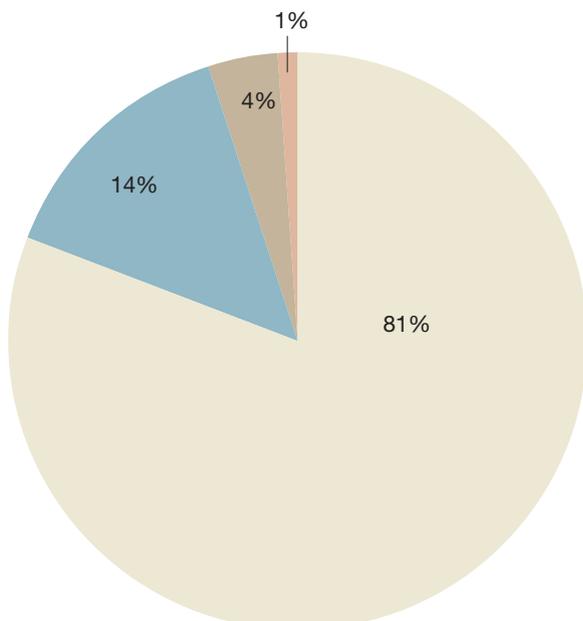
FY 2019 SPONSORED PROJECT AWARDS BY SPONSOR TYPE



Total number of proposals 156
 Total number of awards 99

TOTAL FUNDING \$20,785,319

FY 2018 SPONSORED PROJECT AWARDS BY SPONSOR TYPE



Total number of proposals 147
 Total number of awards 102

TOTAL FUNDING \$25,366,758

- Federal
- State
- Foundation
- Other (Private Nonprofit, International, Private For Profit, Other Governmental, etc.)

Aside from some major grants given to our Center for Rural Health in 2020, the school received funding for research in the areas of cancer, Alzheimer's disease, and various infectious diseases, including COVID-19.



SERVE CENTER FOR RURAL HEALTH

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. CRH provides technical assistance to all 38 rural North Dakota hospitals, 36 of which are Critical Access Hospitals. CRH works closely with other groups too, such as public health, emergency medical services (EMS), rural primary care clinics (such as Rural Health Clinics), behavioral and mental health, and tribal health. Assistance is directed at improving access to quality healthcare services, the viability of rural health systems, and community engagement. CRH administers a variety of funding sources used to support and assist rural communities in North Dakota totaling:

- \$10,400,312 for FY2020

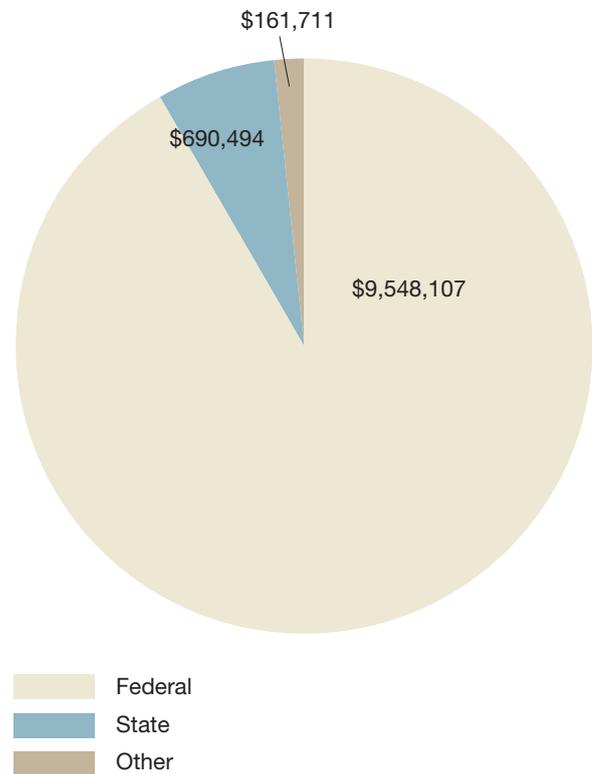
FY 2020*

Federal Grants: \$9,548,107 CRH supports 21 grants in this category, including:

