

2023
COMMUNITY REPORT
VITAL SIGNS

UND SCHOOL OF MEDICINE
& HEALTH SCIENCES
UNIVERSITY OF NORTH DAKOTA 

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ACCOMPLISHMENTS

**ESTIMATED
REVENUE
2023–2025**

\$236,656,361

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**UND
SMHS*
ALUMNI**

12,186

page 11

**SPONSORED
PROJECT
AWARDS FY23**

\$34,397,895

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* 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:

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UND School of Medicine & Health Sciences

701.777.6048 | brian.schill@UND.edu.

Vital Signs 2023 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*.



DR. MONICA MAYER (M.D. '95) IS AMONG THE HUNDREDS OF GRADUATES OF OUR INDIANS INTO MEDICINE (INMED) PROGRAM, WHICH CELEBRATED ITS 50TH ANNIVERSARY THIS YEAR.

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CENTER FOR RURAL HEALTH
FACULTY/STAFF/STUDENTS
WORKFORCE

EDUCATE. DISCOVER. SERVE.

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



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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

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)



STUDENT AND FACULTY MEMBERS OF THE SMHS EMERGENCY MEDICINE INTEREST GROUP PRACTICE A POST-SKIING INJURY MOUNTAIN EVACUATION AT DETROIT MOUNTAIN SKI AREA.

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 across North Dakota.
- Interprofessional learning activities, including an interprofessional health care course, provide students with a strong practical understanding of the various health care professionals on their team.
- Our world-first medical school-based Department of Indigenous Health houses the world-first Indigenous Health Ph.D. program.



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 2023, Department of Biomedical Sciences Professor Holly Brown-Borg, Ph.D., was awarded a 5-year, \$3,519,350 grant from the Hevolution Foundation for a project that focuses on the underlying aging biology that leads to age-related dysfunction and disease.

Read more about our research programs on page 18–19.



SERVE

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

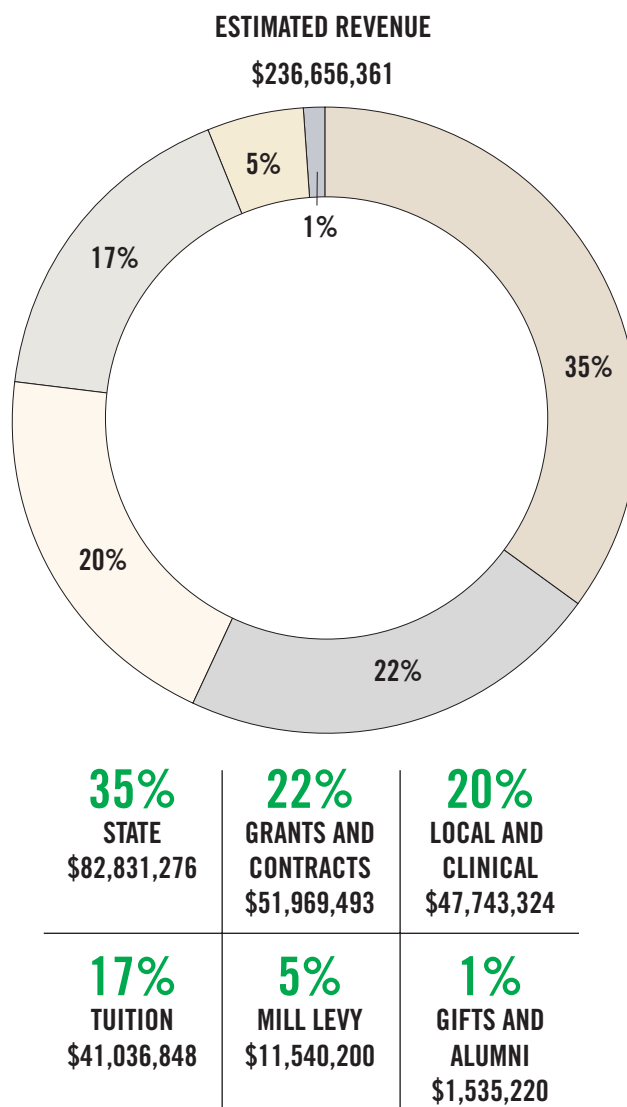
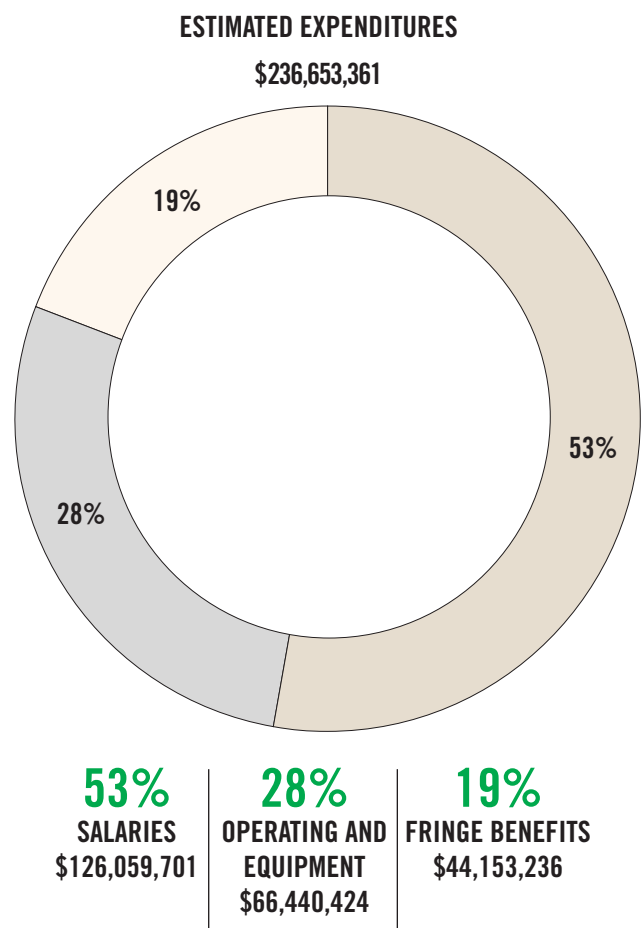
The School leads the nation in rural health through the Center for Rural Health (CRH), which serves as the State Office of Rural Health for North Dakota. It is home to six national programs: The National Resource Center on Native American Aging, the National Indigenous Elder Justice Initiative, the Native 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 2023–2025 BIENNIAL BUDGET IS \$236,656,361

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 \$1.72 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)

