

2022 COMMUNITY REPORT VITAL SIGNS

Educate.
Discover.
Serve.



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North Dakota Department of Health

ACCOMPLISHMENTS

ESTIMATED
REVENUE

2021–2023

\$220,300,000

page 6

UND SMHS*
ALUMNI

11,945

page 11

SPONSORED
PROJECT

AWARDS FY22

\$48,651,717

page 18

* University of North Dakota School of Medicine & Health Sciences

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, Director
Office of Alumni & Community Relations
UND School of Medicine & Health Sciences

701.777.6048 | brian.schill@UND.edu.

Vital Signs 2022 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*.



STUDENTS AND FACULTY FROM OUR DEPARTMENT OF PHYSICAL THERAPY PRACTICE CLIENT REHABILITATION IN THE UND SCHOOL OF MEDICINE & HEALTH SCIENCES BUILDING.

WHAT'S INSIDE

4 PURPOSE STATEMENT

6 FINANCE

BUDGET
TUITION
PHILANTHROPY

8 EDUCATE

DEGREE PROGRAMS
STUDENT ENROLLMENT
PASS RATES
RETENTION
COMPLETION RATES
MATCH DAY
FAMILY MEDICINE RESIDENCY
PATHWAY PROGRAMS

18 DISCOVER

PROJECT AWARDS

21 SERVE

CENTER FOR RURAL HEALTH
FACULTY/STAFF/STUDENTS
WORKFORCE
JOGGIN' WITH JOSH

EDUCATE. DISCOVER. SERVE.

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


[@UNDSMHS](#)

FOR YOUR HEALTH

Read Dean Joshua Wynne's weekly column in For Your Health, the School's digital newsletter delivered to your inbox: blogs.UND.edu/for-your-health

NORTH DAKOTA MEDICINE

University of North Dakota School of Medicine & Health Sciences

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.



“The primary purpose of the University of North Dakota School of Medicine and Health Sciences is to educate physicians and other health professionals for subsequent service in North Dakota and to enhance the quality of life of its people. 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)



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 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 2022, Department of Biomedical Sciences Assistant Professor Kumi Nagamoto Combs was awarded a \$1.8 million, five-year R01 grant through the National Institute of Allergy and Infectious Diseases of the National Institutes of Health to explore the link between food allergies and neurodegeneration.

Read more about our research programs on page 20.



SERVE

The School improves the health and health care of North Dakotans through research, community engagement, and prevention programs:

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 seven national programs: The National Resource Center on Native American Aging, the National Indigenous Elder Justice Initiative, the Native Urban Elder Needs Assessment Survey, the Rural Health Information Hub, the Rural Health Research Gateway, 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

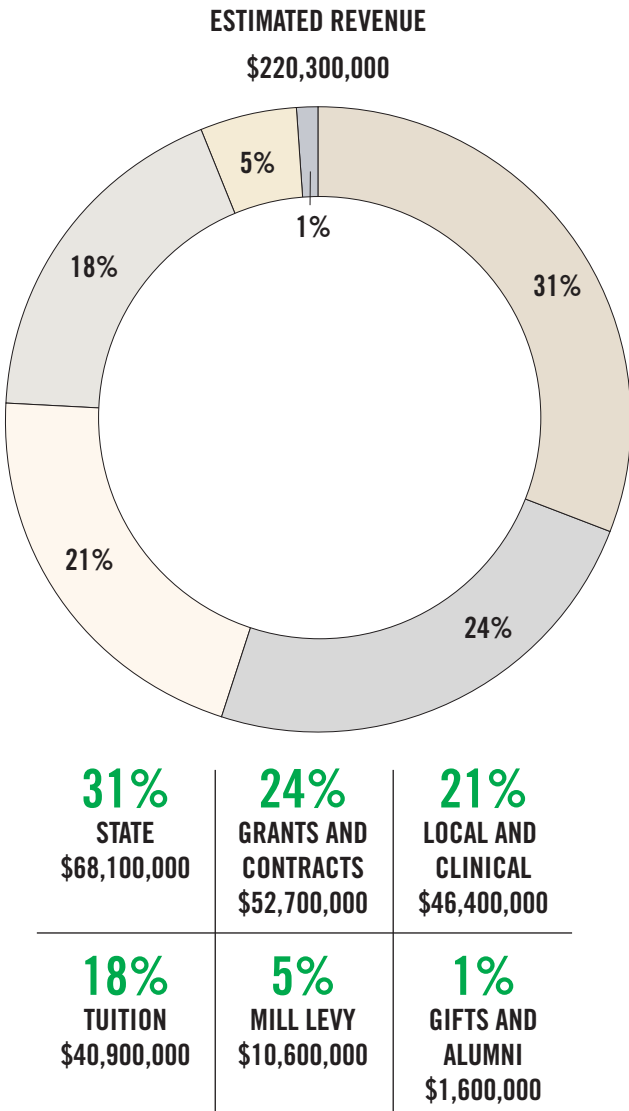
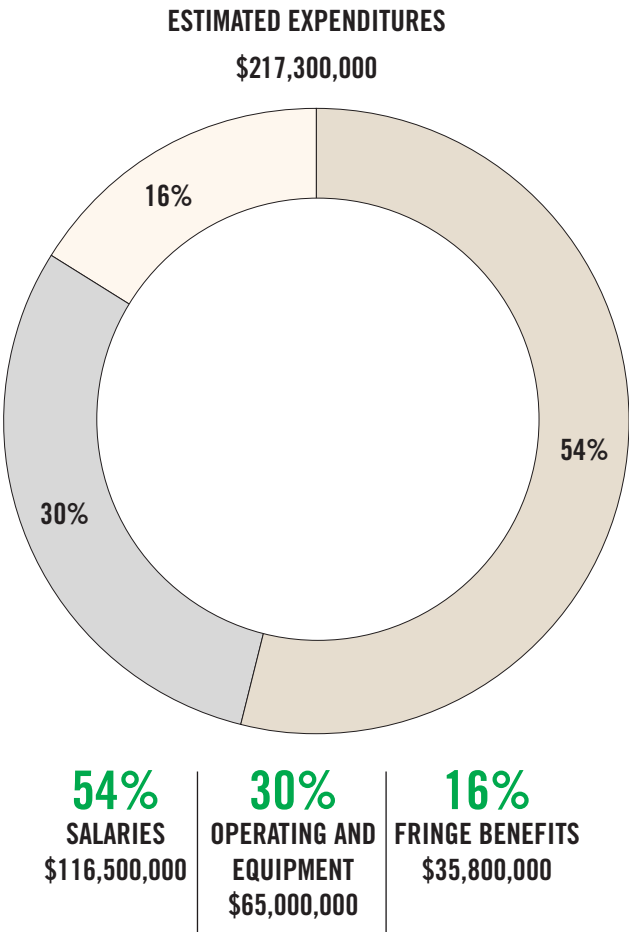
community level through education, training, assessment, planning, program and workforce development, and evaluation. Primary focus areas include community development, research, Indigenous health, behavioral and mental health, population health, quality improvement, evaluation, health policy, and education.

Students, faculty, and staff regularly take advantage of area volunteer opportunities and engage in service learning projects.



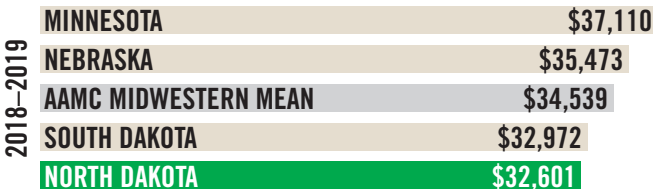
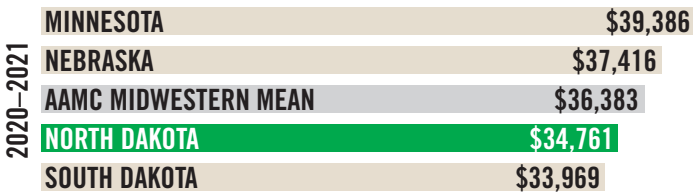
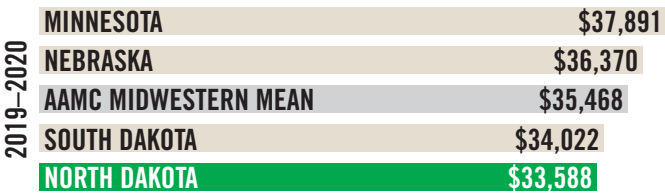
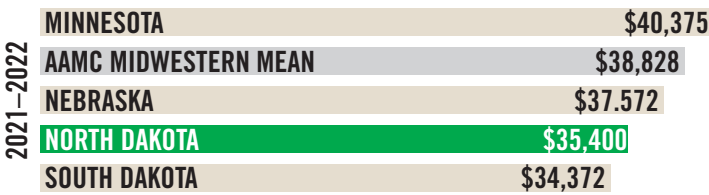
OUR 2021–2023 BIENNIAL BUDGET IS \$220,300,000

The majority comes from non-state sources such as grants, contracts, patient revenue, and tuition.



