



# VITAL SIGNS

2016 COMMUNITY REPORT

EDUCATE DISCOVER SERVE

 **SCHOOL OF MEDICINE  
& HEALTH SCIENCES**  
UNIVERSITY OF NORTH DAKOTA 

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# EDUCATE, DISCOVER, SERVE

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## A Community-Based School of Medicine and Health Sciences

UND is one of 28 medical schools in the country that is community-based, meaning we don't own or operate our own hospital. Rather, we partner with healthcare providers in the community to educate our students.

Doctor of Philosophy and Master of Science degrees are available in the following disciplines:

- Anatomy and Cell Biology
- Biomedical Sciences
- Biochemistry and Molecular Biology
- Clinical and Translational Science
- Microbiology and Immunology
- Pathology
- Pharmacology, Physiology, and Therapeutics

### Medical Doctor (MD) Program

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

### MD/PhD Scholars Program

Outstanding students are prepared for careers in academic medicine and research. Students pursue original research in laboratories or clinical settings with members of the graduate faculty while also completing the medical school curriculum.

### Master of Public Health

The educational priority is preparing students to respond to the growing demand for public health professionals who can transform data into information for decision-making. The size of health data is growing exponentially, and the skills to mine big data are exceptionally

valued by public and private health agencies, as well as healthcare provider and payer organizations. Therefore, both MPH specializations—Population Health Analytics, and Health Management and Policy—emphasize analytics. The program's Center for Comparative Effectiveness Analytics provides a laboratory for training in analytics.

In 2016, the Norwegian Centre for International Cooperation in Education under the Partnership Program with North America funded a four-year student and faculty exchange between the MPH program and the systems dynamics department at the University of Bergen in Norway. The North Dakota Department of Health funded an evaluation of its Worksite Wellness programs, and the Robert Wood Johnson Foundation funded a community engagement project focused on radon exposure in Grand Forks. The North Dakota Statewide Cancer Registry continued its funding to MPH faculty member Cristina Oancea, as lead epidemiologist.

### Health Sciences

#### Athletic Training

- Four-year Bachelor of Science

#### 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; more than half in North Dakota and the surrounding region

#### Histotechnician Certificate

#### Occupational Therapy

- Five-year Master of Occupational Therapy

#### Physician Assistant Studies

- Two-year Master of Physician Assistant Studies

#### Physical Therapy

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

# EDUCATE

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The primary purpose of the University of North Dakota School of Medicine and Health Sciences is to educate physicians and other health professionals and to enhance the quality of life in North Dakota. Other purposes include the discovery of knowledge that benefits the people of this state and enhances the quality of their lives.

—North Dakota Century Code

## The University of North Dakota School of Medicine and Health Sciences is a national leader in rural health—serving North Dakota since 1905

### Areas of Strength

Your School of Medicine and Health Sciences educates healthcare providers and scientists and strives to discover new knowledge to serve North Dakotans.

The School has a well-deserved reputation for excellence as one of 28 community-based medical schools in the country, which gives our medical and health sciences students the chance to practice in hospitals and clinics across North Dakota. The School is grateful for the more than 1,000 part-time or volunteer clinical faculty in over 30 communities throughout the state who 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 here in North Dakota but also across the country, including an occupational therapy campus in Casper, Wyoming, and a medical laboratory science campus at Mayo Clinic in Rochester, Minnesota.

## The UND School of Medicine and Health Sciences *educates* students to focus on patients and communities

- The School's patient-centered-learning curriculum is nationally recognized for producing caring, patient-centered, and dedicated practitioners.
- At the forefront of medical education, the School uses the latest in simulation technology for teaching and serves as a valuable resource for healthcare professionals throughout North Dakota and the region.
- An interprofessional healthcare course makes the School a national leader in providing students with a strong practical understanding of the various healthcare professionals on their team.
- Medical students and residents provide direct care to North Dakotans through the Centers for Family Medicine in Bismarck and Minot as well as through clerkships in communities throughout the state.
- Health sciences students provide direct care and services through internships in healthcare facilities across North Dakota.

# DISCOVER, SERVE

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Chester Fritz Distinguished Professor Emeritus Edward C. Carlson, PhD, in the Department of Biomedical Sciences, presented a talk about his research to the South Forks Lions Club on May 24 in Grand Forks. The Lions have supported Carlson's research on diabetic eye disease since 1988. Carlson expressed his heartfelt gratitude to the Lions for their long-term support.



## The UND School of Medicine and Health Sciences *serves* North Dakota

- The School improves the health and healthcare of North Dakotans through research, community engagement, and prevention programs.
- Direct primary care to North Dakotans is provided through its family medicine clinics in Bismarck and Minot.
- The School leads the nation in rural health through the Center for Rural Health, one of the nation's best. It is home to seven national programs: the National Resource Center on Native American Aging, the National Indigenous Elder Justice Initiative, the Rural Health Information Hub, the Rural Health Research Gateway, the Rural Health Reform Policy Research Center, the Seven Generations Center of Excellence in Native Behavioral Health, and TruServe, a web-based information tracking system that is now used by most State Offices of Rural Health. The Center is a UND Center of Excellence in Research, Scholarship, and Creative Activity, and in 2013 was awarded the UND Departmental Award for Excellence in Research.
- The Master of Public Health program is training students to contribute to prevention of disease and disability and to improvement of health and healthcare in North Dakota and the Northern Plains. The program's educational and service goals are achieved through partnerships within UND, including with medicine and the health sciences, public administration, geography, environmental health sciences, and engineering, as well as with state and local public health departments, health systems, and insurers.
- The School is a major provider of healthcare practitioners for the state of North Dakota, especially family physicians practicing in rural areas.