2022–2023

MINNESOTA	\$40,688
NEBRASKA	\$37,689
AAMC MIDWESTERN MEAN	\$37,206
NORTH DAKOTA	\$36,074
SOUTH DAKOTA	\$34,372

2020–2021

MINNESOTA	\$39,386
NEBRASKA	\$37,416
AAMC MIDWESTERN MEAN	\$36,383
NORTH DAKOTA	\$34,761
SOUTH DAKOTA	\$33,969

2021–2022

MINNESOTA	\$40,375
AAMC MIDWESTERN MEAN	\$38,828
NEBRASKA	\$37,572
NORTH DAKOTA	\$35,400
SOUTH DAKOTA	\$34,372

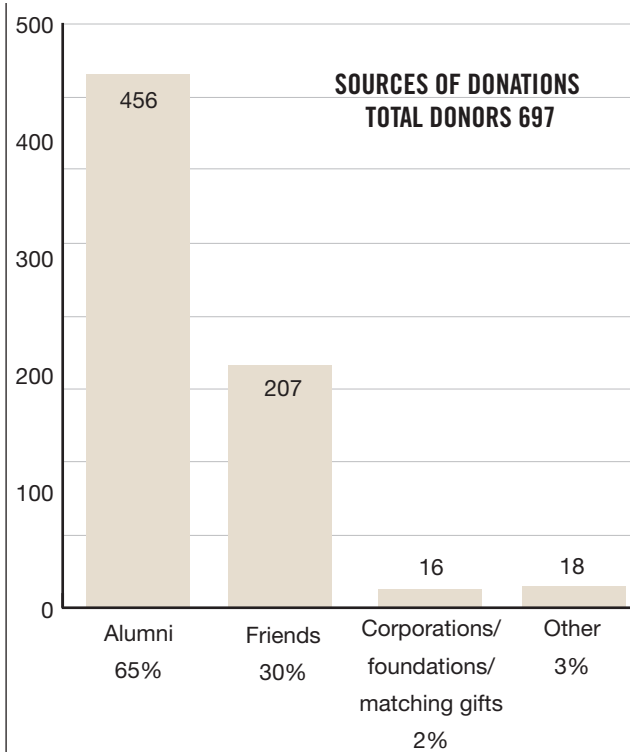
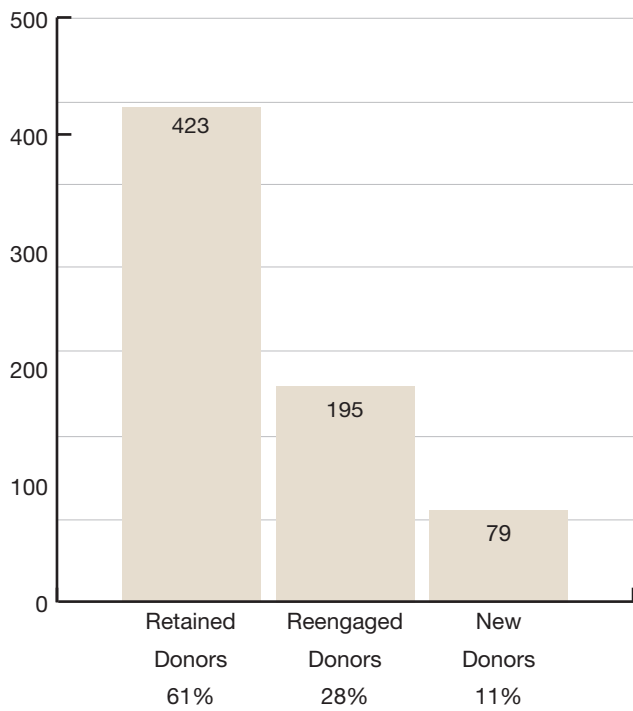
2019–2020

MINNESOTA	\$37,891
NEBRASKA	\$36,370
AAMC MIDWESTERN MEAN	\$35,468
SOUTH DAKOTA	\$34,022
NORTH DAKOTA	\$33,588

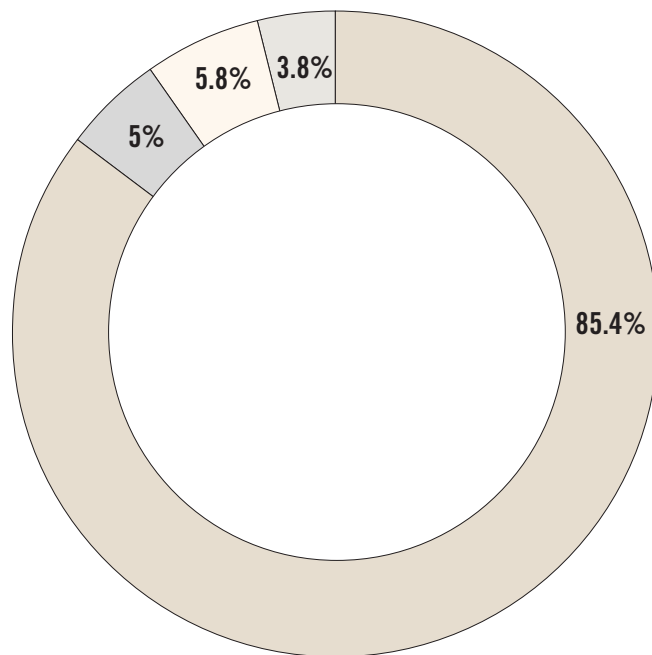
AAMC Midwest Mean - average of MN, NE, SD, ND

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

TOTAL GIFTS IN FY23: \$3,063,797



USES OF DONATIONS



85.4%
STUDENTS
\$2,617,962

5%
EDUCATORS
(FACULTY) AND
FACILITIES
\$150,050

5.8%
PRIORITY
NEEDS
\$177,363

3.8%
PROGRAMS
\$118,422

FISCAL YEAR 2022

Retained Donors	347
Reengaged Donors	169
New Donors	45

TOTAL DONORS 561

Alumni	424
Friends	118
Other	6
Corporations/foundations/ matching gifts	13

TOTAL DONORS 561

Students	\$ 8,310,305
Priority Needs	422,908
Educators (faculty) and Facilities	2,753,050
Programs	326,249

TOTAL \$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
Programs	242,940
Priority Needs	132,889
Educators (faculty) and Facilities	2,004

TOTAL \$ 2,098,907

“Thank you very much for donating my stethoscope. It means a lot to know that there are generous donors like yourself who care about the education and future of medical students.”

— JACOB TUPA

Larimore, N.D.
M.D. Class of 2026

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 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. Our revised hands-on, patient-centered learning curriculum offers more first-year elective options and gets students into the clinical setting faster than many medical colleges.

INDIGENOUS AND PUBLIC HEALTH

At 11 years-young, the UND 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. The program houses three specializations – Health Management & Policy, Indigenous Health, and Population Health Research & Analytics. Likewise, our School’s world-first doctoral program in Indigenous Health provides graduate students with opportunities to promote synergy across research, education, service, and training that focuses on Indigenous health and health equity. Empowered by Indigenous knowledges and cultures, the program saw its first four graduates in 2023 and envisions a world in which current and future generations of Indigenous Peoples thrive with equitable access to health and wellness available to all.

HEALTH SCIENCES

Athletic Training

- Master of Athletic Training degree—first program graduates expected in Spring 2024

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 (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*
Biomedical Sciences (Graduate—Master and Doctoral) 39	Year 1 Class of 2027 78 Year 2 Class of 2026 72 Year 3 Class of 2025 67 Year 4 Class of 2024 66 <hr/> Total 283	Training in family medicine, geriatric medicine, hospital medicine, internal medicine, psychiatry, surgery, orthopedic surgery, transitional, neurology, and hematology/oncology <hr/> Total 168 (A new residency program in pediatric medicine was approved in 2022 and will begin taking residents in 2024.)	Athletic Training Pre-Athletic Training 20 Master of Athletic Training 7 Medical Laboratory Science Pre-Medical Laboratory Science 79 Certificate 71 Histotechnician 18 Bachelor of Science 92 Master of Science 49 Occupational Therapy Pre-Occupational Therapy 97 Occupational Therapy Doctorate 151 Physical Therapy Pre-Physical Therapy 200 Doctor of Physical Therapy 145 Physician Assistant Master of Physician Assistant Studies 65 Public Health Master of Public Health 49 Indigenous Health Ph.D. 51 <hr/> Total 1,094

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 and programs that help recruit more area high school students to UND.	Increased geriatrics, population health, and public health focus.
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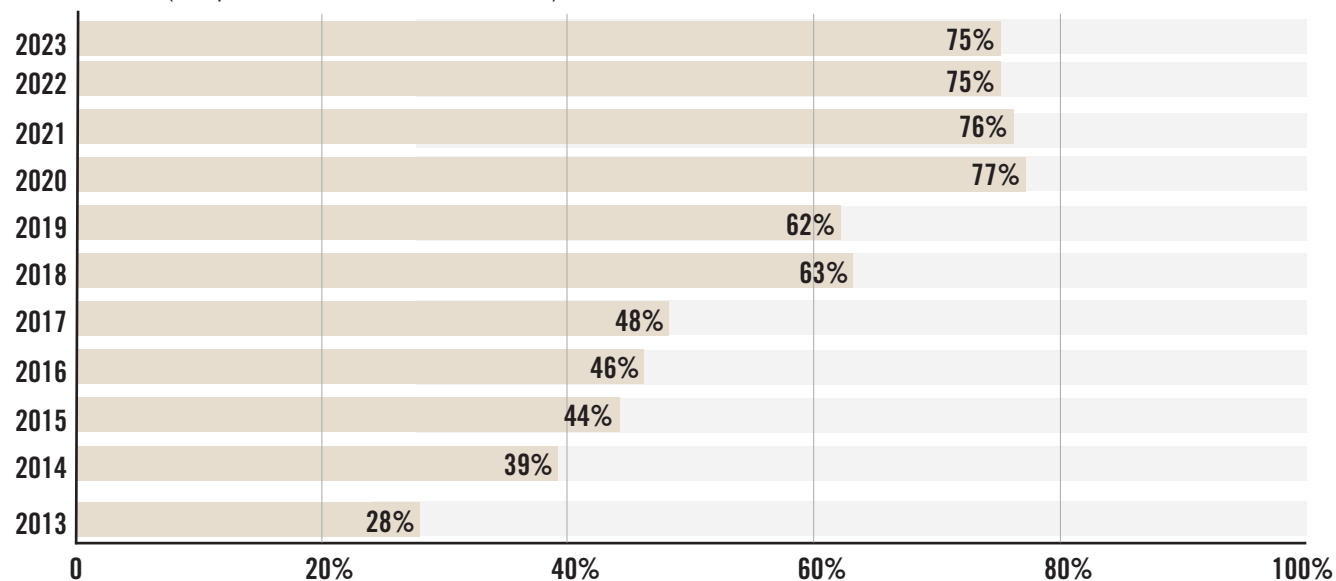
* Official fall 2023 enrollment figures per the University of North Dakota Office of Analytics & Planning.