- Two national programs that focus on indigenous populations: the National Indigenous Elder Justice Initiative (NIEJI) and the National Resource Center on Native American Aging (NRCNAA). These programs focus on improving health outcomes and the wellbeing of American Indian, Alaska Native, and Native Hawaiian Elders. 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. CRH works with nearly half of the 574 federally recognized tribes. NRCNAA has expanded to include a focus on urban-based Native Elders and administers an effort to expand Qualified Service Providers into reservation communities.
- Nationally sponsored projects like the Rural Health Information Hub and Rural Health Research Gateway provide resources, information, and dissemination of information regarding the latest rural health research and programs.
- CRH receives federal funding for other programs that support healthcare, 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 healthcare models; and engage communities.

State Grants: \$690,494 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: \$161,711 CRH administers and supports other sponsored contracts that serve and enhance rural health in the state and region. Initiatives include Truserv, 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 2019

Federal Grants	\$ 6,611,248
State Grants	406,747
Other Grants	881,586
TOTAL:	\$ 7,899,581

FY 2018

Federal Grants	\$ 5,508,512
State Grants	476,747
Other Grants	1,644,328
TOTAL:	\$ 7,629,587

* In Spring 2020, UND's Center for Rural Health received a substantial SHIP COVID-19 grant award (\$3,035,412). This one-time funding was provided by HRSA under the Coronavirus Air, Relief, and Economic Security (CARES) Act. The funding was specifically designated to support COVID-19 activities in North Dakota's 36 Critical Access Hospitals.

EACH YEAR UND SCHOOL OF MEDICINE & HEALTH SCIENCES FACULTY, STAFF, AND STUDENTS ENGAGE IN MANY PROJECTS THAT SEEK TO IMPROVE THE COMMUNITIES IN WHICH THEY LIVE AND WORK. HERE ARE A FEW HIGHLIGHTS FOR 2020:

UND designated state's first cardiac ready campus by North Dakota Department of Health

In February, the North Dakota Department of Health (NDDoH) designated the University of North Dakota the first Cardiac-Ready Campus in the state. In 2016, the North Dakota Division of Emergency Medical Systems & Trauma partnered with the American Heart Association (AHA) to provide the Cardiac-Ready Community program through the North Dakota Cardiac System of Care. The program, which promotes the AHA's "Chain of Survival," is designed to promote survival from a cardiac event by making sure communities are prepared to respond and assist if an individual has a cardiac event. The effort was led by Dr. Bryan Delage, chair of UND's Cardiac-Ready Campus committee and faculty in the School's Department of Family & Community Medicine. Requirements to keep the Cardiac-Ready program going throughout the designation period include continued community leadership, an ongoing community awareness campaign, additional blood pressure screenings (including referrals for blood pressure management and education on lifestyle change), continuing education of the community on CPR and automatic external defibrillator (AED) use, expansion of public access to AEDs, and development of a performance improvement program.



Bryan Delage, M.D.

SMHS, Altru Health System team up to produce COVID-19 testing medium

In April, researchers at Altru Health System and the UND School of Medicine & Health Sciences partnered on the production of a laboratory medium useful for testing COVID-19. Marijo Roiko, Ph.D., microbiology program director in the Department of Pathology and Laboratory Services for Altru, and UND Department of Biomedical Sciences Associate Professors Catherine Brissette, Ph.D., and Matthew Nilles, Ph.D., produced a viral transport media (VTM) solution used to maintain the stability of a clinical specimen from the point of collection to laboratory testing. In laboratory science, VTM is a liquid medium used for collection, transport, maintenance and long-term freezer storage of clinical specimens containing viruses, including COVID-19. The UND-Altru team produced enough VTM for more than 1,600 COVID-19 tests. According to the researchers, the locally produced medium was developed from reagents available in laboratories at the two institutions. The compound was vetted by quality assurance testing at Altru and the North Dakota Public Health Laboratory.



Catherine Brissette, Ph.D.



Matthew Nilles, Ph.D.

UND School of Medicine & Health Sciences expands RuralMed health workforce retention program

The UND School of Medicine & Health Sciences expanded its state-sponsored RuralMed Program in 2020.