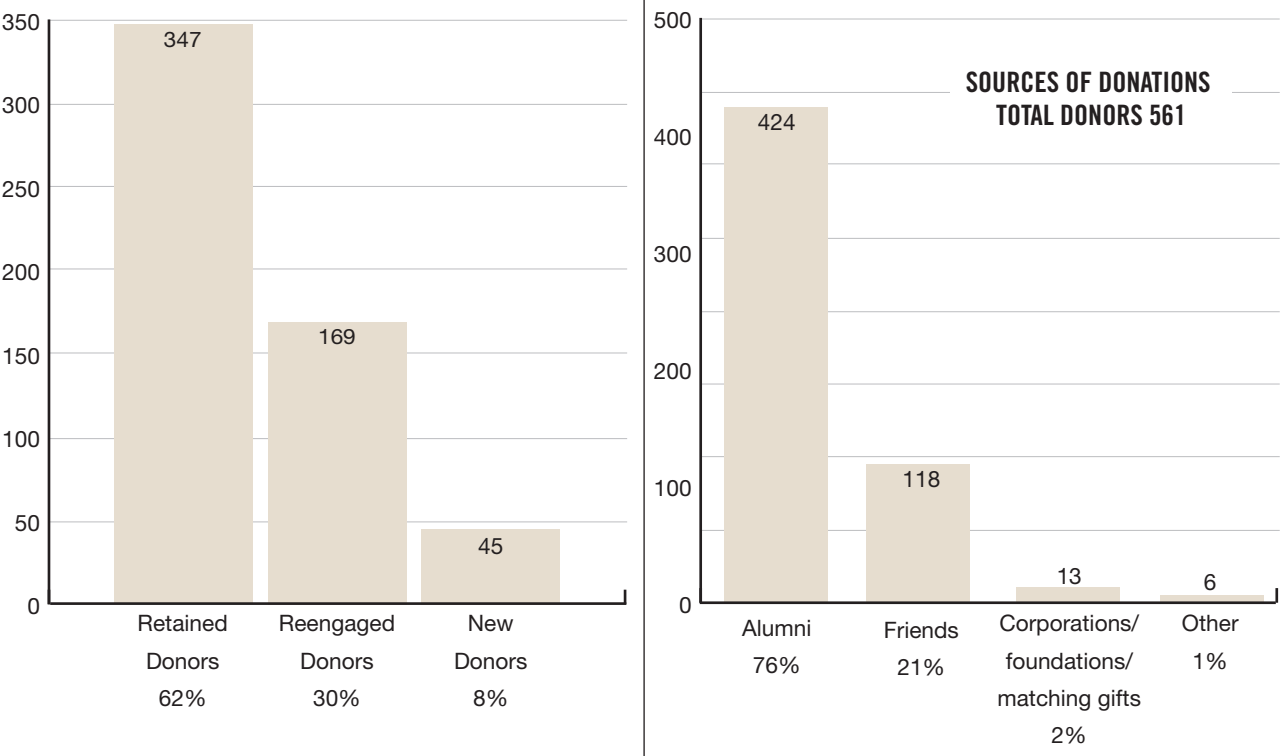
For every \$1 appropriated to the School by the Legislature, the School generates about \$2 in grants, contracts, tuition, and clinical revenues.

1ST YEAR IN-STATE RESIDENT TUITION AND FEE RATES FOR REGIONAL MEDICAL SCHOOLS PER THE ASSOCIATION OF AMERICAN MEDICAL COLLEGES (AAMC)



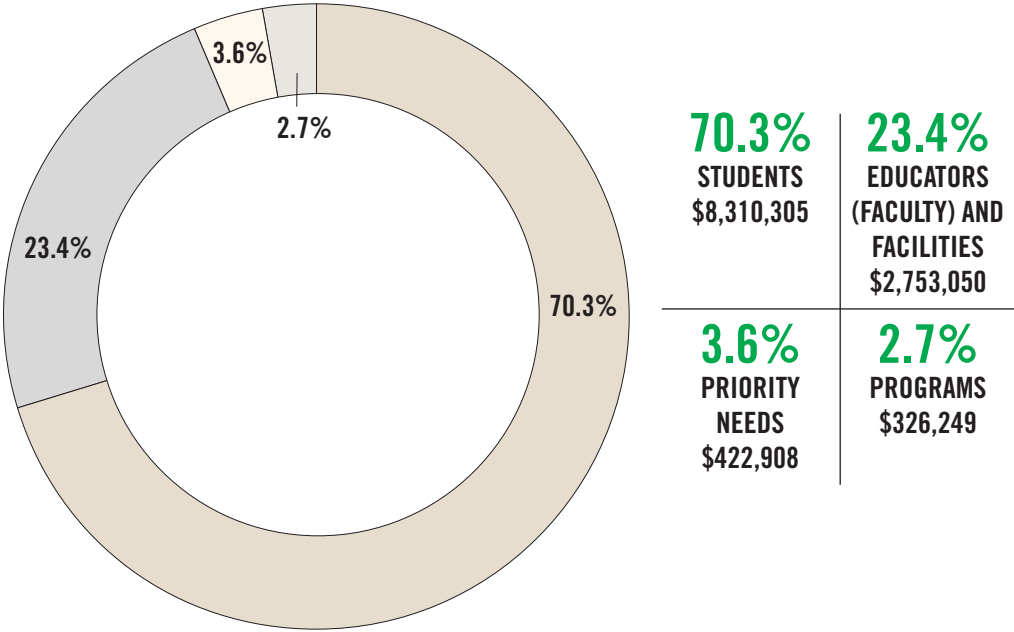
AAMC Midwest Mean - average of MN, NE, SD, ND
Source: aamc.org/data-reports/reporting-tools/report/tuition-and-student-fees-reports

TOTAL GIFTS IN FY22: \$11,812,513



FISCAL YEAR 2021	
Retained Donors	317
Reengaged Donors	135
New Donors	37
TOTAL DONORS	489
Alumni	383
Friends	82
Other	12
Corporations/foundations/matching gifts	12
TOTAL DONORS	489
Students	\$ 1,721,074
Priority Needs	132,889
Programs	242,940
Educators (faculty)	2,004
TOTAL	\$ 2,098,907

USES OF DONATIONS



FISCAL YEAR 2020	
Retained Donors	392
Reengaged Donors	121
New Donors	49
TOTAL DONORS	562
Alumni	461
Friends	75
Other	13
Corporations/foundations/matching gifts	13
TOTAL DONORS	562
Students	\$ 1,457,537
Priority Needs	234,945
Programs	57,815
Educators (faculty)	4,513
TOTAL	\$ 1,754,810

“Thank you so much for the generous gift you have provided me. By donating, you have taken one less stressor out of my life and have allowed me to focus more effort on school rather than finances.”

—JUSTIN SCHAFER
Mandan, N.D.
M.D. Class of 2023

GRADUATE PROGRAMS	MEDICAL DOCTOR (MD) PROGRAM	INDIGENOUS AND PUBLIC HEALTH	HEALTH SCIENCES
<p>Doctor of Philosophy (Ph.D.) and Master of Science degrees in Biomedical Sciences, with specializations in:</p> <ul style="list-style-type: none">• 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	<p>All medical students spend their first 20 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 years and four months of clinical training in Bismarck, Fargo, Grand Forks, Minot, or a rural community through the Rural Opportunities in Medical Education (ROME) Program. The medical program is now in the second year of a new curriculum, and students are fully engaged in elective experiences and are enjoying the transition to clinical experiences earlier in the curriculum.</p>	<p>The UND SMHS 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. Our program houses the world's first doctoral program in Indigenous Health and our master program offers three specializations – Health Management & Policy, Indigenous Health, and Population Health Research & Analytics.</p> <p>The MPH program celebrated its tenth anniversary in 2022 at UND Homecoming.</p>	<p>Athletic Training</p> <ul style="list-style-type: none">• Master of Athletic Training degree—new in 2022 (previously only a bachelor's degree program) <p>Medical Laboratory Science</p> <ul style="list-style-type: none">• 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 <p>Occupational Therapy</p> <ul style="list-style-type: none">• Three-year pre-occupational therapy program and three-year Occupational Therapy Doctorate (OTD)

- Physical Therapy**
- Three-year pre-physical therapy program and three-year Doctor of Physical Therapy (DPT)
- Physician Assistant Studies**
- Two-year Master of Physician Assistant Studies (MPAS) leading to the Certified Physician Assistant credential (PA-C)