OUR ATHLETIC TRAINING PROGRAM UPGRADED TO A MASTER OF ATHLETIC TRAINING (MAT) DEGREE IN 2022. IT IS ONE OF VERY FEW MAT PROGRAMS IN THE UPPER-MIDWEST.

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

Percentile rank (compared with other medical schools)



Source: Missions Management Tool, 2023 AAMC

DEGREE PROGRAM PASS RATES

PROGRAM

- Athletic Training
- Medical Laboratory Science
- Occupational Therapy
- Physical Therapy
- Physician Assistant
- Medicine (First time examinees taking the exam from June 2022–June 2023)
 - Step 1
 - Step 2
 - Step 3

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



UND SMHS PASS RATE	NATIONAL PASS RATE
56%	70%
88%	76%
100%	98%
80%	86%
97%	97%
100%	93%
99%	97%
97%	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	2023
All Specialties	46%	50%	49%
Family Medicine	74%	78%	79%
Internal Medicine	41%	44%	40%
Obstetrics and Gynecology	66%	69%	69%
Pediatrics	41%	45%	42%
Psychiatry	41%	48%	48%

Source: AMA Master File, 2023. [Data file]. Wood Dale, Ill. Medical Marketing Service

SCHOOL OF MEDICINE & HEALTH SCIENCES ALUMNI

Athletic Trainers	306
Biomedical Sciences and Clinical & Translational Science	248 (since 1995)
Indigenous Health	4
Medical Laboratory Scientists	2,738
Occupational Therapists	2,117
Physical Therapists	2,117
Physician Assistants	1,996
Physicians	2,534
Public Health Professionals	126

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

Athletic Trainers	32%
Medical Laboratory Scientists	47%
Occupational Therapists	38%
Physical Therapists	48%
Physician Assistants	37%

Source: North Dakota state licensing boards and academic departments

UND SMHS Medical Doctor Program Outcomes

METRIC	PERCENTILE RANK
Fraction of class identifying as American Indian	98th
Graduates entering primary care	98th
Graduates practicing in family medicine	93rd
Graduates practicing in rural areas	99th

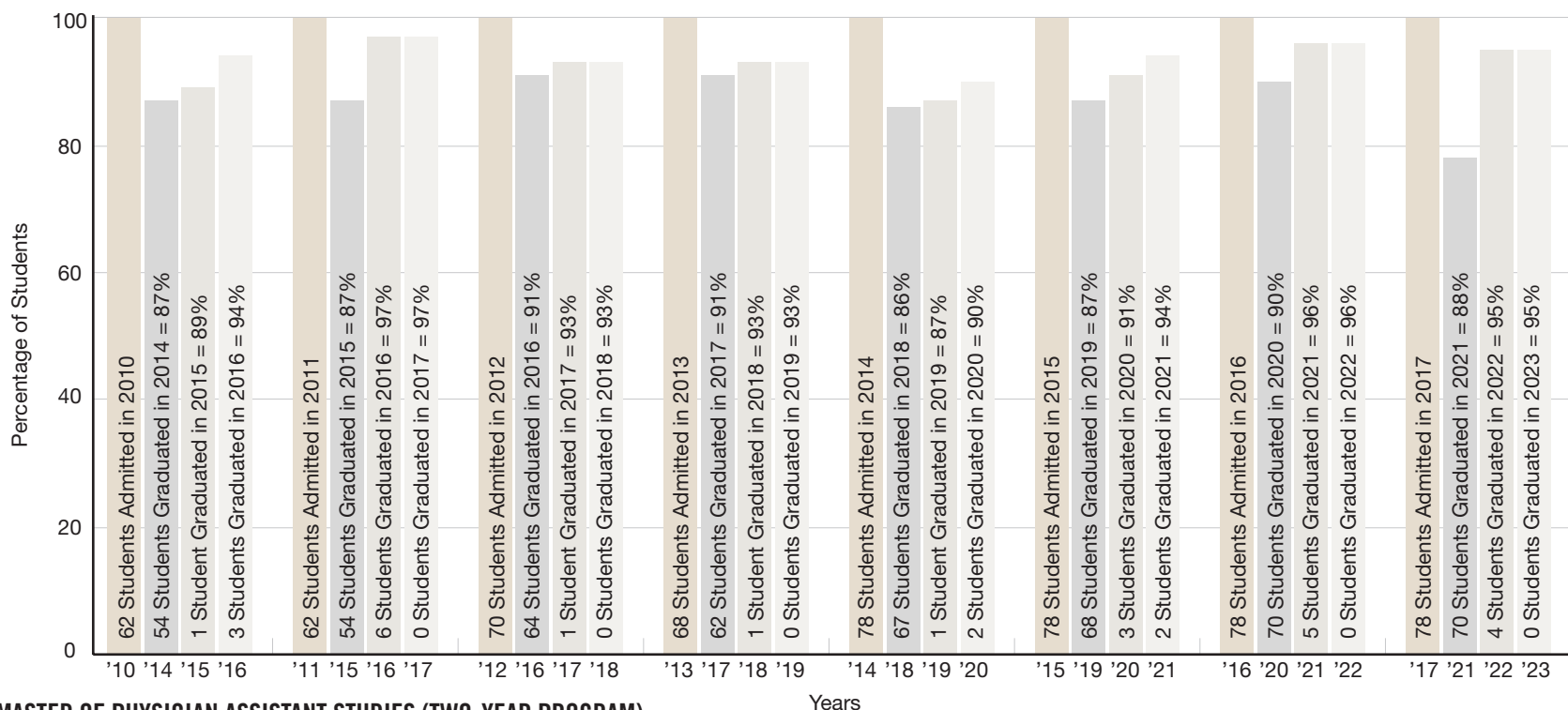
Source: Missions Management Tool, 2023 AAMC

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.

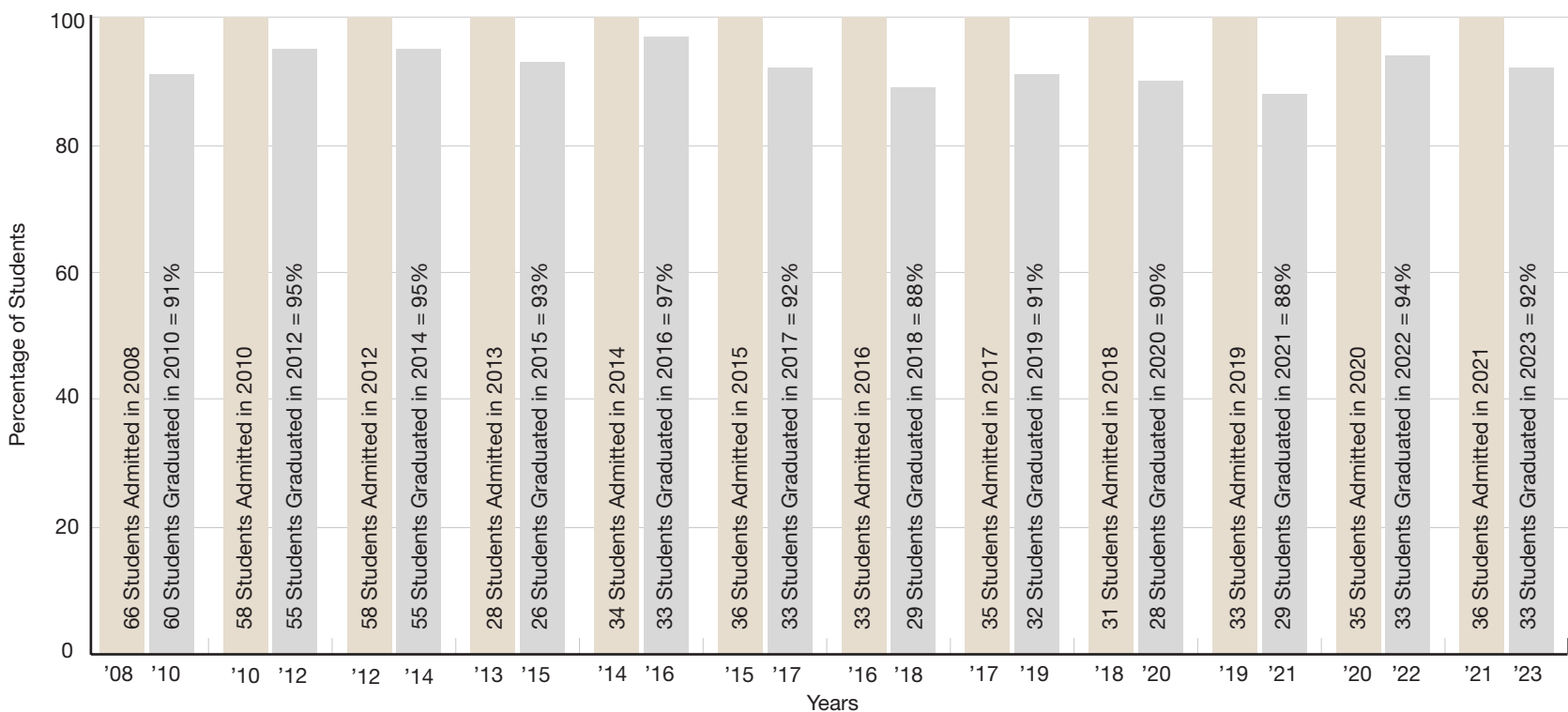
DOCTOR OF MEDICINE (FOUR-YEAR PROGRAM)