Established in concert with the North Dakota Legislative Assembly in 2009-10, RuralMed was designed to increase the number of new physicians practicing in rural North Dakota. Here's how it works: UND medical students apply for the program during any of their four years in medical school and, if accepted, see the cost of their tuition paid in return for five years of practice in a rural North Dakota hospital or clinic.

At the program's inception, student enrollees were required to pursue a post-graduate residency in family medicine. Internal medicine and general surgery were added later. Today, however, that pool of specialties is being expanded to include all medical specialties.

Like much of the nation, North Dakota is experiencing a shortage of physicians, particularly in rural areas. The consequences of this shortage, which include overworked providers and limited access to health care for North Dakotans of all backgrounds, have been especially salient during an ongoing global pandemic.

"The RuralMed program has given a huge recruitment boost to

communities with physician shortages, while at the same time reducing student loan debt, which can be a significant barrier to physicians choosing rural practice opportunities," noted Dave Molmen, interim CEO of Altru Health System and chair of the SMHS Advisory Council.

Molmen's colleague Casey Ryan, a physician and member of North Dakota's State Board of Higher Education, agreed.

"The RuralMed Program is innovative and benefits people living in rural North Dakota communities by stabilizing often short-staffed health systems," Ryan said. "The impact these providers make in their communities is huge, and will continue to be for the foreseeable future. It's the right thing to do."

To date, nine RuralMed graduates from UND are practicing in rural North Dakota, and 18 more enrollees are scheduled to practice in rural parts of the state soon.



Dave Molmen



Casey Ryan, M.D.

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

Although COVID-19 meant that UND was unable to hold its annual Employee Recognition Ceremony in May, the University still honored employees' work anniversaries. As usual, many of these honorees are based out of the SMHS, including the following honorees:

45-YEAR HONOREES

Mary Coleman, Medical Laboratory Science

40-YEAR HONOREES

Richard Clarens, Jr., Family & Community Medicine

Meridee Danks, Physical Therapy

30-YEAR HONOREES

Kristi Hofer, Southeast Campus – Fargo

Mary Johnson, Continuing Medical Education

Marilyn Klug, Population Health

Barry Pederson, Center for Rural Health

Kathleen Spencer, Center for Rural Health

25-YEAR HONOREES

Dawn Drake, ND STAR/Simulation Center

James Foster, Biomedical Sciences

Diane Hillebrand, Research Affairs

Susan Jenó, Physical Therapy

David Relling, Physical Therapy

Mark Romanick, Physical Therapy

Deborah Todhunter, Education Resources

Makoto Tsuchiya, Sports Medicine

20-YEAR HONOREES

Gary Betting, Bismarck Center for Family Medicine

Jane Dunlevy, Biomedical Sciences

Jan Gunderson, Library Health Sciences

Denelle Kees, Biomedical Sciences

Cathy Martsolf, Education Resources

Kevin O'Brien, Physical Therapy

James Porter, Student Affairs & Admissions

Jacqueline Quisno, Bismarck Center for Family Medicine

Holly Wolf, Education Resources

15-YEAR HONOREES

Jon Allen, ND STAR/Simulation Center

Tonya Brey, Minot Center for Family Medicine

Jacqueline Gray, Center for Rural Health

Jennifer Hershey, Biomedical Sciences

Kevin Kern, Education Resources

Sabrina Kraus, Minot Center for Family Medicine

Nancy Marcott, Education Resources

Jeanie McHugo, Physician Assistant Studies

Jodi Myrvik, Bismarck Center for Family Medicine

Monica Paczkowski, Bismarck Center for Family Medicine

Robert Porter, Medical Laboratory Science

Debra Walker, Psychiatry and Behavioral Science

Joshua Wynne, Dean's Office

Xudong Zhou, Pathology

10-YEAR HONOREES

Terrilyn Braasch, Minot Center for Family Medicine

Elizabeth Bradshaw, Family & Community Medicine

Joshua Burbank, Family & Community Medicine

Sandra Christianson, Pathology

Gilbert Falcon, Minot Center for Family Medicine

Mikhail Golovko, Biomedical Sciences

Svetlana Golovko, Biomedical Sciences

Brianne Melicher, Pediatrics

Nicole Miller, Biomedical Sciences

Nicole Pape, Center for Rural Health

Sejal Parikh, Psychiatry and Behavioral Science

Kirsten Peterson, ND STAR/Simulation Center

Chernet Tessema, Biomedical Sciences

Beverly Voigt, Physical Therapy

Terry Waite, Education Resources

Tass Wood, Dean's Office

5-YEAR HONOREES

Mary Aaland, Surgery

Syed Ali, Geriatrics

Arden Anderson, Biomedical Sciences

Shelby Beyer, Minot Center for Family Medicine

Sara Bjerke, Sports Medicine

Cody Boyle, Biomedical Sciences

Matthew Brufodt, Center for Rural Health

Roberta Carrlson, Occupational Therapy

Alicia Champagne, Sports Medicine

Bryan Delage, Family & Community Medicine

Jon Dickson, Education Resources

Loralee Feininger, Minot Center for Family Medicine

Mathew Gerving, Internal Medicine

Jahid Hamchary, Pathology

Nicole Harris, Occupational Therapy

Kara Hendrickson, Physician Assistant Studies

Junguk Hur, Biomedical Sciences

Donald Jurivich, Geriatrics

Elise Klein, Minot Center for Family Medicine

Teresa Klein, Psychiatry and Behavioral Science

Jacinta-Jon Klindworth, Bismarck Center for Family Medicine

Zachary Lunak, Medical Laboratory Science

Andrew Lundstrom, ND STAR/Simulation Center

Riley McLean, Bismarck Center for Family Medicine

Kumi Nagamoto-Combs, Biomedical Sciences

Robert Olson, Psychiatry and Behavioral Science

Tana Ostlie, ND STAR/Simulation Center

Hannah Peterson, Minot Center for Family Medicine

Samantha Peterson, Medical Laboratory Science

Trudy Riehl, Surgery

Peter Sandroni, Minot Center for Family Medicine

Gary Schwartz, Population Health

Nicholas Smith, Pathology

Lisa Steinbrink, Surgery

Casey Swanson, Geriatrics

Vanessa Taylor, Surgery

Susan Zelewski, Northeast Campus Grand Forks

FACULTY & STAFF TURNOVER

The faculty turnover rate (faculty who left their jobs) at the UND SMHS for FY 2020 was 5.4 percent. The turnover rate for all North Dakota University System (NDUS) faculty for that same year was 13 percent.

Likewise, the staff turnover rate at the UND SMHS for FY 2020 was 11.6 percent while the rate for all NDUS staff was 13.5 percent.

In FYs 16, 17, 19 and 20, the University of North Dakota offered a voluntary separation program (VSIP) for both faculty and staff. Six SMHS employees accepted voluntary separation in FY20.

FISCAL YEAR 2020 BENEFITED* FACULTY AND STAFF

Total Benefited	Total Benefited
Faculty – 185	Staff – 250
Full-time – 174	Full-time – 237
Part-time – 11	Part-time – 13
Turnover Count – 10	Turnover Count – 29
VSIP – 1	VSIP – 5

FISCAL YEAR 2019 BENEFITED* FACULTY AND STAFF

Total Benefited	Total Benefited
Faculty – 185	Staff – 249
Full-time – 174	Full-time – 236
Part-time – 11	Part-time – 13

* Benefited appointment is 20 hours/week or more.

JOGGIN' WITH JOSH 2020

Being mindful of COVID-19, this year's Joggin' with Josh walk/run was held virtually, for the first time ever, on Saturday, Sept. 12. More than 190 people registered for the tenth anniversary of this event! Some participants even shared images of themselves out jogging or walking in a "social-distancing" sort of way.



EDUCATE. DISCOVER. SERVE.

Keep your finger on the pulse of the latest news and events from the UND School of Medicine & 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.

NORTH DAKOTA MEDICINE

Subscribe to *North Dakota Medicine*, the School's quarterly magazine available on the SMHS website: med.und.edu/nd-medicine 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.