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*	MEDICAL DOCTOR* (MD) PROGRAM	POST-MD DEGREE* (RESIDENCY)	HEALTH SCIENCES*
<div>Biomedical Sciences (Graduate—Master and Doctoral)35</div> <div>Clinical and Translational Science (Graduate—Master and Doctoral)8</div> <div>Total43</div>	<div>Year 1 Class of 202678</div> <div>Year 2 Class of 202567</div> <div>Year 3 Class of 202465</div> <div>Year 4 Class of 202374</div> <div>Total284</div>	<div>Training in family medicine, geriatric medicine, hospital medicine, internal medicine, psychiatry, surgery, orthopedic surgery, transitional, neurology, and hematology/oncology</div> <div>Total169</div> <div>(A new pediatric residency program was approved in 2022.)</div>	<div>Athletic Training</div> <div>Pre-Athletic Training3</div> <div>Bachelor of Science6</div> <div>Master of Athletic Training3</div> <div>Medical Laboratory Science</div> <div>Pre-Medical Laboratory Science88</div> <div>Certificate66</div> <div>Histotechnician27</div> <div>Bachelor of Science62</div> <div>Master of Science53</div> <div>Occupational Therapy</div> <div>Pre-Occupational Therapy100</div> <div>Occupational Therapy Doctorate157</div> <div>Physical Therapy</div> <div>Pre-Physical Therapy203</div> <div>Doctoral143</div> <div>Physician Assistant (Graduate—Master)66</div> <div>Public Health</div> <div>Master of Public Health59</div> <div>Indigenous Health Ph.D.44</div> <div>Total1,080</div>

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.
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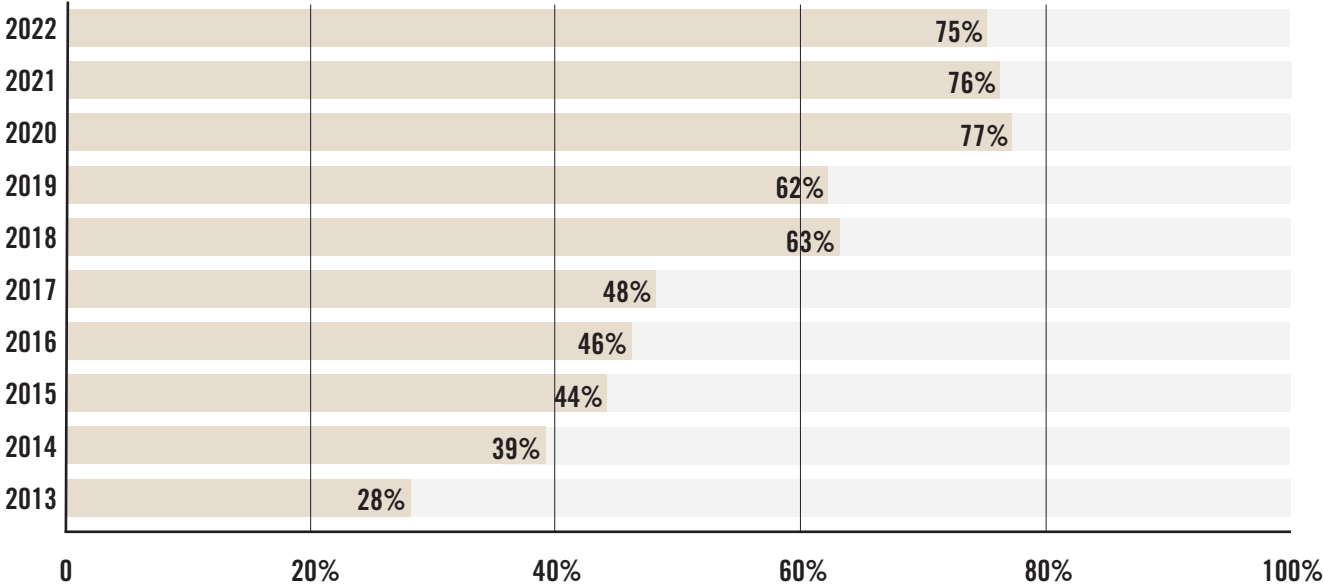
* Official fall 2022 enrollment figures per the University of North Dakota Office of Analytics & Planning.



OUR CELEBRATED INDIANS INTO MEDICINE PROGRAM HAS PRODUCED NEARLY 300 INDIGENOUS PHYSICIANS AND MANY HEALTH PROVIDERS PRACTICING IN OTHER PROFESSIONS, FROM MEDICAL LABORATORY SCIENCE AND PUBLIC HEALTH TO PHYSICAL AND OCCUPATIONAL THERAPY.

RETENTION OF UND SMHS MEDICAL STUDENT GRADUATES FOR PRACTICE IN-STATE

Percentile rank (compared with other medical schools)



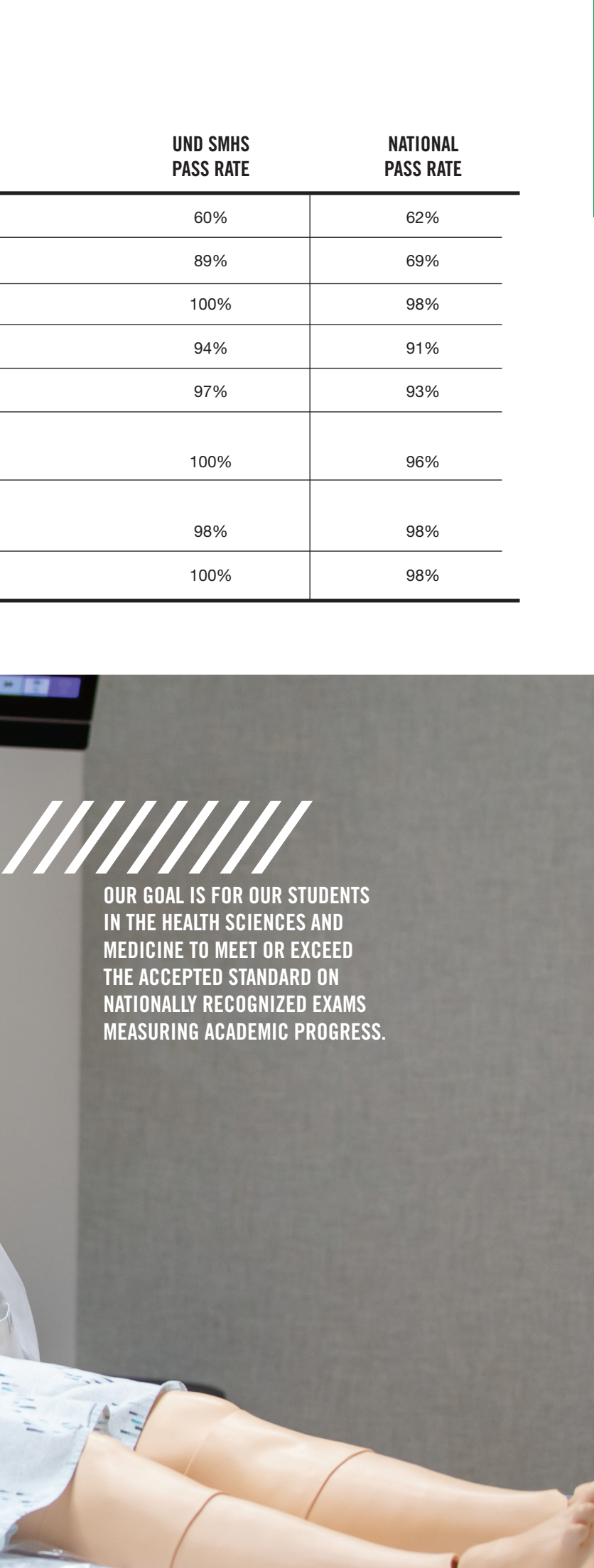
Source: Missions Management Tool, 2022 AAMC

PROGRAM

- Athletic Training
- Medical Laboratory Science
- Occupational Therapy
- Physical Therapy
- Physician Assistant
- Medicine
 - Step 1
 - Step 2
 - Clinical Knowledge
- Step 3

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





UND SMHS
PASS RATE

NATIONAL
PASS RATE

60%	62%
89%	69%
100%	98%
94%	91%
97%	93%
100%	96%
98%	98%
100%	98%

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.