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.

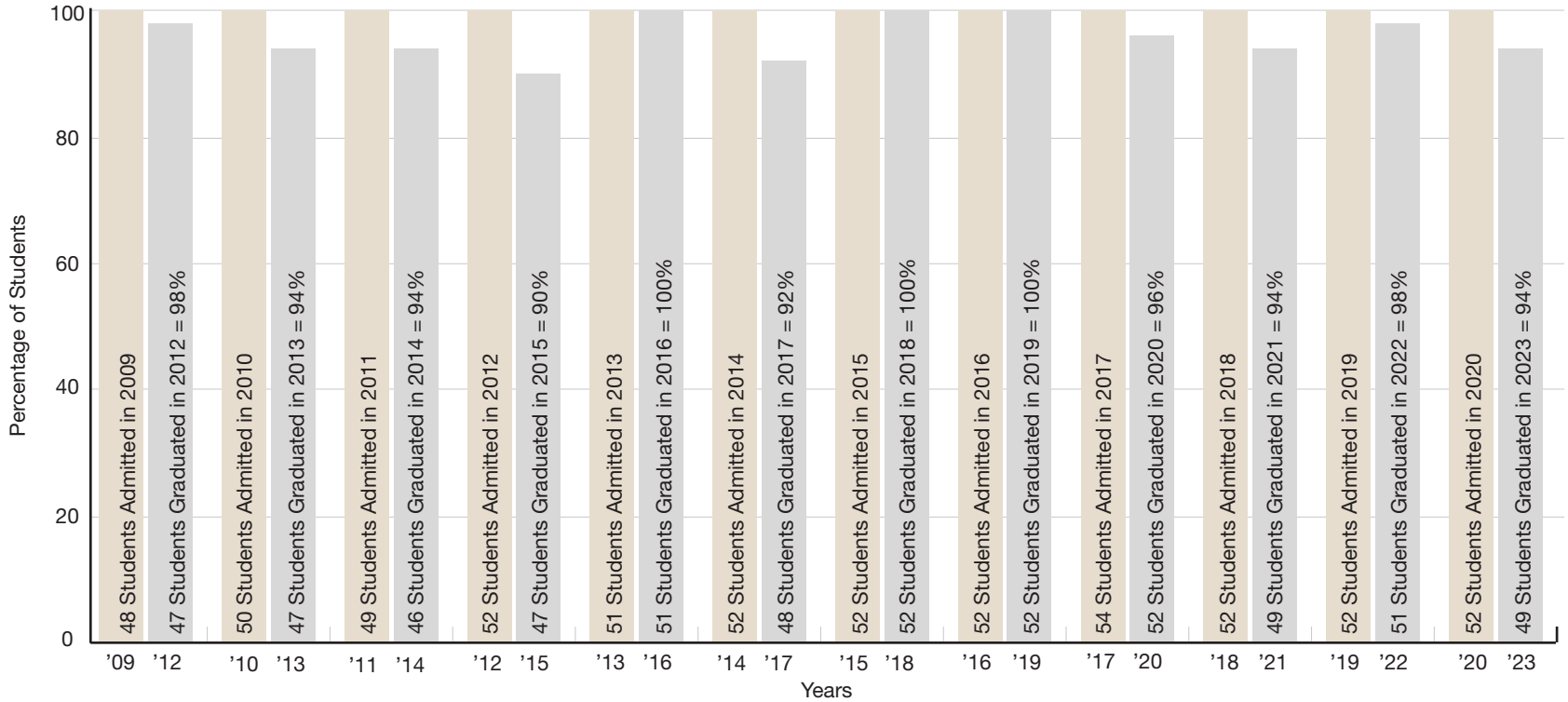




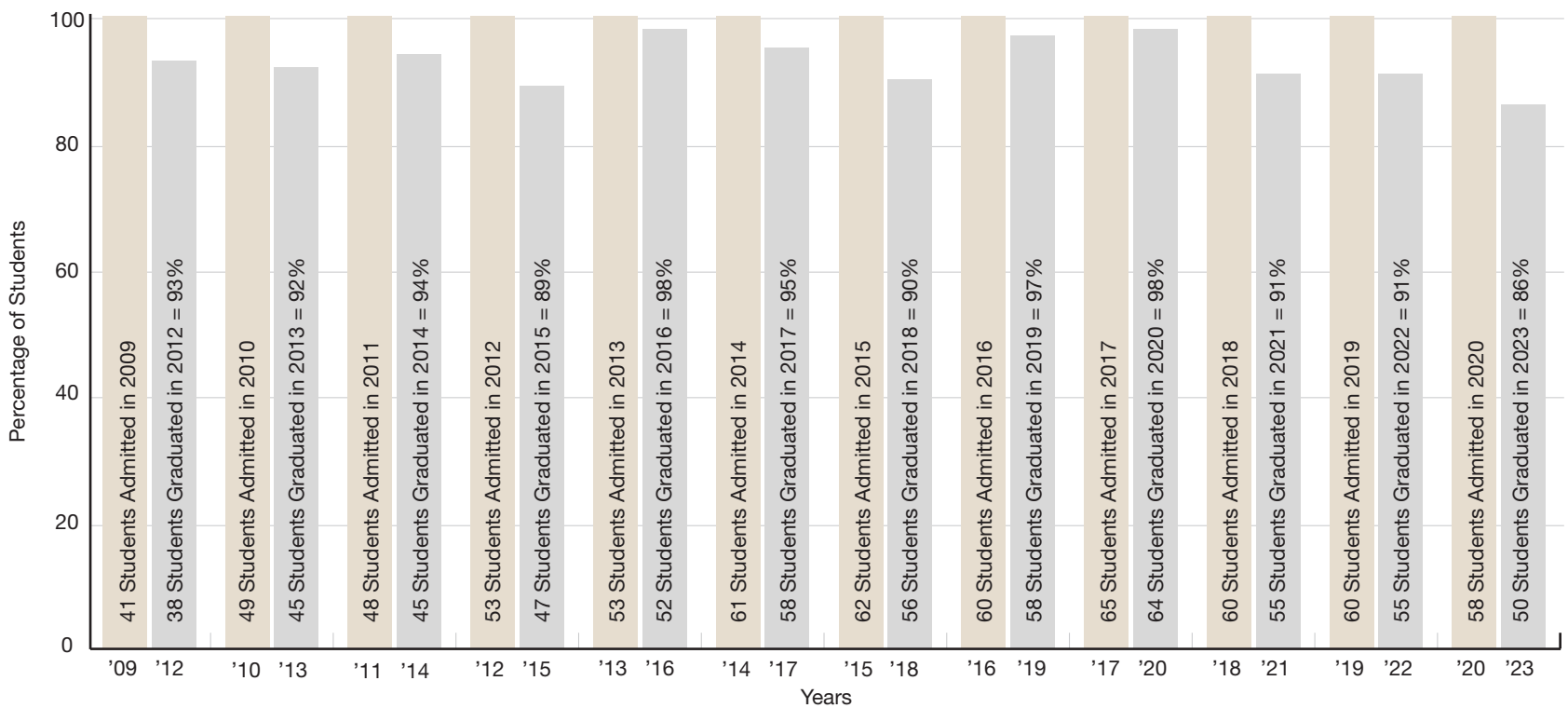
OUR GOAL IS TO EXCEED THE

NATIONAL BENCHMARK FOR COMPLETION

DOCTOR OF PHYSICAL THERAPY (THREE-YEAR PROGRAM)