On November 3, a large contingent of UND students—including medical, occupational and physical therapy, nutrition and dietetics, and nursing—sponsored the 2016 iteration of the annual Teddy Bear Clinic, where about one hundred local kindergartners bring their teddy bears in to the School for a checkup. Among other activities, the children are partnered one-on-one with a medical student to perform an examination of their teddy. And firefighters from the Grand Forks Fire Department were on hand as well to emphasize safe practices around the home. The clinic promotes good health and teaches the children to learn and speak about healthful living. The clinic is an example of community commitment and attention to population health principles demonstrated by our students. In the photo, a kindergartner views an “X-ray image” taken of her stuffed elephant.

# EDUCATE

## Student Enrollments by Major, Fall 2016

|  |                  |  |                    |
|--|------------------|--|--------------------|
| Anatomy and Cell Biology<br>(Graduate—Master and Doctoral)   | 3                | Health Sciences                            |                    |
| Biochemistry and Molecular Biology<br>(Graduate—Master and Doctoral, includes Pathology)                     | 9                | Athletic Training                          |                    |
| Biomedical Sciences<br>(Graduate—Master and Doctoral)  | 24               | Pre-Athletic Training                      | 31                 |
| Clinical and Translational Science<br>(Graduate—Master and Doctoral)   | 3                | Bachelor of Science                        | 28                 |
| Microbiology and Immunology<br>(Graduate—Master and Doctoral)  | 5                | Medical Laboratory Science                 |                    |
| Pharmacology, Physiology, and Therapeutics<br>(Graduate—Master and Doctoral)                                 | 6                | Pre-Medical Laboratory Science             | 70                 |
|  | <b>Total 50</b>  | Certificate                                | 91                 |
| Medical Doctor   |                  | Bachelor of Science                        | 123                |
| Year 1—Class of 2020   | 78               | Master of Science                          | 48                 |
| Year 2—Class of 2019   | 77               | Occupational Therapy                       |                    |
| Year 3—Class of 2018   | 70               | Pre-Occupational Therapy                   | 114                |
| Year 4—Class of 2017   | 68               | Professional Year I<br>(Undergraduate)     | 59                 |
|  | <b>Total 293</b> | Professional Year II<br>(Undergraduate)    | 56                 |
| Residents  |                  | Professional Year III<br>(Graduate—Master) | 62                 |
| (Post-MD degree training in family medicine,<br>internal medicine, surgery, psychiatry,<br>and transitional) |                  | Physical Therapy                           |                    |
|  | <b>Total 118</b> | Pre-Physical Therapy                       | 219                |
|  |                  | Doctoral                                   | 152                |
|  |                  | Physician Assistant<br>(Graduate—Master)   | 66                 |
|  |                  | Public Health                              | 26                 |
|  |                  | Graduate—Master Certificate                | 1                  |
|  |                  |  | <b>Total 1,146</b> |

The School's faculty also teach basic science courses to 762 UND undergraduate students each semester who will become nurses, dietitians, teachers, and forensic scientists.

When the School's Healthcare Workforce Initiative (HWI) is fully implemented, 64 additional medical students (16 per year), 90 health sciences students (30 per year), and 51 residents (post-MD degree trainees, with 17 per year added) will be educated. And to house these 205 new trainees (not to mention the requisite added faculty and staff), the new medical school and health sciences facility was completed on time and on budget in July 2016 to house everyone. In addition to expansion of class sizes, the HWI utilizes a number of strategies to maximize success in

increasing North Dakota's healthcare workforce:

- Acceptance of students to medical school weighted toward those from rural areas of North Dakota.
- Tuition forgiveness for those who commit to practice primary care in a rural community.
- Increased longitudinal experiences in rural communities.
- Increased geriatrics, population health, and public health focus.

## David F. Schmitz

David F. Schmitz, MD, has been named the chair of the Department of Family and Community Medicine at the University of North Dakota School of Medicine and Health Sciences. He is an internationally known and respected clinician who has extensive research expertise in training and retaining physicians in rural and underserved areas. Since 2013, Schmitz has been the chief rural officer for the Family Medicine Residency of Idaho in Boise, where he served as the chief quality officer, as well as program director of the Rural Training Tracks for the Caldwell and Magic Valley Programs in Idaho. He practices as a family physician and taught for the Family Medicine Residency of Idaho.

At the UND SMHS, Schmitz works collaboratively with the faculty and institutional leaders to build upon the School's strong nationally recognized rural medicine program. As chair, he will work with the SMHS's clinical partners to innovatively meet the need for education and training of current and future health professionals to effectively serve rural and underserved areas of the state.

"Dr. Schmitz's background, training, and experience are almost a perfect match with our needs here at UND and in North Dakota," said Joshua Wynne, MD, MBA, MPH, UND vice president for health affairs and dean of the UND School of Medicine and Health Sciences. "Dave is a highly accomplished and highly respected family medicine clinician, scholar, administrator, and teacher with local, regional, national, and international recognition."