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 AND/OR COMPLETED AN IN-STATE RESIDENCY

	2019	2021
All Specialties	46%	50%
Family Medicine	74%	78%
Internal Medicine	41%	44%
Obstetrics and Gynecology	66%	69%
Pediatrics	41%	45%
Psychiatry	41%	48%

Source: Medical Marketing Service. (2021). AMA Master File, 2021. [Data file]. Wood Dale, Ill. Medical Marketing Service

SCHOOL OF MEDICINE & HEALTH SCIENCES ALUMNI

Medical Laboratory Scientists	2,661
Athletic Trainers	295
Physicians	2,459
Physical Therapists	2,068
Occupational Therapists	2,167
Physician Assistants	1,963
Public Health Professionals	86
Biomedical Sciences	246 (since 1995)

PERCENTAGES OF OTHER HEALTHCARE 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	41%
Physical Therapists	48%

Source: North Dakota state licensing boards and academic departments

UND SMHS Medical Doctor Program Outcomes

METRIC	PERCENTILE RANK
Graduates entering primary care	99th
Graduates practicing in rural areas	98th
Graduates practicing in family medicine	92nd
Fraction of class identifying as American Indian	100th

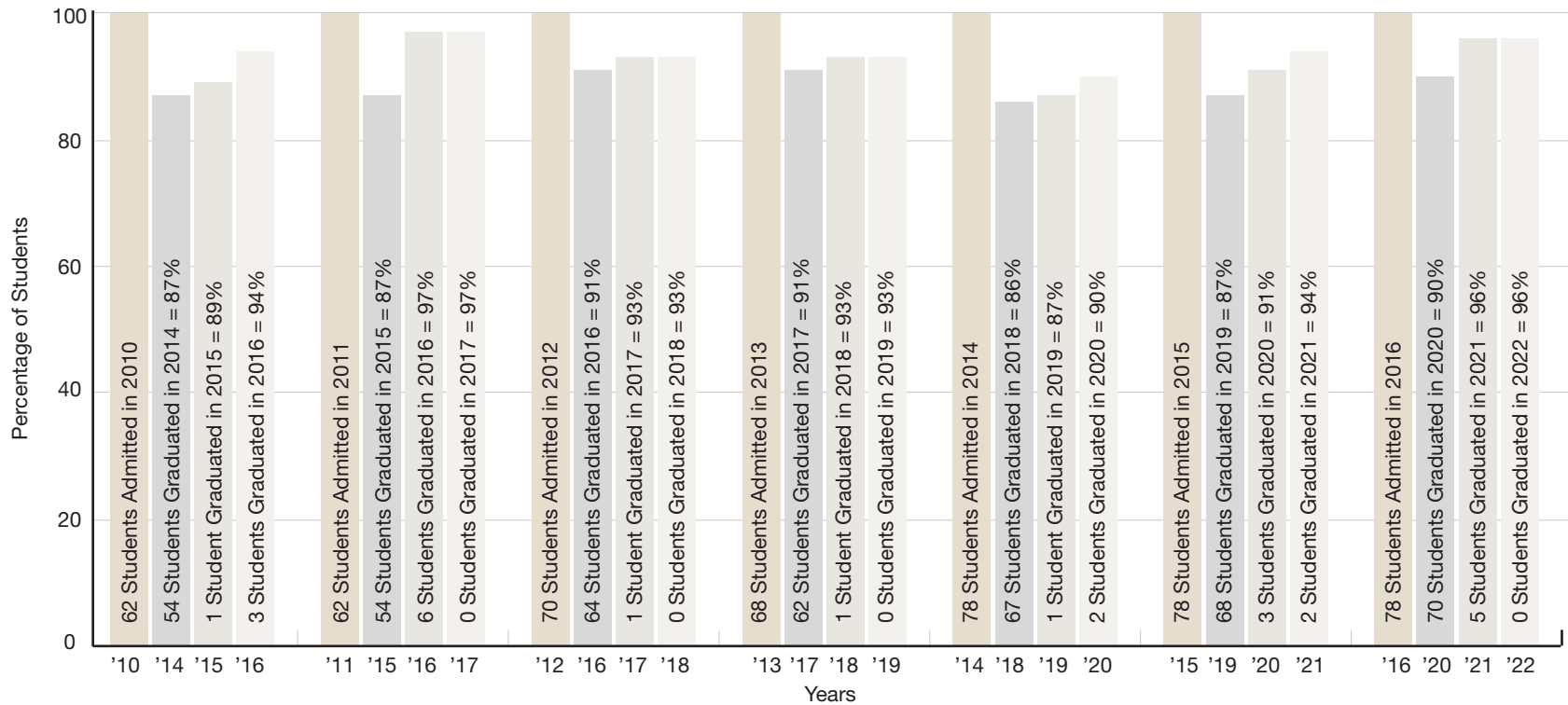
Source: Missions Management Tool, 2022 AAMC

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. Gray bars represent the number and percentage of a class graduating relative to the initial number of enrolled students (brown) in a given year.

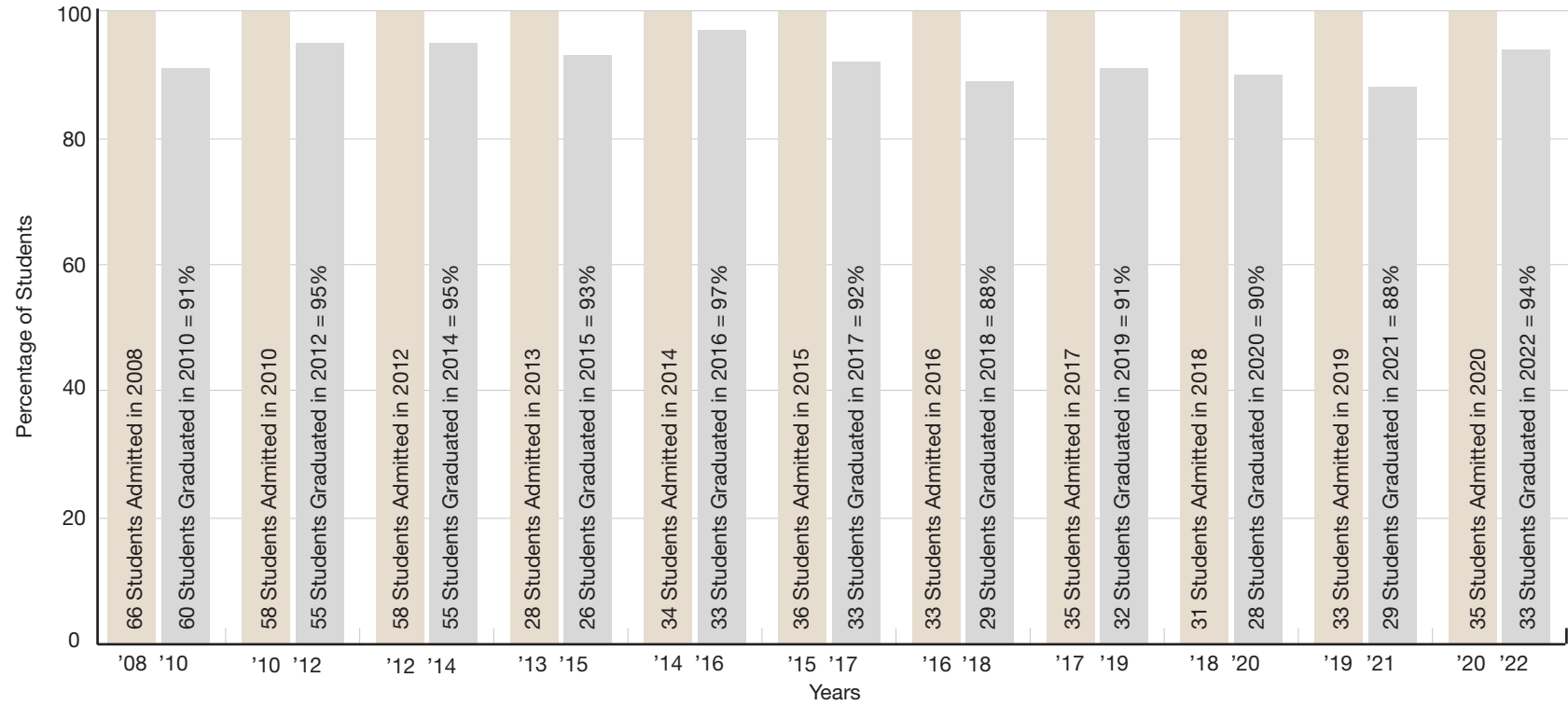
DOCTOR OF MEDICINE (FOUR-YEAR PROGRAM)

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)