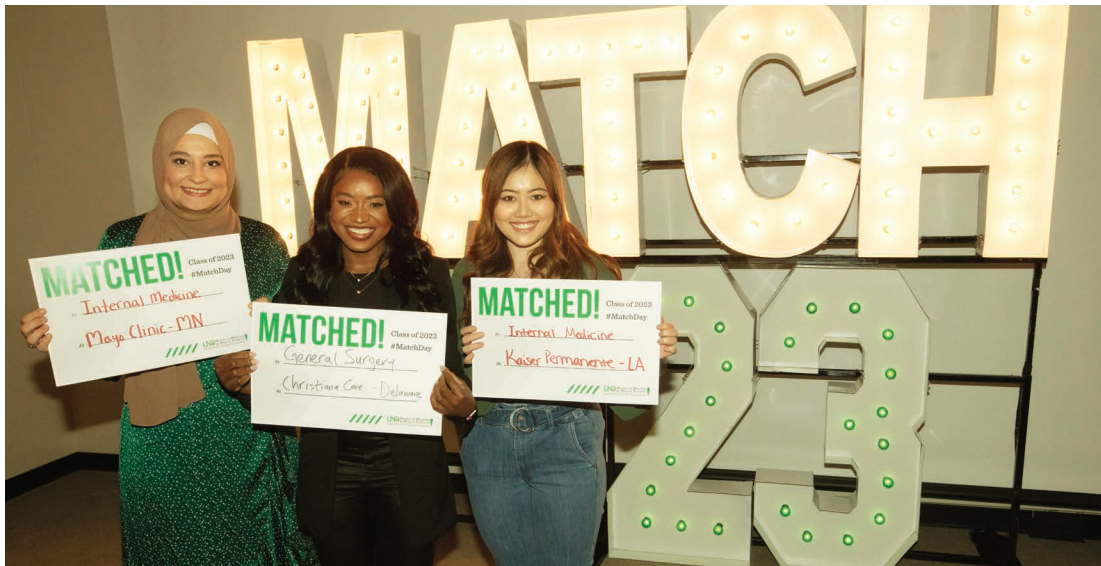


MASTER OF OCCUPATIONAL THERAPY & OCCUPATIONAL THERAPY DOCTORATE (THREE-YEAR PROGRAM)*



* 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 will begin taking residents in 2024

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 and New England), Fargo (Valley City and Wahpeton, N.D., and Detroit Lakes and Perham, Minn.), Hettinger (Bowman, New England, Mott, and Watford City, N.D., and Lemmon, S.D.), Minot (Belcourt, Garrison), and Williston
- UND Surgery Rural Track (Jamestown, N.D., and Grand Rapids and Perham, Minn.)
- UND Psychiatry (Rural Outreach to Dickinson, Williston, Devils Lake, Jamestown, and Valley City, plus Telemedicine)

Post-graduate Fellowships:

- Geriatrics (Fargo)
- Hospitalist (Bismarck)
- Hematology-Oncology (Fargo)
- A new Forensic Pathology Fellowship was approved in 2023 (Grand Forks).

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).

Results of the Match are closely watched because they can predict future changes in the physician workforce. Of the more than 40,000 slots filled in 2023, 34,822 were first-year (PGY-1), an increase of 1.0 percentage point over 2022.

MATCHED! MEMBERS OF UND'S M.D. CLASS OF 2023 SHARE THEIR RESIDENCY MATCH RESULTS, BOTH PROGRAM AND LOCATION.



This year, 72 UND School of Medicine & Health Sciences students successfully matched with residency programs. In all, 52 percent of the M.D. Class of 2023 graduates (38/72) matched into the primary care specialties of family medicine, internal medicine, obstetrics & gynecology, and pediatrics. More than 13 percent (10/72) of the cohort entered family medicine – above the national average of students matching into family medicine – while 14 students (nearly 20 percent) entered internal medicine residencies.

“UND prepared me well for this transition to residency by exposing me to many medical situations and encouraging independence in patient encounters. I feel lucky that we have opportunities to learn from talented physicians here in North Dakota.”

— **SARAH LESMEISTER**

Velva, N.D.
M.D. Class of 2023



* 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 Minot and Bismarck respectively, but complete their last two years in Williston or Hettinger.

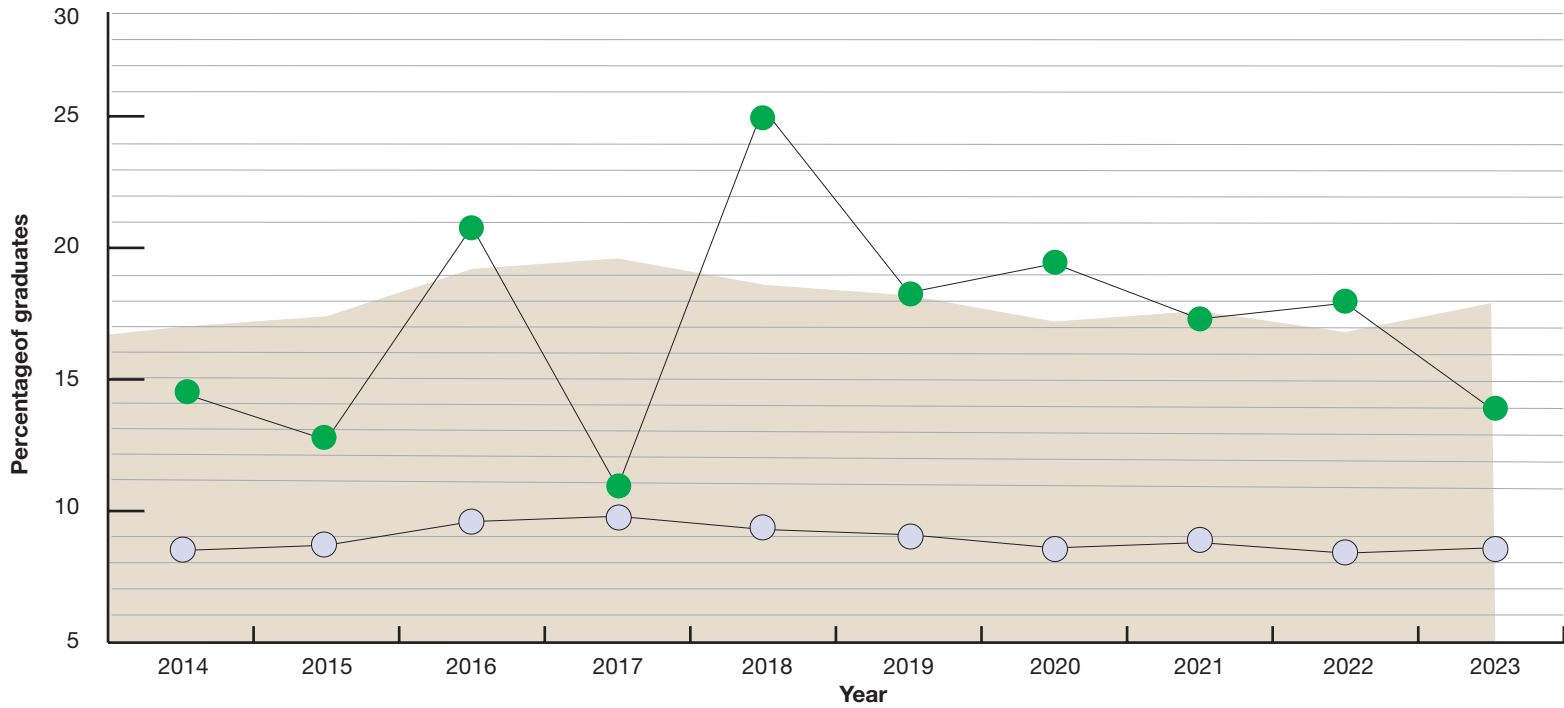
** Transitional residency is a yearlong program designed to introduce graduates to a wide range of medical and surgical specialties. The goal is to build a broad foundation of clinical skills as a base for future training in a medical subspecialty.

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 2014–2023*



Average 2014–2023

- UND SMHS 17.3%
- National MD-Granting Medical Schools 8.6%
- UND SMHS Goal (double the national avg.)