"It is an honor to join the University of North Dakota," Schmitz said. "My entire career has centered around the mission I personally share with this department and the UND SMHS. I am dedicated to serving the needs of our patients, our communities, and our School. Together we will continue to strive to meet the needs of the state of North Dakota while setting an example nationally."

Schmitz earned his medical doctorate from the State University of New York at Buffalo. His residency training was completed in family medicine at the Family Practice Residency of Idaho in Boise. Schmitz is a Fellow of the American Academy of Family Physicians. He is board-certified in family medicine by the American Board of Family Medicine, where he has been a diplomate since 1999.

While practicing in rural Idaho before returning to medical education in 2005, he served as chief of staff of a critical access hospital and cofounded the St. Maries Volunteer Community Clinic in St. Maries, Idaho. He is a past-president of the Idaho Rural Health Association and



currently president-elect of the National Rural Health Association. He is the founding chair of the American Academy of Family Physicians Member Interest Group on Rural Health. He also serves the academy through its quality and practice, and its education commissions. Schmitz is an Advisory Council member for the National Rural Health Resource Center, Technical Assistance and Service Center. He is an executive committee member of the Global Association of Family Doctors Working Party on Rural Health. The association is a selected small group of rural medical education leaders who collaborate worldwide to share research, best practices, and opportunities for training rural family physicians.

Schmitz's research and scholarly interests are in rural physician workforce development, recruitment, and retention; the development of rural communities' healthcare resources; and quality improvement in rural healthcare. He has published and presented extensively on his research, having published or delivered over 150 publications, technical reports, and presentations.

# EDUCATE

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.

## School of Medicine and Health Sciences Student Performance on Nationally Recognized Exams

| Program                       | UND Pass Rate | National Pass Rate |
|-------------------------------|---------------|--------------------|
| Athletic Training             | 90%           | 82%                |
| Medical Laboratory Science    | 88%           | 72%                |
| Histotechnology               | 88%           | 73%                |
| Occupational Therapy*         | 98%           | 87%                |
| Physical Therapy              | 96%           | 94%                |
| Physician Assistant           | 97%           | 96%                |
| <b>Medical Student</b>        |               |                    |
| Step 1                        |               |                    |
| Basic Science                 | 96%           | 96%                |
| Step 2                        |               |                    |
| Clinical Knowledge            | 95%           | 96%                |
| Clinical Skills               | 93%           | 97%                |
| Step 3                        |               |                    |
| Independent Clinical Practice | 100%          | 98%                |

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

\* Rates are for first-time test takers from Grand Forks, N. Dak., and Casper, Wyo., campuses.



# EDUCATE

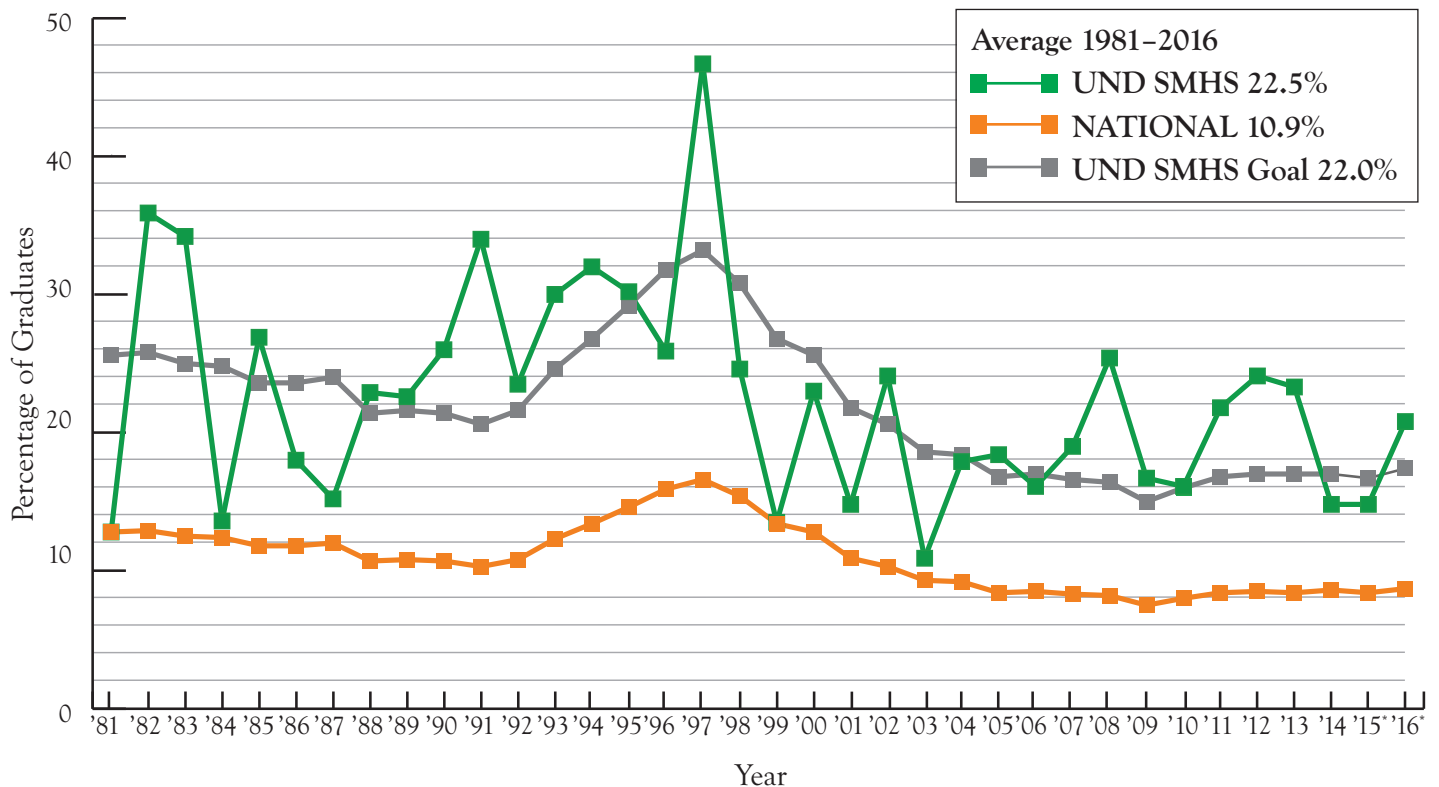
A study completed by the American Academy of Family Physicians (AAFP) noted that the University of North Dakota School of Medicine and Health Sciences was again among the top five contributors to building the nation's family physician workforce. This is the 35th national study conducted by the AAFP that reports retrospectively the percentage of graduates from U.S. Liaison Committee on Medical Education (LCME)-accredited; American Osteopathic Association