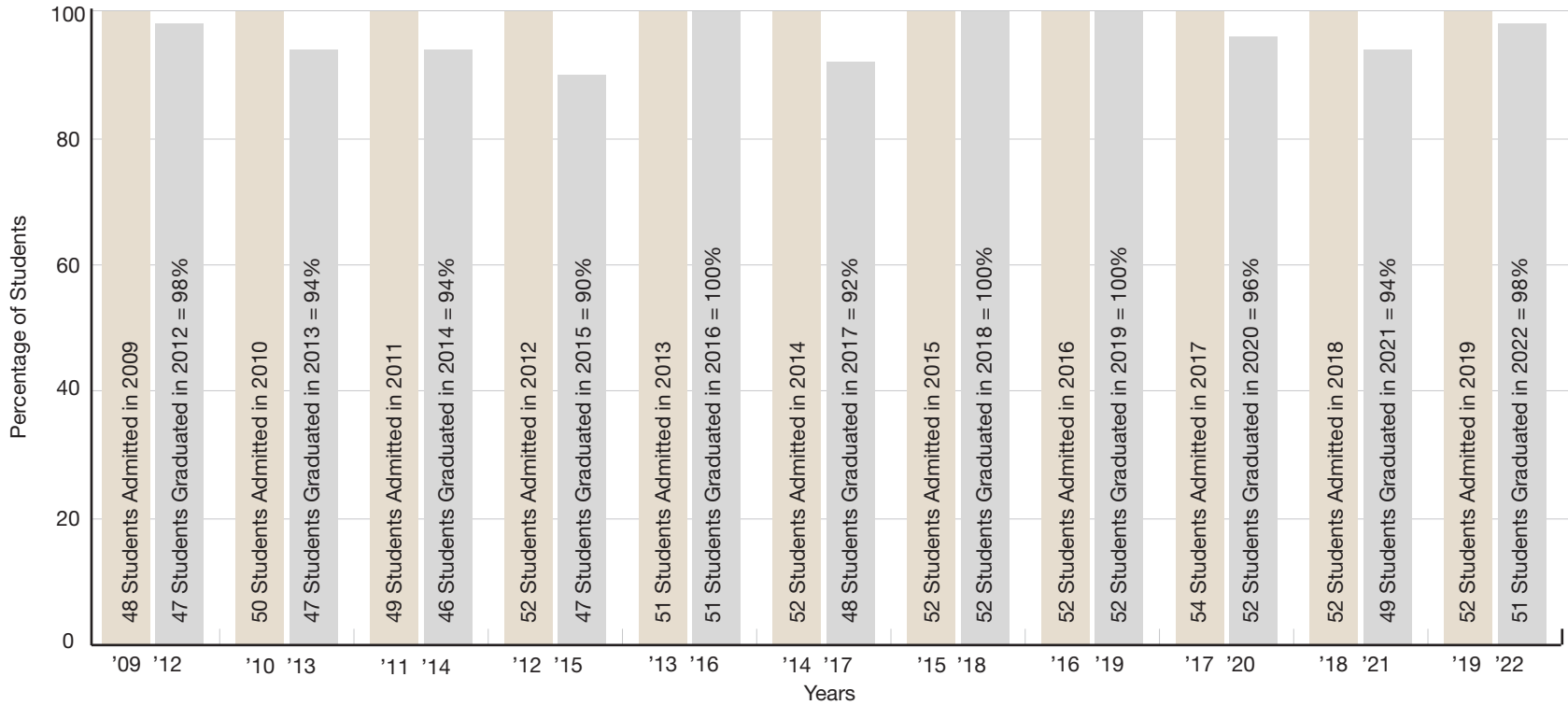
Beginning in 2006, the program accepted a new class every other year. It has returned to an annual admission structure effective with the class matriculating in 2013.



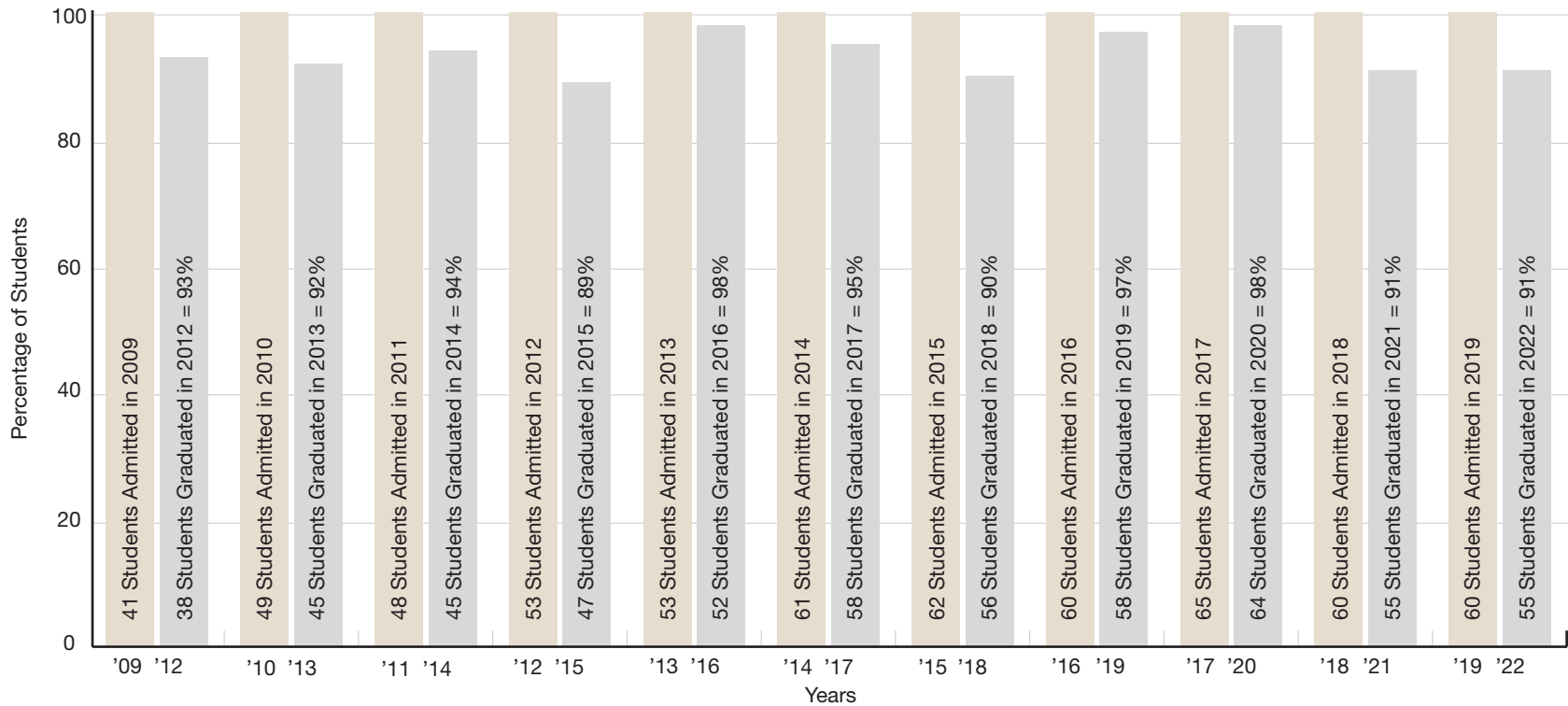


OUR GOAL IS TO EXCEED THE
NATIONAL BENCHMARK FOR COMPLETION

DOCTOR OF PHYSICAL THERAPY (THREE-YEAR PROGRAM)



MASTER OF OCCUPATIONAL THERAPY (THREE-YEAR PROGRAM)*



* Number Graduated/Number Admitted = Completion Rate

+ In 2019-2020 the UND Department of Occupational Therapy transitioned to a three-year Occupational Therapy Doctorate (OTD) program. The first OTD graduates were in 2022.



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 seven specialties:

- Family Medicine (Bismarck, Fargo, Grand Forks, Hettinger, Minot, and Williston)*
- Internal Medicine (Fargo)
- Neurology (Fargo)
- Orthopedic Surgery (Fargo)
- Psychiatry (Fargo)
- Surgery (Fargo, Grand Forks)
- Transitional (Fargo)**
- A new Pediatric Residency Program, based in Fargo and managed by UND, was approved in 2022.