Sources:

National Resident Matching Program: nrmp.org/match-data-analytics/residency-data-reports

Department of Family & Community Medicine, UND SMHS, July 2023

* U.S. M.D. seniors successfully matching in the NRMP.

STUDENTS POSE FOLLOWING THE CLASS OF 2023 M.D. COMMENCEMENT CEREMONY.





GROWING OUR OWN INNOVATIVE PROGRAMS TO PRODUCE HEALTHCARE PROVIDERS FOR NORTH DAKOTA

NORTH DAKOTA AREA HEALTH EDUCATION CENTER

Since 2009, the North Dakota Area Health Education Center (ND AHEC) has utilized federal, state, and private funding to support learning opportunities for more than 40,000 health occupation trainees and professionals all across the state, with emphasis on clinical placements in rural and underserved communities. Since 2013, ND Health Occupations Students of America (HOSA) HOSA/Future Healthcare Occupations – a program of ND AHEC – has provided educational opportunities to 2,286 (unique count) secondary students to healthcare careers, through 16 local HOSA Chapters.

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 clerkship. Students work with preceptors in each of the specialties. An important feature of the 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.

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.

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 2023, the event saw hundreds of faculty, postdoctoral fellows, and graduate, medical, and health sciences students presenting live 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. INMED celebrated 50 years in 2023!

R-COOL-HEALTH SCRUBS ACADEMY

Since the annual Scrubs Academy started in 2011, 612 students have attended from over 120 communities throughout North Dakota (428 students from rural communities). Scrubs Academy I is open to North Dakota students who will have completed grades 6-8. Scrubs Academy II is open to North Dakota high school students who will have completed grades 9-11. 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 2023 Scrubs Academy I (Grand Forks) was the first Academy held since 2019, due to the COVID-19 pandemic. The 2023 Scrubs Academy II (Minot) was unable to be held due to location logistics.

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 (grades 5-12) are able to explore healthcare careers from their local healthcare providers through hands-on, interactive activities. Since the program's start in 2010, 12,209 students, 4,065 volunteers, and over 230 local communities have participated in 135 Scrubs Camps across the state.

RESEARCH

Over the past decade,
the School has been awarded

over \$334 million

in external funding for
sponsored research and other projects.

For fiscal year 2023
(July 1, 2022–June 30, 2023),

total research and sponsored funding was

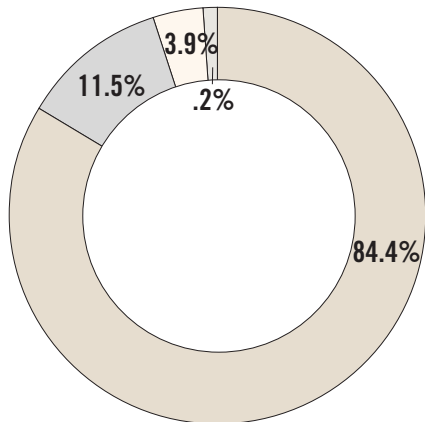
more than \$34 million



FISCAL YEAR 2023

TOTAL FUNDING BY SPONSOR TYPE \$34,397,895

Total number of proposals 159
Total number of awards 105

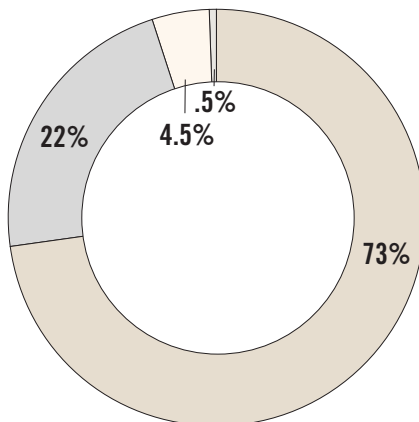


84.4% FEDERAL \$29,015,263	3.9% STATE \$1,330,136
11.5% OTHER* \$3,996,477	.2% FOUNDATION \$56,019

FISCAL YEAR 2022

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

Total number of proposals 155
Total number of awards 104

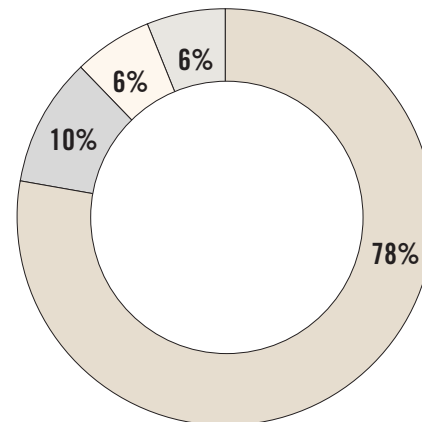


73% FEDERAL \$35,486,062	22% STATE \$10,923,316
4.5% OTHER* \$2,129,839	.5% FOUNDATION \$112,500

FISCAL YEAR 2021

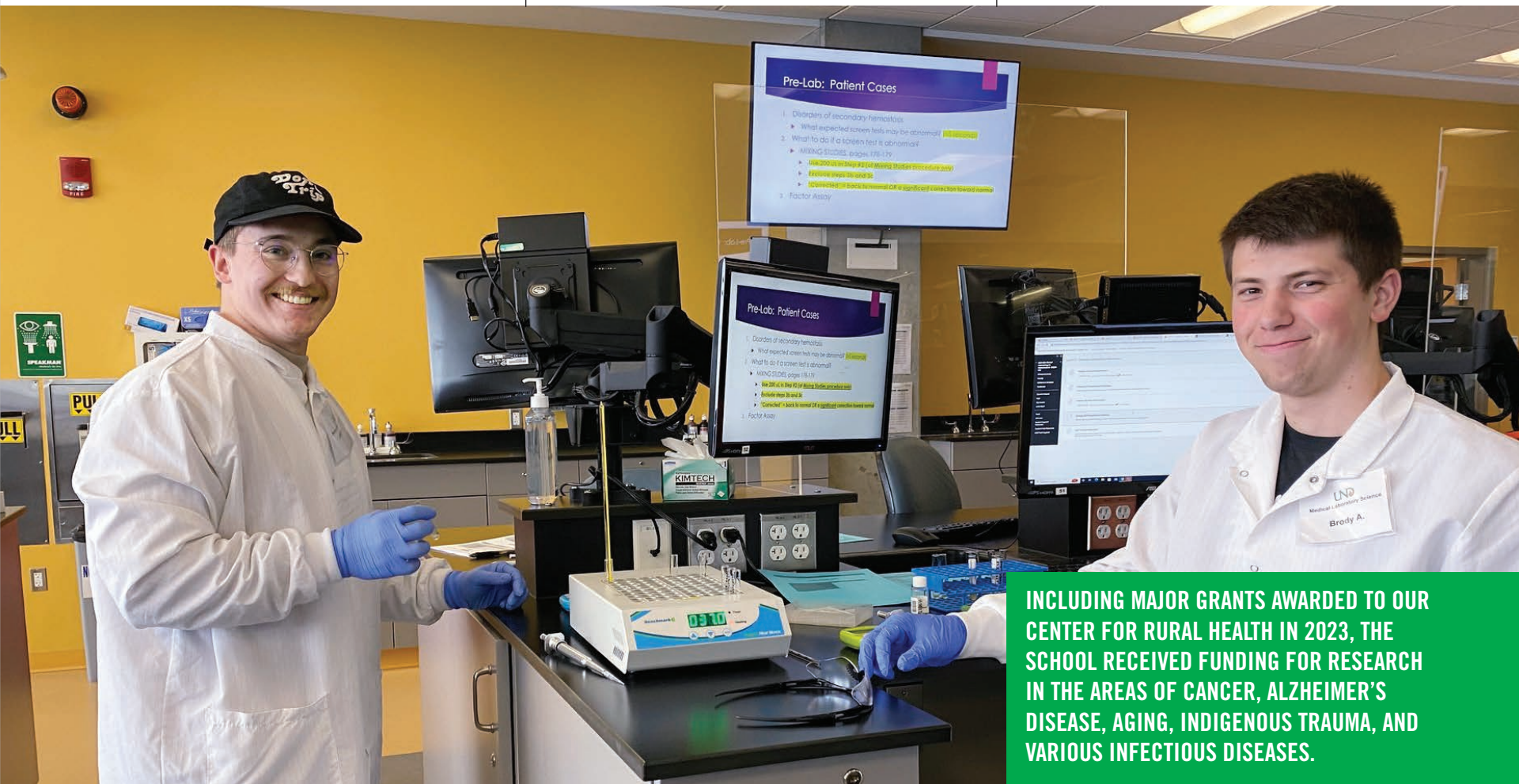
TOTAL FUNDING BY SPONSOR TYPE \$38,476,968