(AOA)-accredited; and international medical schools who enter Accreditation Council for Graduate Medical Education (ACGME)-accredited family medicine residency programs as first-year residents.

The full AAFP report titled "Entry of US Medical School Graduates Into Family Medicine Residencies: 2015–2016" is available at <http://www.stfm.org/FamilyMedicine/Vol48Issue9/Kozakowski688>.

Our goal is to exceed the national average of students going into family medicine by 100 percent.

## Graduates Entering a Family Medicine Residency 1981–2016



Sources:  
 Medical Education Division  
 American Academy of Family Physicians, Leawood, KS  
 Family Medicine, STFM Journal  
 Department of Family & Community Medicine  
 University of North Dakota School of Medicine 3/16

\*U.S. seniors successfully matching in the National Resident Matching Program

# EDUCATE

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## Growing Our Own

### Innovative Programs to Produce Healthcare Providers for North Dakota

#### Healthcare Workforce Initiative (HWI)

Thanks to the generous support of the 2013 and 2015 North Dakota Legislatures and strong leadership from Governor Jack Dalrymple and Lt. Governor Drew Wrigley, the School has implemented the Healthcare Workforce Initiative (HWI) and has constructed a new \$124 million home. The HWI is a four-pronged plan to help address North Dakota's healthcare workforce needs now and in the future by reducing disease burden, retaining more of our graduates for practice in North Dakota, training more practitioners, and improving the efficiency of our healthcare delivery system.

#### RuralMed

RuralMed is a tuition waiver program (or scholarship) designed to encourage medical students to select careers in family medicine and increase the number of family medicine providers for rural North Dakota. Students accepted for the RuralMed Program have the entire cost of tuition waived in return for their practicing in North Dakota. Students will not have to borrow money for tuition and accrue interest for medical education. Currently, 19 students are accepted or enrolled in the program, and all are destined for rural practice in North Dakota.

#### INMED

The Indians into Medicine Program (INMED), which was established in 1973, is a comprehensive program designed to assist American Indian students who aspire to be health professionals to meet the needs of our Indian communities and to serve reservation populations. INMED has assisted approximately 20 percent of U.S. American Indian physicians with their education.

#### ROME

Rural Opportunities in Medical Education (ROME) is a 24–28 week interdisciplinary experience in a rural primary care setting that is open to third-year students at the School of Medicine and 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. Each primary preceptor is board-certified in family medicine, but students also work with board-certified surgeons, internists, pediatricians, and other specialists available in the community.

#### Interprofessional Healthcare Course (IPHC)

The course includes nine allied health professions on campus and is run on a collaborative model that doesn't assign a "higher" value to any one profession or specialty over any other. Over 3,400 students have completed the course.

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

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

### Minot Integrated Longitudinal Experience (MILE)

A clerkship is a course of clinical training that third-year medical students undertake in specialty areas. In the summer of 2012 in Minot, the first cohort of medical students undertook an integrated, longitudinal experience.

Students work with preceptors in each of the specialties; for example, spending a half day every week in the office with each primary care preceptor, less frequent office time with surgery and obstetrics and gynecology preceptors, balanced by operating room and delivery room time, and regular emergency department shifts. An important feature of the new MILE is that students develop a panel of patients whom they follow throughout the year, accompanying them to consultant visits and procedures, and following them through hospitalizations.

Ample evidence from several schools shows that students in longitudinal, integrated clerkships perform as well or better on standardized tests than their traditional counterparts, and MILE students increase in their patient-focus through the year, while traditional students decrease in this important measure of attitude.