Some residency programs have training specific to rural medicine: (rural rotations are completed in the towns listed in parentheses):

- UND Family Medicine in Bismarck (Fort Yates, Fargo (Valley City, Hillsboro, and Wahpeton, N.D., and Detroit Lakes and Perham, Minn.), Hettinger, and Minot (Belcourt, Garrison), and Williston
- UND Surgery Rural Track (Minot, Hettinger, Rugby, Williston, and Fargo, N.D., and Perham, Minn.)
- UND Psychiatry (Rural Outreach to Dickinson, Williston, Devils Lake, Jamestown, Valley City, and New Town, plus Telemedicine)

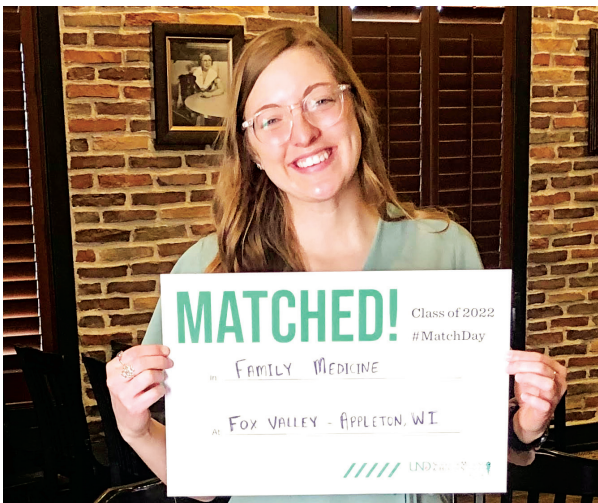
Post-graduate Fellowships:

- Geriatrics (Fargo)
- Hospitalist (Bismarck)
- Hematology-Oncology (Fargo)

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 medical school graduates complete before engaging in independent practice as a physician. Residency interviews are conducted between October and January of that academic year for most 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 2022 Main Residency Match included 39,205 total positions, the largest number ever. Of that figure, more than 36,270 were first-year (PGY-1) positions, also the largest on record and a 3.1 percent increase over 2021.



This year, 66 UND School of Medicine & Health Sciences students successfully matched with residency programs. In total, 41 percent of the MD Class of 2022 matched into primary care specialties of family medicine, internal medicine, obstetrics & gynecology, and pediatrics. Furthermore, 16.7 percent (11 of 66) of the cohort are set to enter family medicine, a figure nearly twice the national average of students matching into family medicine.

Also of note is the fact that eight of UND's 66 matches (12%) were in psychiatry, a figure nearly double the national average of medical school graduates entering that specialization. This is significant in so far as not only North Dakota but the nation continues to experience a shortage of mental health providers even as diagnoses for conditions like anxiety and depression continue to climb.

"I am able to stay in North Dakota and finish my residency...I feel more than prepared to start residency in July which can be attributed to the training I received from UND."

—EMILY FALCON

Belcourt, N.D.
M.D. Class of 2022



* The Family Medicine Program in Grand Forks is sponsored by Altru Health System. The Williston and Hettinger sites are separate ACGME-accredited programs. Williston and Hettinger residents spend their first year in Bismarck, but complete their last two years in Williston or Hettinger, respectively.

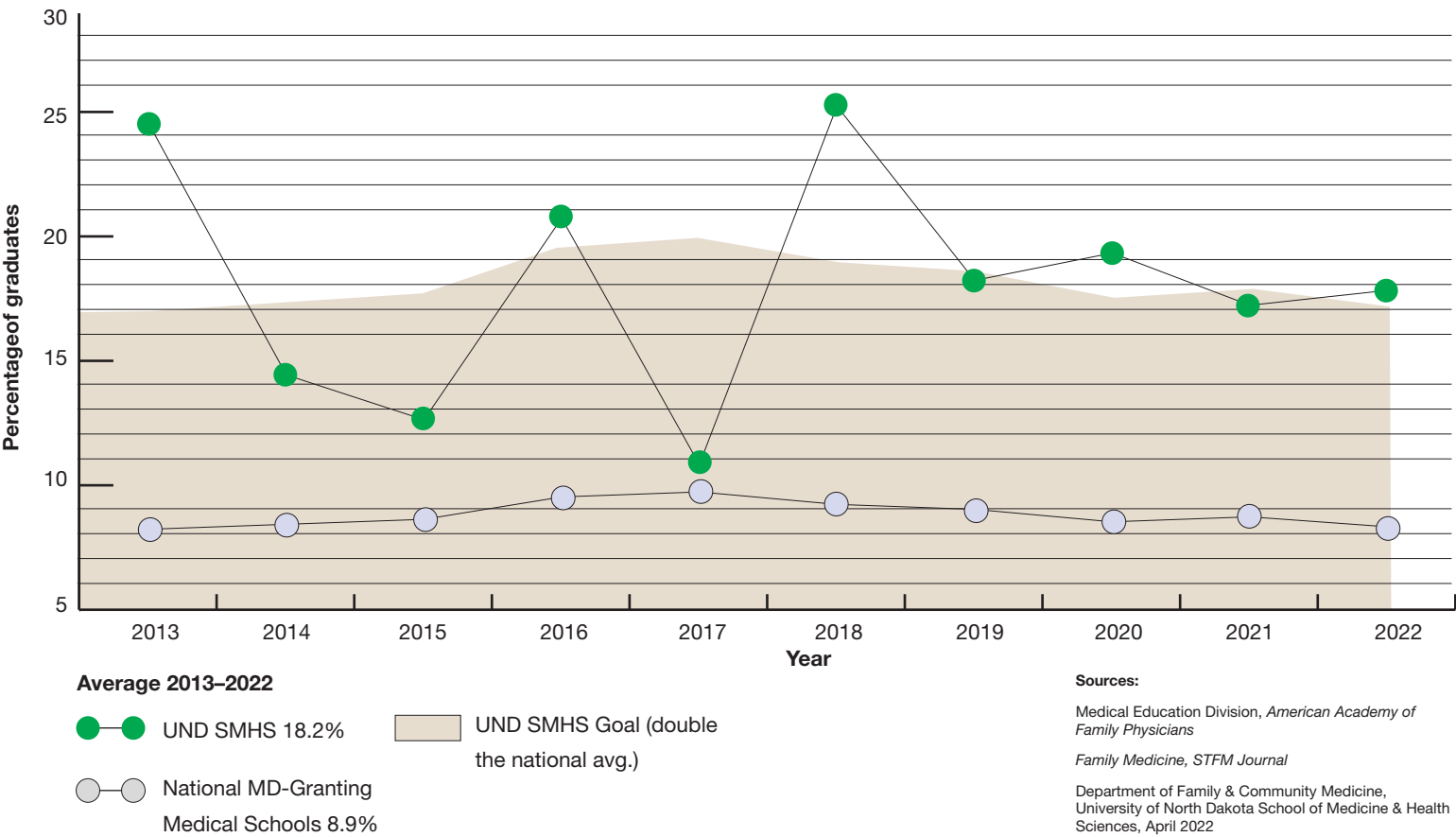
** Transitional residency is a yearlong program designed to introduce graduates to a wide range of medical and surgical specialties. The goal is to build a broad foundation of clinical skills as a base for future training in a medical subspecialty.

OUR GOAL IS TO EXCEED THE NATIONAL AVERAGE OF STUDENTS SPECIALIZING IN FAMILY MEDICINE BY 100 PERCENT

A study 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 contributors to building the nation's family physician workforce. The figure below represents various national studies conducted by the AAFP, and appearing in Family Medicine, that

report retrospectively the percentage of graduates from U.S. Liaison Committee on Medical Education (LCME)-accredited medical schools who enter Accreditation Council for Graduate Medical Education (ACGME)-accredited family medicine residency programs as first-year residents.

GRADUATES CHOOSING FAMILY MEDICINE 2013–2022*



FACULTY AND STUDENTS AT THE CLASS OF 2022 M.D. COMMENCEMENT CEREMONY.





GROWING OUR OWN

INNOVATIVE PROGRAMS TO PRODUCE HEALTHCARE PROVIDERS FOR NORTH DAKOTA

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 medical students at the School of Medicine & Health Sciences. Students live and train in nonmetropolitan communities under the supervision of physician preceptors. ROME students experience healthcare delivery in rural areas throughout the state of North Dakota, where providing access to healthcare 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 program 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.

RURALMED

RuralMed is a state-sponsored program designed to increase the number of health care providers who practice in North Dakota. Medical students can apply to this program focusing their training on any medical specialty as long as they can establish a full-time practice in rural North Dakota. Students accepted for the RuralMed program have the cost of four-years’ tuition paid through a forgivable student loan, in return for five years of medical service in a rural North Dakota setting.

**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 24,337 participants reaching all 53 North Dakota counties. Of that total, more than 14,249 students have participated in health career awareness events and activities, and more than 249 students enrolled in health profession programs have completed rural clinical rotation experiences.

FRANK LOW RESEARCH DAY

The School’s annual Frank Low Research Day, named in honor of the former SMHS anatomy professor who came to UND in the 1960s and pioneered a series of new techniques for the electron microscope, is the culminating event of the academic year for area researchers working in the biomedical and health sciences. In 2022, a virtual event saw faculty, postdoctoral fellows, and graduate, medical, and health sciences students presenting prerecorded presentations.

**SUMMER UNDERGRADUATE
RESEARCH**

For 10 weeks each summer, dozens of 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!

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 celebrating 50 years in 2023!