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

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

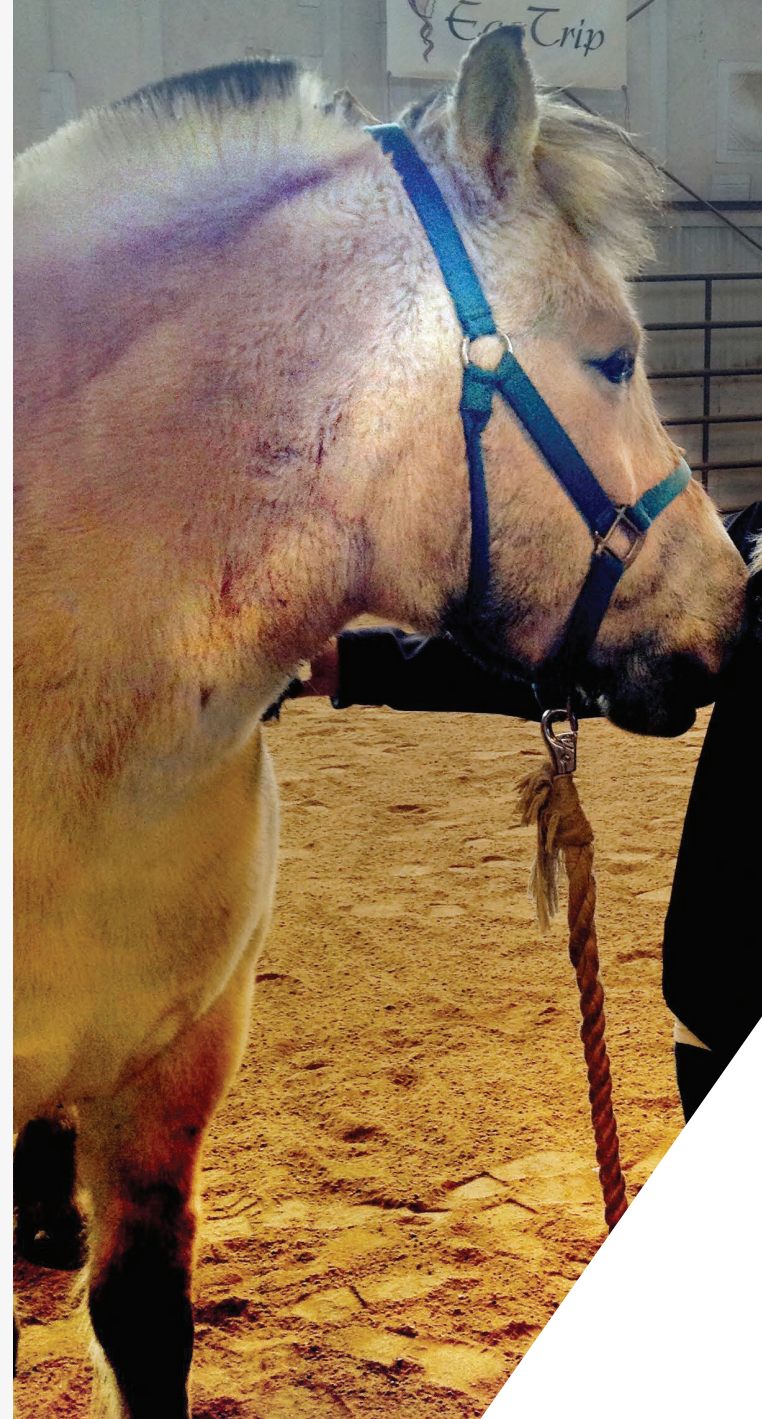


INCLUDING MAJOR GRANTS AWARDED TO OUR CENTER FOR RURAL HEALTH IN 2023, THE SCHOOL RECEIVED FUNDING FOR RESEARCH IN THE AREAS OF CANCER, ALZHEIMER'S DISEASE, AGING, INDIGENOUS TRAUMA, AND VARIOUS INFECTIOUS DISEASES.



ACTIVITIES OF DAILY LIVING

Students of the UND Athletic Training program in Grand Forks, N.D., and Occupational Therapy Doctorate program in Casper, Wyo., get hands-on training.



30 YEARS OF TRENDSETTING

UND's Departments of Sports Medicine and Occupational Therapy celebrate 30 years of blazing trails for their professions.

Medical college-based Athletic Training

In the end, making history took only 25 words.

"This is to express support for the location of the Athletic Training Education Program in the School of Medicine at the University of North Dakota."

With the single sentence, written by former UND President Thomas Clifford and delivered to then-Dean of what is today the UND School of Medicine & Health Sciences (SMHS), Dr. Edwin C. James, UND's Department of Athletic Training became the first such program in the nation to be housed within an accredited medical college.

Smiling at the 10 April 1990 memo that he collected as part of a fuller report on his department's history, Chair and Associate Professor in the Department of Sports Medicine Dr. Steve Westereng reflected on just how risky and profound such a move felt at the time.

"In 1991, nobody had done that," explained Westereng from a meeting room on the third floor of the SMHS building in Grand Forks, clarifying that while his department was admitted to the medical college shortly after the Clifford memo, the athletic training program was not officially accredited until 1993. "This was the first athletic training program to go into a med school.



And now that's where everybody else is – it's actually a standard now. You should be doing this."

Crediting former Director of Sports Medicine Jim Rudd and former Chair of the UND Department of Family & Community

Medicine Dr. William Mann with making the move happen more officially, Westereng noted how the transition 30 years ago marked the first of what was to become many trendsetting decisions by the Department.

"In 2011 the NFL mandated all teams have a physical therapist on staff, whereas we already had this in place at UND since 2000," continued Westereng, who helped bring one of the regions only Master of Athletic Training degrees online at UND in 2022. "A more recent development was working with the Department of Physical Therapy on a Sports Residency for physical therapists who work within the UND Center for Sports Medicine and with the athletic training faculty on student athletes. This program is interdisciplinary, educational, and contributes to the service of area athletes."

Here's another example: Based on advice and input it received from the National Athletic Trainers Association, the NCAA approved, in 2016, new rules aimed at guaranteeing medical independence for athletic training and sports medicine staff.

As one NCAA report put it at the time, schools' sports medicine staff – team physicians and athletic trainers – must be given "unchallengeable authority" over the medical treatment and return-to-play decisions for injured athletes.

"While it is common and accepted for head coaches to hire and fire assistant coaches and certain support staff," the report noted, "the new rules draw a line when it comes to medical staff, insisting that the employment, supervision and decision-making of team physicians and athletic trainers be made independent of coaches."

That is to say, the NCAA recommended schools take both athletic training programs and injury reporting out of university athletics programs, advising instead that they reside in academic and/or health-adjacent departments.

"NCAA-mandated independent medical decision making in 2016, but UND was already there back in 1991 because of its placement in the School of Medicine & Health Sciences," Westereng stated.

UND Occupational Therapy in Wyoming

This tradition of setting trends is hardly unique to UND's Department of Sports Medicine, though.

"People worry about a level of saturation – that there'll be no jobs – but they're hiring for OT in every single town in Wyoming," says the Nicole Harris from her office at the UND Department of Occupational Therapy's (OT) satellite campus at Casper College in Casper, Wyo. "So, we need more students. We don't have enough OTs, and we need to fill those positions."

This desperate need for health providers in a state even more sparsely populated than North Dakota – which is to say, even more rural in scope – is at the heart of what led Tom Clifford, Jr., the son of the former University of North Dakota President, Tom Clifford, Sr., and the late LeRoy Strausner, who served as Casper College's President from 1991 to 2004, to push for an OT program in Wyoming back in the early-1990s.

To Breann Lamborn, it was this vision that has been vital to the provision of healthcare in Wyoming for three decades.

"We were the first OT program in the country that crossed state lines," says Lamborn, a Casper-based associate professor of occupational therapy for UND. "And for many years we were the model for the proprietary programs that opened after us. Nobody had done it before."

The new Chair of UND's Department of Occupational Therapy, Dr. Sarah Nielsen, agrees, noting how UND has been identified by the Accreditation Council for Occupational Therapy Education (ACOTE) for its integrated model.