### 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, 4,181 students, 1,681 volunteers, and 303 communities have participated in the Scrubs Camp program. Students who have participated in Scrubs Camps have learned about various healthcare careers and participated in interactive activities, including dissecting pig hearts, typing blood samples, and participating in mock emergency scenarios.

### R-COOL-Health Scrubs Academy

Fifty-five North Dakota junior high students participated in the sixth annual Scrubs Academy, held at the University of North Dakota campus, June 13–16. Students participated in a dissection, explored the inside of a 32-foot inflatable colon, and learned more about anatomy, medical laboratory science, emergency medical services, mental health, occupational therapy, physical therapy, public health, nutrition, music therapy, radiology, and other health careers. As part of the academy, students received CPR training and became certified in the Health Insurance Portability and Accountability Act (HIPAA). Most health facilities in North Dakota require that students be HIPAA-certified before allowing them to job shadow, and job shadowing is an important step in selecting a career path. Students also were given the opportunity to explore and learn more about the School of Medicine and Health Sciences, the UND campus, and the Grand Forks community.

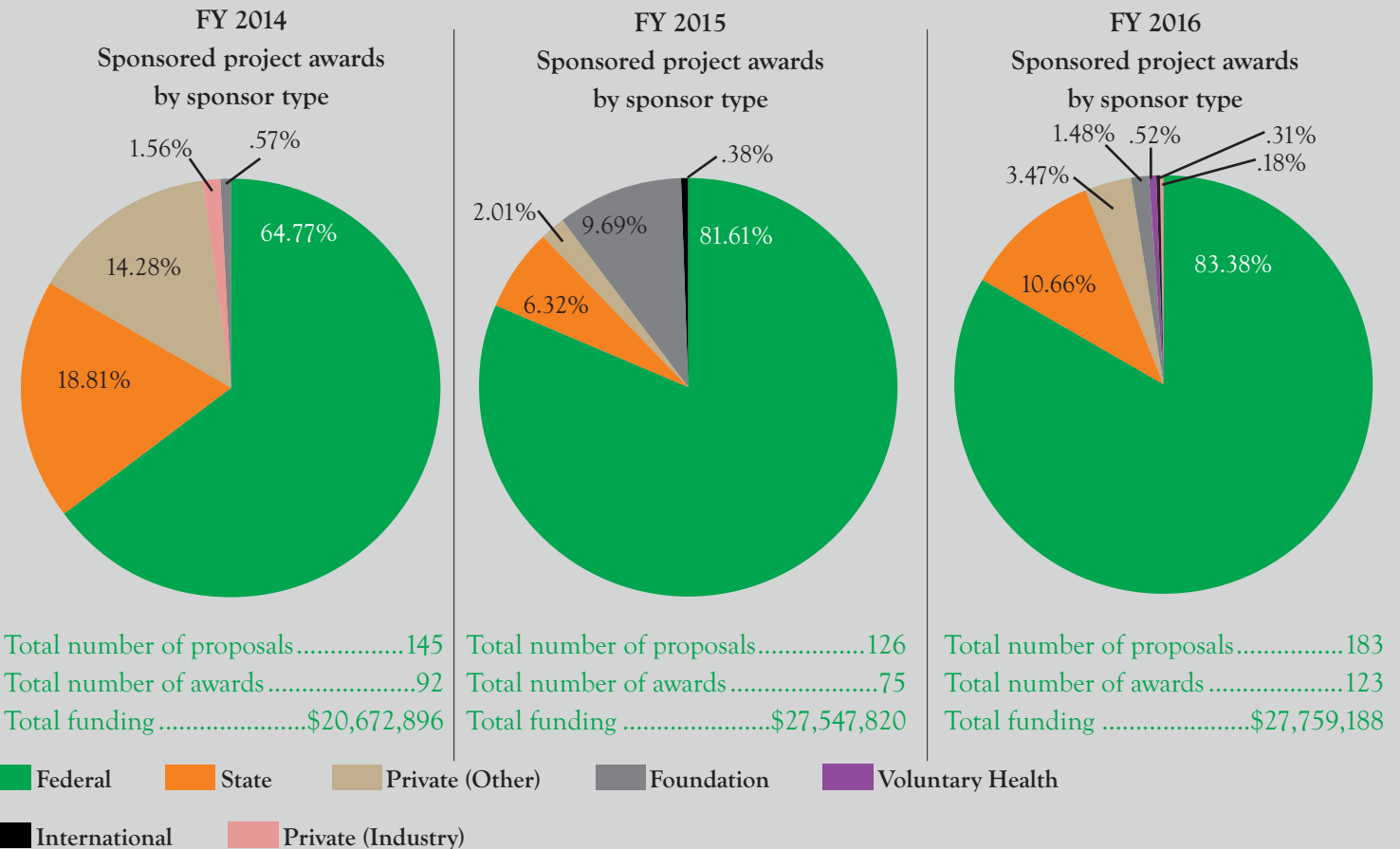
The North Dakota Area Health Education Center (AHEC) addresses critical healthcare workforce shortages in the state. Without an adequate workforce, access to essential health and medical services and the quality of care will suffer. With regional centers located in Hettinger and Mayville to serve the western and eastern parts of the state, North Dakota AHECs work with students in kindergarten through college, rural communities, medical professionals, and educators. The North Dakota AHEC program has reached over 15,300 participants, covering every county in the state. In addition, the AHECs have provided \$64,000 in grant funding to facilitate health occupation activities for 10,000 students. AHEC has assisted 91 students in clinical rotations, and contributed over \$142,580 toward continuing education for healthcare providers in rural North Dakota.