R-COOL-HEALTH SCRUBS ACADEMY

Since the annual Scrubs Academy started in 2011, 512 students have attended the academy 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 2022 Scrubs Academy was unable to be held due to the COVID-19 pandemic.

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, 10,803 students, 3,636 volunteers, and dozens of local communities have participated in 122 Scrubs Camps across the state. In 2021-2022 only nine Scrubs Camps were held due to the COVID-19 pandemic.

RESEARCH

For fiscal year 2022
(July 1, 2021–June 30, 2022),
total research and sponsored
funding was

**more than
\$48 million.**

Over the past decade,
the School has been awarded

**nearly
\$320 million**

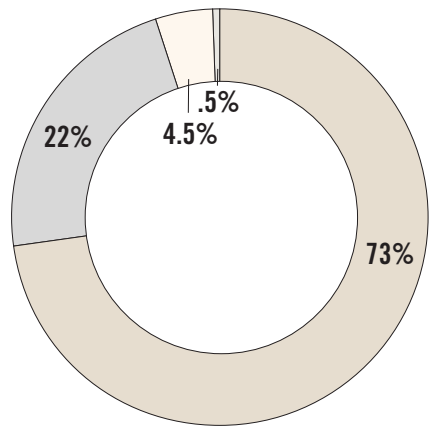
in external funding
for sponsored research
and other projects.



FISCAL YEAR 2022

TOTAL FUNDING BY SPONSOR TYPE \$48,651,717

Total number of proposals 155
Total number of awards 104

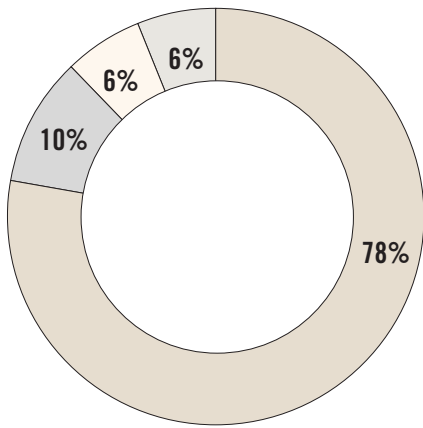


73% FEDERAL \$35,486,062	22% STATE \$10,923,316
4.5% OTHER* \$2,129,839	.5% FOUNDATION \$112,500

FISCAL YEAR 2021

TOTAL FUNDING BY SPONSOR TYPE \$38,476,968

Total number of proposals 207
Total number of awards 126

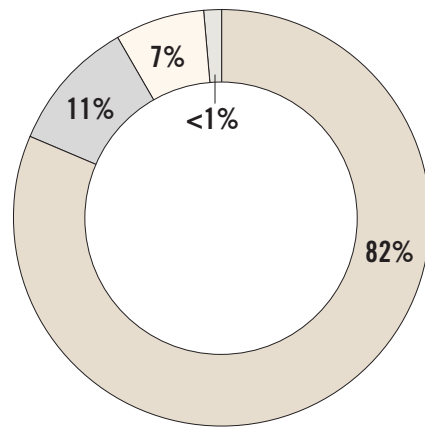


78% FEDERAL \$29,921,538	10% STATE \$4,004,920
6% FOUNDATION \$2,356,000	6% OTHER* \$2,194,510

FISCAL YEAR 2020

TOTAL FUNDING BY SPONSOR TYPE \$30,805,926

Total number of proposals 155
Total number of awards 102



82% FEDERAL \$25,359,217	11% STATE \$3,266,991
7% OTHER* \$2,175,218	<1% FOUNDATION \$4,500

* Private nonprofit, international, private for profit, other governmental, etc.



INCLUDING MAJOR GRANTS AWARDED TO OUR CENTER FOR RURAL HEALTH IN 2022, THE SCHOOL RECEIVED FUNDING FOR RESEARCH IN THE AREAS OF CANCER, ALZHEIMER'S DISEASE, LYME DISEASE, INDIGENOUS TRAUMA, AND VARIOUS INFECTIOUS DISEASES.

RECORD \$48 MILLION RESEARCH FUNDING IN 2022



The Office of Research Affairs at the SMHS has announced that the School was awarded a record-setting \$48 million in fiscal year 2022 for its research and service missions.

According to the Office's Sponsored Projects Awards report, the SMHS won a total of 104 research awards from external agencies like the National Institutes of Health, Centers for Disease Control & Prevention, National Science Foundation, and other universities and foundations totaling \$48,651,717.

This figure follows a several-year growth trend in awards to the School.

"At a time when there is increasing pressure on research funds nationally, this continued acceleration in SMHS extramural research funding is a tribute to the outstanding work and dedication of our faculty," said Dr. Marc Basson, senior associate dean for Medicine & Research at the School. "They have focused

their efforts on discovery relevant to improving the health of the citizens of North Dakota in areas ranging from cancer and neuroscience to infectious disease and Indigenous health."

Such awards, some of which came from the State of North Dakota, are already being put to use to study the prevention, diagnosis, and treatment of conditions like cancer, Alzheimer's, Lyme disease, and infectious diseases like influenza and SARS-CoV-2 (COVID-19).

"This is an amazing achievement and continues the dramatic surge in such funding garnered by the School's faculty and staff over the past few years," added SMHS Dean Dr. Joshua Wynne. "Because almost all the research grants awarded to our faculty are competitive and ranked by other investigators through peer review, the amount of grants awarded to an institution in any one year often is used as a surrogate marker for the size and quality of an institution's research enterprise."

HIGHLIGHTS FROM THIS GROUP OF 2022 AWARDS INCLUDE:

- **Kumi Nagamoto-Combs, Ph.D.**, assistant professor with the Department of Biomedical Sciences, was awarded a \$1.8 million, five-year R01 grant through the National Institute of Allergy and Infectious Diseases of the NIH to explore the link between food allergies and neurodegeneration. R01 grants are the highest award researchers can receive from the NIH and are given for mature research projects that are hypothesis-driven with strong preliminary data.
- **Tim Casselli, Ph.D.**, research assistant professor with the Department of Biomedical Sciences, won a \$70,500 NIH R03 grant to study Lyme disease. Lyme disease, which is caused by infection from the tick-borne pathogen *Borrelia burgdorferi*, can lead to inflammatory diseases affecting the joints, heart, and nervous system. As there are no vaccines or effective vector controls against the infection, the overall goal of Dr. Casselli's project is to identify *B. burgdorferi* targets for prophylactic and therapeutic treatments for Lyme disease.
- **Sandeep Singhal, Ph.D.**, assistant professor in the Department of Pathology, received a one-year, \$200,000 grant from the National Institute of General Medical Sciences (NIGMS) to build cloud-based learning modules for biomedical research together with Google and Deloitte Consulting.

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 works with 100 or more communities each year. CRH provides technical assistance to all 98 rural North Dakota hospitals, 37 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, behavioral and mental health, and tribal health. In 2021 we launched the North Dakota Rural Clinic (RHC) Network and all 54 RHCs have joined, allowing for additional assistance resources, and networking for clinics across the state. Other 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:

\$18,317,617 FOR FY2022

FISCAL YEAR 2022

Federal Grants: \$16,447,281 - CRH supports 15 grants in this category, including:

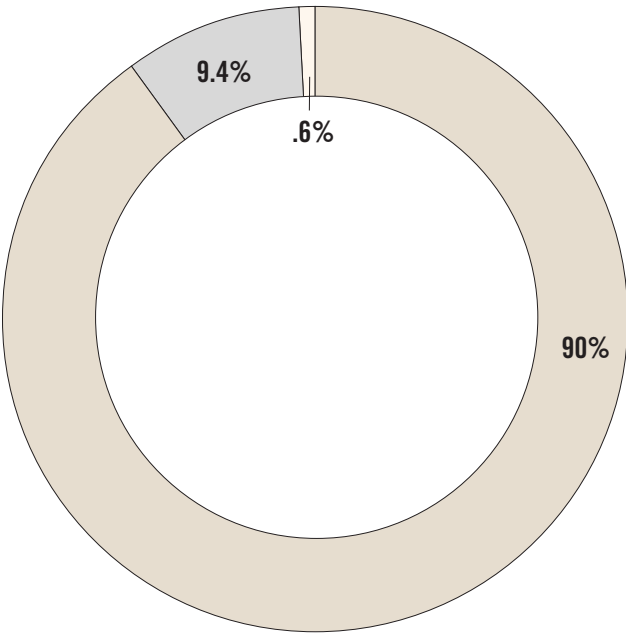
- Two national programs that focus on Indigenous populations: the National Indigenous Elder Justice Initiative (NIEJI) and the National Resource Center on Native American Aging (NRCNAA). These programs focus on improving health outcomes and the wellbeing of American Indian, Alaska Native, and Native 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 to allow Elders to age in place.
- 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. Funding was also received from the Health Resources and Services Administration for a Network Planning Grant to support the RHC Clinic Network.