"Until recently, I did not understand the significant impact UND has had on additional location models," Nielsen says. "When I started on the ACOTE, I was placed on the policies and procedures committee specifically because of UND's role in setting the gold

standard for additional locations. We are viewed as doing it right: one program with one curriculum where we collaborate every day."

According to a document provided by the Department, Strausner was first interested in starting an occupational therapy assistant (OTA) program in Wyoming, which had no OT or OTA training options at the time. He took the idea to Clifford, Jr., then-Chair of the Life Sciences Division at Casper College, who, given his contacts up at UND, connected with then-Chair of the Department of Occupational Therapy, Sue McIntyre. Asking McIntyre if she would consult Casper on opening an OTA program, Clifford was surprised at McIntyre's modified "yes" response.

"Tom had been advising and guiding his students to North Dakota, which of course was his alma mater," explains Lamborn. "And Sue, being highly innovative, said 'Well, what would you think if we were just to deliver the bachelor's degree in OT to you, from UND?' That's how the ball got rolling for an OT program in Wyoming."

Despite the distance, though, the two student cohorts remain part of a single program with a single faculty.

"From the beginning, we intended the Wyoming program to fill a critical need in healthcare providers for rural practice – because there was no OT school even close to us at that time," she says, citing research data suggesting that rural areas have an especially difficult time recruiting and retaining health providers. "We've always maintained that emphasis on offering this program with the hope, as in North Dakota, that students would come here and then they would choose to stay here and practice. Up to this point, we've been very successful with that. The majority of OTs in Wyoming are grads from our program."

This sentiment, says Nielsen, is part of what makes the program so valuable to both states.

"The beauty of this collaboration is that we have found similar issues in health delivery in both states, and we have also found that the ways each state addresses challenges varies," she notes. "One of the most fascinating things we've learned is that Wyoming has incredibly innovative frontier service delivery strategies for education and healthcare. We then bring that knowledge back to our own state as we impact delivery in North Dakota."

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 37 Critical Access Hospitals (CAHs) and 6 Tertiaries. All CAHs are members of the CRH-supported CAH Quality Network. All 57 Rural Health Clinics (RHCs) have joined with the North Dakota RHC Network. CRH has recently provided training and development assistance to CAHs to prepare for significant health system change in the form of Value-Based Care. 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. 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:

\$7,373,336 FOR FY2023

FISCAL YEAR 2023

Federal Grants: \$6,953,126 - CRH supports 13 grants in this category, including:

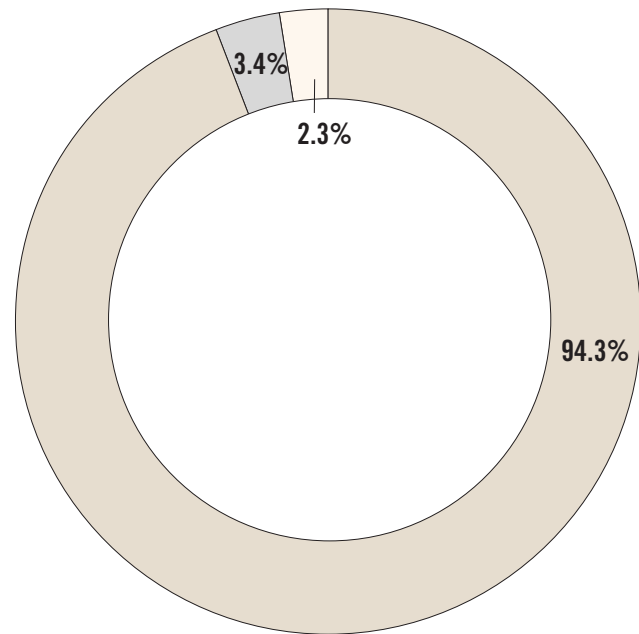
- Two national programs that focus on Indigenous populations: the National Indigenous Elder Justice Initiative (NIEJI) and the National Resource Center on Native American Aging (NRCNAA). These programs focus on improving health outcomes and the wellbeing of American Indian, Alaska Native, and Native 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, Rural Health Research Gateway, and Rural Community Toolbox 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: \$247,210 - CRH has sponsored contracts with the state for the North Dakota Brain Injury Network and the Qualified Service Provider (QSP) Hub which provides training, assistance, and resources for QSPs and QSP provider agencies. Both of these grants are awarded on a biennial basis.

Other Grants: \$173,000 - 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. Funding for Project ECHO trainings is received on a project basis and this past year five series were offered.

FISCAL YEAR 2023

TOTAL \$7,373,336



94.3%	3.4%	2.3%
FEDERAL	STATE	OTHER
\$6,953,126	\$247,210	\$173,000

Fiscal Year 2022

Federal Grants	\$ 16,447,281
State Grants	1,730,836
Other Grants	139,500
Total	\$ 18,317,617

Fiscal Year 2021

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

FUTURE HEALTH PROVIDERS PRACTICE HEARING A BABY'S HEARTBEAT IN THE WOMB AT THE SCRUBS ACADEMY I.



SMHS STAFF CELEBRATE WORK ANNIVERSARIES

The 2023 Staff 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 Tues., May 9, 2023, in the UND Memorial Union. The following were among the SMHS staff celebrating a work anniversary of 5, 10, 15, 20, 25, 30 and 35 years of service:

35-YEAR HONOREES

Julie Arnold, Center for Rural Health (CRH)

Susan Carlson, Administration & Finance

Tonya Murphy, Surgery

Allison Ranisate, SMHS Library Resources

20-YEAR HONOREES

Bonnie Kee, Biomedical Sciences

Jennifer Lang, CRH

John Lee, Information Resources

Jodee Nielsen, Northwest Campus – Minot

Dannette Stramer, Information Resources

Jennifer Wahl, Minot CFM

Wendy Warner, CRH

5-YEAR HONOREES

Sonja Bauman, CRH

Karen Bernhardt, CRH

Kathryn Camburn, Internal Medicine

Vicki Clapp, Bismarck CFM

30-YEAR HONOREES

Steven Adkins, Biomedical Sciences

Sharlene Rakoczy, Biomedical Sciences

15-YEAR HONOREES

Carla Beach, Internal Medicine

Tiffany Jensen, Minot CFM

Marlys Peterson, Surgery

Rebecca Quinn, CRH

Laura Stutrud, Information Resources

Jody Ward, CRH

Karen Davis, CRH

Emily Evers, Student Affairs & Admissions

Atreyi Ghatak, Biomedical Sciences

Alissa Hancock, Education Resources

25-YEAR HONOREES

Melissa Gardner, Family & Community Medicine

Donita Johnson, Bismarck Center for Family Medicine (CFM)

Christine Wiese, Bismarck CFM

10-YEAR HONOREES

Kayla Langer, Bismarck CFM

Traci Lentz, Minot CFM

Bernadette Meberg, Biomedical Sciences

David Rzucidlo, Occupational Therapy

Michelle Senger, Minot CFM

Timothy Shea, SMHS Simulation Center

Courtney Maguire, SMHS Simulation Center

Brenda Niess, Minot CFM

Laurie Nitz, Occupational Therapy

Damien Parrello, Biomedical Sciences

FACULTY & STAFF TURNOVER

The faculty turnover rate (faculty who left their jobs) at the UND SMHS for FY 2023 was 10.3 percent. The turnover rate for all North Dakota University System (NDUS) faculty for that same year was 16.3 percent.

Likewise, the staff turnover rate at the UND SMHS for FY 2023 was 10.0 percent while the rate for all NDUS staff was 20.1 percent.

In FYs 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 FY22 or FY23.

	2023**	2022**
Total Benefited Faculty*	195	208
Full-time	184	193
Part-time	11	15
Turnover Count	20	22
Total Benefited Staff*	289	262
Full-time	281	254
Part-time	8	8
Turnover Count	28	36

* Benefited appointment is 20 hours/week or more.

** Fiscal Year



IT ALL HAPPENS AT SMHS

CLOCKWISE FROM TOP: KIDDOS AND MEDICAL STUDENTS AT OUR ANNUAL TEDDY BEAR CLINIC EVENT; INDIANS INTO MEDICINE FOUNDERS, GRADS, AND FORMER STAFFERS AT THE PROGRAM'S 50TH ANNIVERSARY IN APRIL 2023 (LEFT-TO-RIGHT: BARB ANDERSON, DEB WILSON, NANCY EVERLING, LINDA GOURNEAU, M.D., AND LOIS STEELE, M.D.); AND TIM SHEA (LEFT) WORKS WITH A STUDENT IN OUR AWARD-WINNING SIMULATION CENTER.