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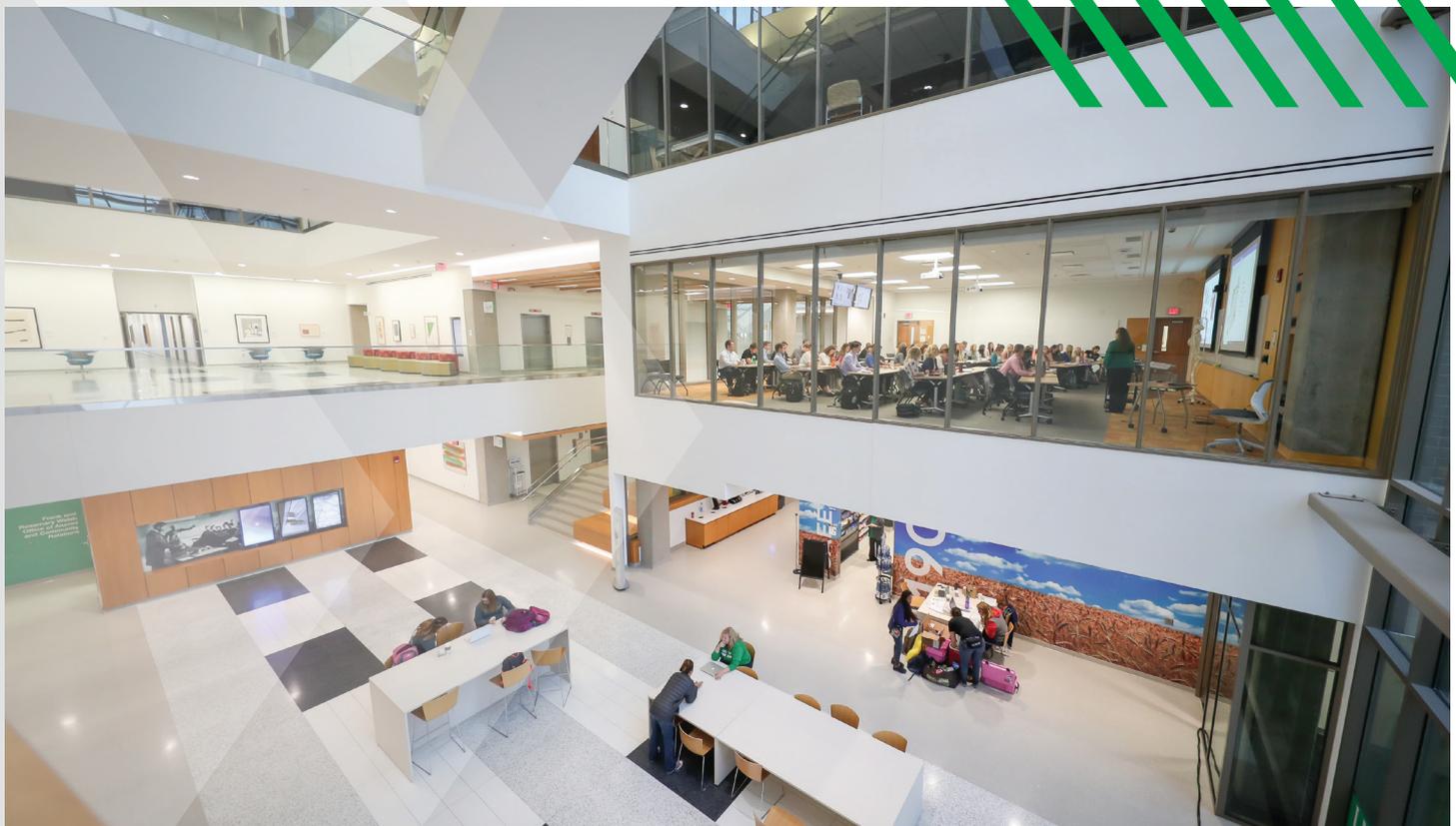
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If you would like further details about the information in this Community Report or the programs, departments, or research at the School, please contact Brian Schill, interim director, Office of Alumni & Community Relations, UND School of Medicine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

Vital Signs 2020 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*.