# DISCOVER

For fiscal year 2016 (July 1, 2015–June 30, 2016), total research funding was \$27,759,188, which was a record amount for the School. Of the 28 community-based medical schools in the United States, the SMHS is ranked in the top quarter of schools in external funding for sponsored projects. The School’s goal is to be No. 1.

## Studying Issues that Matter to North Dakotans

- Molecular and genetic bases of diseases
- Immune and inflammatory diseases
- Drug discovery and targeted therapeutics
- Applied microbiology
- Neurodegenerative diseases
- Substance abuse



## Biomedical boost

*New federal COBRE grant recognizes UND's biomedical science capabilities*

Recognizing the already notable reputation of University of North Dakota's biomedical research enterprise, the federal government authorized a \$10.7 million grant to a group of scientists based at UND's School of Medicine and Health Sciences to dig deeper into the many questions surrounding infectious agents.

The U.S. Department of Health and Human Services five-year grant is named "Center for Excellence in Host-Pathogen Interactions." The named principal investigators are David Bradley, Malak Kotb, and Brij Singh, all of the SMHS. The grant is one of several so-called COBRE grants awarded recently. COBRE is an acronym for Centers of Biomedical Research Excellence.

"The objective of this COBRE grant is to gain further understanding of devastating infectious diseases including lung infections, neuro-inflammation, and parasitic diseases," said Singh, a Chester Fritz Distinguished Professor of Biomedical Sciences at the SMHS.

Five other SMHS scientists will work collaboratively on this COBRE research program: Catherine Brissette, Xuesong Chen, Bibhuti Mishra, Jyotika Sharma, and Min Wu.

Students are also an important part of this grant as several will be working alongside each of the SMHS scientists named.

## Level field

The COBRE program was designed by the National Institutes of Health (NIH) to cultivate research expertise among junior faculty and strengthen the research infrastructure of states that do not receive as much NIH funding as some larger states.



**Singh**



**Kotb**



**Bradley**

"This COBRE award complements the two other COBRE grants currently active at UND and the SMHS, and will be a powerful engine to speed the development of further discoveries that can be applied at the bedside to help patients with infectious disease," said Dr. Joshua Wynne, UND vice president for health affairs and dean of the SMHS. "We are extremely proud of all of our faculty members who are part of this wonderful award."

"This is a major coup for UND and a clear testament to the confidence that the Department of Health and Human Services has in our research capabilities," said Grant McGimpsey, UND vice president of research and economic development.

"This also shows the high impact research that is done by investigators at the School and UND," Singh said. This COBRE follows two others recently renewed for research projects at UND's SMHS:

- COBRE Center for Neurodegenerative Disorder Research, \$26 million
- COBRE Epigenetics Bioinformatics Core, \$10.7 million

## Legacy of funding

In 2002, the UND SMHS received a \$10.4-million, five-year award from the NIH to establish a nationally recognized COBRE.

That grant was renewed in 2007 for another five years at \$10.1 million, and in 2012 for another five years at \$5.1 million.

UND's COBRE funding supports collaborative projects promoting research opportunities for biomedical investigators in North Dakota. These projects offer broad potential for understanding and treating pathophysiological and neurodegenerative diseases, and also provided funds to establish imaging and mass spectrometry facilities.

Additionally, the UND SMHS has received an "INBRE" grant—also recently renewed—for \$13 million. It's the NIH's IDEa (Institutional Development Award) program, an effort to expand North Dakota's research foundation by funding basic, clinical, and translational research; faculty development; and infrastructure improvements.

In total, the UND SMHS biomedical research enterprise has current COBRE and INBRE grants totaling close to \$45 million that will be expended over the next several years.

# SERVE

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Since 2010, through funding from the state Legislature, the Center for Rural Health helped communities hold 59 Scrubs Camps and 6 Scrubs Academies for 4,482 children across North Dakota. Scrubs Camps are one-day learning experiences for kids to learn about health professions; the Scrubs Academies are four-day experiences held at the School of Medicine and Health Sciences for middle-school students.

The Center for Rural Health at the School of Medicine and Health Sciences provides services to all 53 counties and 100 communities in North Dakota. The Center provides technical assistance to all 38 rural hospitals, 36 of which are critical access hospitals. The assistance is focused on improving access to care, viability of rural health systems, quality of care, and rural health system development. Direct grants to health organizations in North Dakota awarded and administered through the Center for Rural Health totaled \$1,353,161 for FY 2010, \$1,812,459 for FY 2011, \$1,556,381 for FY 2012, \$1,763,662 for FY 2013, \$1,365,904 for FY 2014, \$1,389,561 for FY 2015, and \$1,335,317 for FY 2016.

## FY 2014

- \$665,278 to rural hospitals for health services development or expansion (federally supported Rural Hospital Flexibility Program and Small Hospital Improvement Program, Quality Improvement Network, KOGNITO-mental health screening, Frontier Community Health Improvement, and Hospital Stroke Care Program).
- \$700,626 for Health Workforce Development (federally supported Area Health Education Center, Student/Resident Experiences and Rotations in Community Health, state appropriations for Scrubs Camps, Scrubs Academy, and workforce development assistance to rural communities).