State Grants: \$1,730,836 - CRH has sponsored contracts with the state of North Dakota for the Traumatic Brain Injury Network and behavioral health work. In 2022, through a partnership with the North Dakota Department of Health, a newly created Qualified Service Provider (QSP) Hub was launched, training, assisting, and providing resources for QSPs and QSP provider agencies.

Other Grants: \$139,500 - CRH administers and supports other sponsored contracts that serve and enhance rural health in the state and region. Initiatives include: the Blue Cross Blue Shield Caring Foundation grant; the Native Urban Elder Needs Assessment Survey, funded by AARP; the Native Aging in Place Program, funded by the Margaret A. Cargill Philanthropies; and Community Health Needs Assessments.

FISCAL YEAR 2022

TOTAL \$18,317,617



90%	9.4%	.6%
FEDERAL	STATE	OTHER
\$16,447,281	\$1,730,836	\$139,500

Fiscal Year 2021

Federal Grants	\$ 7,227,654
State Grants	635,245
Other Grants	2,662,500
Total	\$ 10,525,399

Fiscal Year 2020

Federal Grants	\$ 9,548,107
State Grants	690,494
Other Grants	161,711
Total	\$ 10,400,312

FUTURE HEALTH PROVIDERS PRACTICE SPLINTING AT A SCRUBS CAMP IN WASHBURN, N.D.



PUBLIC HEALTH AS PUBLIC GOOD

The founders of UND's Master of Public Health program reflect on its 10-year anniversary

For Cristina Oancea, Ph.D., an associate professor in the UND School of Medicine & Health Sciences Master of Public Health (MPH) program, the insistence that students be involved in almost every aspect of public health work—from contact tracing to epidemiology to policymaking to marketing—is what makes it such a special place to be.

“The placements that our students get, oftentimes even before graduation, are incredible and the result of what those organizations see our students doing here. They get offers immediately,” she smiles. “A lot of times we’ll hire students as graduate assistants, and then, before you know it, someone like the North Dakota Department of Health wants them. That story has happened so many times.”

The MPH program at UND celebrated its tenth anniversary this academic year. In those ten years, the program has graduated more than 100 health professionals, almost all who have gone on to get doctoral degrees, publish in major journals, manage COVID-19 outbreaks at the state level, and address things like substance use disorders, tuberculosis, sexually transmitted infections, and suicide in their local communities—among many other public health priorities.

“Over the years, we’ve seen tremendous student growth,” adds Ashley Bayne, MPH program manager. “For several years we’ve had a 100% employment rate for our alumni, which is fantastic. The need for public health in general has grown over the years and I think especially now [post-COVID], people know that.”

But it wasn’t always so.

While not necessarily under attack, public health as a profession was in a very different place ten years ago. Much of the developed world at least felt that most communicable diseases had been contained and that communities understood the value of things like sanitation, sober driving, and seat-belt use. Likewise, tobacco use was on the decline.

Then came the opioid epidemic, the Flint, Mich., water crisis, renewed debates over gun violence in the United States, and increases in suicide among many age cohorts—all of which contributed to a decline in life expectancy in America by 2019.



Topping it all off was, of course, COVID-19, which as of this writing has claimed more than one million lives in the U.S. alone.

All of this, says Oancea, has contributed to the immense interest in public health programs not only at UND, but across the nation in recent years. As such, what began in 2012 as a small program—fewer than 10 enrolled students—has grown to one with more than 80 current students.

Such growth and professional foci were goals of the program’s founding director Dr. Ray Goldsteen, who along with his wife, Dr. Karen Goldsteen, guided the program from 2012 to 2018 and achieved its first accreditation by the Council on Accreditation for Public Health (CEPH) in 2016.

“Number one, we felt that in all areas—urban or rural—people needed strong skills in analytics,” says Ray. “So, we emphasized analytics and made that one of the major features of the curriculum, and began working with students, helping them achieve their goals.”

Team Goldsteen started immediately building partnerships with community agencies where students might end up, including local health systems, the Grand Forks Health Department, and other health and service community organizations in the region.

Part of what has made the program at UND so successful, say both Goldsteens, are the academic partnerships it developed across UND and the state.

These partnerships include joint degree offerings—an accelerated B.S./M.P.H., an M.D./M.P.H., and a J.D./M.P.H.—across UND.

One such integration was partnering with UND’s Nistler College of Business and Public Administration.

“We actually had a joint hire in that area,” Ray continues. “A joint faculty in that area between the business school and our own school. All those things we wanted to flourish—partnerships with the business school, the law school, and within the medical school. We were looking for those opportunities to make it as creative as we could and keep us from becoming isolated.”

And it worked.

On the heels of both COVID and a recent reaccreditation by CEPH, the MPH program is happily grappling with an increase in applications.

For the next ten years, then, Oancea says that the program is focused on growing its recently-added third track in Indigenous health and exploring a possible new track in environmental health.

All of this, Oancea says, speaks volumes of the program UND has built in ten short years.

“I keep telling our alumni that they are our ambassadors. If they are successful in their careers, that is a reflection not only on their hard work and our work as professors, mentors, and advisers; it’s a reflection on the support they received from their families and the schools they came from.”



FACULTY & STAFF TURNOVER

The faculty turnover rate (faculty who left their jobs) at the UND SMHS for FY 2022 was 10.6 percent. The turnover rate for all North Dakota University System (NDUS) faculty for that same year was 16.2 percent.

Likewise, the staff turnover rate at the UND SMHS for FY 2022 was 14.2 percent while the rate for all NDUS staff was 20.1 percent.

In FYs 16, 17, 19, 20 and 21, the University of North Dakota offered a voluntary separation program (VSIP) for both faculty and staff. UND did not offer VSIP in FY2022.

	2022**	2021**
Total Benefited Faculty*	208	205
Full-time	193	192
Part-time	15	13
Turnover Count	22	16
Total Benefited Staff*	262	270
Full-time	254	260
Part-time	8	10
Turnover Count	36	30

SMHS STAFF CELEBRATE WORK ANNIVERSARIES

The 2022 Staff Years of Service Recognition Luncheon and Awards Ceremony, honoring staff with 5, 10, 15, 20, 25, 30, 35, 40, 45, and 50 continuous years of service to the University of North Dakota, was held on Tuesday, May 10, 2022, in the UND Memorial Union. Among the SMHS staff celebrating a work anniversary of 5, 10, 15, 20, 25 and 30 years of service are the following:

30-year honorees		
Kaylynn Bergland Center for Rural Health	Lisa Lee Information Resources	Karen Rude Minot Center for Family Medicine (CFM)
25-year honorees		
Lisa Beehler Bismarck CFM	Vicki Link Information Resources	Janelle Studney Education Resources
20-year honorees		
Rose Barkie Minot CFM	Michelle Meyer Center for Rural Health	Christy Seidler Minot CFM
Kathleen Fredericks Indians Into Medicine	Kristine Sande Center for Rural Health	Brandon Thorvilson Information Resources
15-year honorees		
Sarah Abrahamson Biomedical Sciences	Angela Osborn Student Affairs & Admissions	Adrienne Salentiny Education Resources
Nancy Hostetter Continuing Medical Education	Kristen Peterson Alumni & Community Relations	Judy Solberg Dean's Office
Katherine Klein Minot CFM		
10-year honorees		
Shae Carlson Education Resources	Mandi Eckman Student Affairs & Admissions	Billie Krush Bismarck CFM
Karen Cisek Pathology	Carrie Germann Bismarck CFM	Cheryl Lepp Minot CFM
5-year honorees		
Kristina Beiswenger Indigenous Health	Kay Miller Temple Center for Rural Health	Jana Reese Center for Rural Health
Paul Dosch Surgery	Torri Nelson Minot CFM	Yvonne Tourand Biomedical Sciences
Jessica Gilbert Redman SMHS Library Resources	Devon Olson SMHS Library Resources	
Rebecca Maher Education Resources	Ellen Olson Pathology	

* Benefited appointment is 20 hours/week or more.

** Fiscal Year



IT ALL HAPPENS AT SMHS

Clockwise from top: The 13th annual Joggin' with Josh 5K/10K walk/run around the UND campus; Dr. Wynne and MPH program grad Michael Dulitz at UND Homecoming 2022; kiddos and medical students at our annual Teddy Bear Clinic event; and researchers share results at the SMHS IDeA Networks of Biomedical Research Excellence (INBRE) research poster session.

UND SCHOOL OF MEDICINE
& HEALTH SCIENCES
UNIVERSITY OF NORTH DAKOTA