## FY 2015

- \$767,767 to rural hospitals for health services development or expansion (federally supported Rural Hospital Flexibility Program and Small Hospital Improvement Program, Critical Access Hospital Quality Network, Frontier Community Health Improvement, Blue Cross Blue Shield Rural Health Grant Program, and Statewide Stroke Care Improvement Program).
- \$621,794 for Health Workforce Development (federally supported Area Health Education Center, Student/Resident Experiences and Rotations in Community Health, state appropriations for Scrubs Camps, Scrubs Academy, and workforce development assistance to rural communities).

## FY 2016

- \$813,696 to rural hospitals for health services development or expansion (federally supported Rural Hospital Flexibility Program and Small Hospital Improvement Program, Critical Access Hospital Quality Network, Frontier Community Health Improvement, Blue Cross Blue Shield Rural Health Grant Program, Expanded Rural Health Information Technology, and Statewide Stroke Care Improvement Program).
- \$521,621 for Health Workforce Development (federally supported Area Health Education Center, Student/Resident Experiences and Rotations in Community Health, state appropriations for Scrubs Camps, Scrubs Academy, and workforce development assistance to rural communities).



*At the 6th Annual R-COOL-Health Scrubs Academy held at the School in June, Dean Joshua Wynne helps two participants with a dissection.*



*Scrubs Academy participants practice an IV insertion with a manikin in the School's simulator ambulance. From the left are Kyra Haugen from Jamestown, N.Dak.; Madeline Fortman from Grand Forks, N.Dak.; Jamie Schmidt, a paramedic with Altru Health System in Grand Forks; and Ariana McFarland from Powers Lake, N.Dak.*

# EDUCATE

## More than 710 Practicing Physicians Serving North Dakota Communities Received Their Education at UND

### Percentages of Healthcare Providers Practicing in North Dakota Who Are Graduates of the University of North Dakota School of Medicine and Health Sciences

|                               |     |
|-------------------------------|-----|
| Athletic Trainers             | 25% |
| Occupational Therapists       | 52% |
| Medical Laboratory Scientists | 40% |
| Physician Assistants          | 42% |
| Physical Therapists           | 52% |

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

### School of Medicine and Health Sciences Alumni

|                               |       |
|-------------------------------|-------|
| Medical Laboratory Scientists | 2,238 |
| Athletic Trainers             | 230   |
| Doctor of Medicine            | 2,103 |
| Physical Therapists           | 1,764 |
| Occupational Therapists       | 1,835 |
| Physician Assistants          | 1,779 |
| Master of Public Health       | 18    |

### Percentages of Physicians Practicing in North Dakota Who Graduated from the UND School of Medicine and Health Sciences or Completed an In-State Residency

|                           |     |
|---------------------------|-----|
| All Specialties           | 44% |
| Family Medicine           | 72% |
| Internal Medicine         | 49% |
| Obstetrics and Gynecology | 61% |
| Pediatrics                | 38% |
| Psychiatry                | 45% |

Source: Medical Marketing Service. (2015). *AMA Master File, 2015*. [Data file]. Wood Dale, IL: Medical Marketing Service.



### **Forensic Pathology Facility Earned NAME Accreditation**

The National Association of Medical Examiners (NAME) announced that the School's Forensic Pathology Facility had earned full accreditation. UND's facility is the first to achieve NAME accreditation in North Dakota and South Dakota; it is the sole accredited forensic pathology provider between Minneapolis, Minn., and Spokane, Wash.

UND SMHS professionals at the facility perform full medicolegal death investigations and forensic autopsies for Grand Forks County and eight counties in northwestern Minnesota. They serve as consultants to North Dakota coroners and perform forensic autopsies for 21 counties in North Dakota. The facility aids investigations for issues in public health, occupational safety, law enforcement and other agencies. Most importantly, the office serves North Dakota families at a time of need, personal loss, and tragedy.

### **Continuing Medical Education Garnered Accreditation with Commendation**

The Accreditation Council for Continuing Medical Education announced that the University of North Dakota School of Medicine and Health Sciences Continuing Medical Education (CME) had earned not only full accreditation but accreditation with commendation. Continuing Medical Education at the UND SMHS awards American Medical Association Physician Recognition Award Category 1 (AMA PRA Category 1) credit for completion of its courses, the highest level of CME credit offered by the AMA.

The office of Continuing Medical Education provides continuing medical education to physicians and interprofessional healthcare teams to promote lifelong learning that will enhance professional competence and performance and improve patient outcomes.

CME includes all areas of biomedical knowledge, clinical skills and patient care, interpersonal and communication skills, ethics and professionalism, practice-based learning and improvement, and systems-based practice, which is provided through conferences, seminars, simulation scenarios, and online modules.

Faculty, resident physicians, community physicians, and healthcare professionals within the state, region, and nation benefit from the services of Continuing Medical Education at the School.

### **New Sports Physical Therapy Residency Received Accreditation**

The American Board of Physical Therapy Residency and Fellowship Education announced that the School's new Sports Physical Therapy Residency had earned full accreditation until December 31, 2020.

Physical therapy residency programs are for licensed physical therapists who want to advance their knowledge and skills in a specific area of clinical practice. There are approximately 205 accredited physical therapy residency programs in the United States and only two in North Dakota. The UND SMHS residency program is the first sports physical therapy residency accredited in the state. The Sports Physical Therapy Residency was developed through collaboration between the Department of Physical Therapy and the Department of Sports Medicine. The residency offers physical therapists the opportunity to advance their knowledge and skills in the area of sports physical therapy. After the resident completes the intensive one-year program, they qualify to take the American Board of Physical Therapy Specialties' sports certification examination.

Assistant Professor Gary Schindler, PT, PhD, DPT, OCS, SCS, ATC, is the director of the Sports PT Residency.

### **The Master of Public Health (MPH) Program Earned Full Accreditation**

The Master of Public Health Program earned full accreditation from the Council on Education for Public Health (CEPH). CEPH is an independent agency recognized by the U.S. Department of Education to accredit schools of public health and public health programs.

### **Physician Assistant Program Earned Reaccreditation**

The Accreditation Review Commission on Education for the Physician Assistant (ARC-PA) granted Accreditation-Continued status to the University of North Dakota Physician Assistant Program sponsored by the University of North Dakota School of Medicine and Health Sciences for 10 years, the maximum length of time allowable before another on-site review. Accreditation-Continued is an accreditation status granted when a currently accredited program is in compliance with the ARC-PA Standards.

# SERVE

## A Stable Workforce

The School of Medicine and Health Sciences' faculty turnover rate (faculty who have left their jobs) was 10.20% for FY 2015. In 2015, the average turnover rate for North Dakota University System faculty was 10.9%.

The School of Medicine and Health Sciences' staff turnover rate was 12.9% for FY 2015. In 2015, the average turnover rate for North Dakota University System staff was 12.8%.

## Benefited\* Faculty and Staff for Fiscal Year 2015

Total Benefited Faculty—187 Total Benefited Staff—263

Full-time—173; Part-time—14 Full-time—246; Part-time—17

\*Benefited appointment is 20 hours/week or more.

### 2016 Staff Recognition Luncheon

Sharlene Rakoczy, research specialist in the Department of Biomedical Sciences, was honored with a prestigious Meritorious Service Award from the University of North Dakota at the 2016 Annual Staff Recognition Ceremony and Luncheon. At the ceremony, then-UND President Edward Schafer presented the award to Sharlene, and Patricia Hanson, UND director of Human Resources, read the citation about Sharlene's service to the School of Medicine and Health Sciences.



### 40 Years of Service

*Mary Smith*, Minot Center for Family Medicine

*Alyson White*, Physical Therapy

### 35 Years of Service

*Marci Hecht*, Information Resources

*Julie Horn*, Biomedical Sciences

*Michael Safratowich*, Library of the Health Sciences

*Lori Sannes*, Office of the Dean

### 30 Years of Service

*Faye Aker*, Education Resources

*Lori Anderson*, Surgery

*Patsy Bergan*, Northwest Campus—Minot

*Mary Bohlman*, Biomedical Sciences

*Terry Nelson*, Office of the Dean

### 25 Years of Service

*Stacy Askvig*, Minot Center for Family Medicine

*Bonnie Lanz*, Bismarck Center for Family Medicine

*Jane Thorvilson*, Student Affairs and Admissions

*Wanda Weber*, Information Resources

### 20 Years of Service

*Cherylyn Stoltman*, Center for Rural Health

### 15 Years of Service

*Angeline Belbas*, Physician Assistant Studies

*Angela Floden*, Biomedical Sciences

*Danping Guo*, Biomedical Sciences

*Kimberly Hansen*, Pathology

*Maren Niemeier*, Center for Rural Health

*Susan Rundquist*, Center for Rural Health



Originally conceived by SMHS Dean Joshua Wynne six years ago, “Joggin’ With Josh” has been working to raise awareness among faculty, staff, and students as well as the Grand Forks community about healthful lifestyle choices, focusing on how adequate exercise can reduce the odds of developing life-threatening diseases. On September 29, the 5K or 10K run, walk, or jog was completed on a course around the neighborhood of the School.

*Christy Seidler, Minot Center for Family Medicine*  
*Victoria Thompson, Information Resources*

**10 Years of Service**

*Marilee Byington, Bismarck Center for Family Medicine*  
*Janice Dona, Occupational Therapy*  
*Carol Norton, Bismarck Center for Family Medicine*  
*Eric Stauss, Information Resources*  
*Austin Theisen, Information Resources*

**5 Years of Service**

*Edward Bina, Pathology*  
*Craig Bohn, Bismarck Center for Family Medicine*  
*Wendy Draper, Minot Center for Family Medicine*  
*Brandi Fuehrer, Office of the Dean*  
*Jeanette Gratton, Office of the Dean*  
*Dawn Hackman, Library of the Health Sciences*  
*Angela Lockwood, Center for Rural Health*  
*Nikki Massmann, Center for Rural Health*

*Mandi Peterson, Center for Rural Health*  
*Jodi Rathjen, Southwest Campus–Bismarck*  
*John Roberts, Information Resources*  
*Tara Specht, Bismarck Center for Family Medicine*  
*Michael Ullrich, Biomedical Sciences*  
*Cathy Westerhausen, Center for Rural Health*

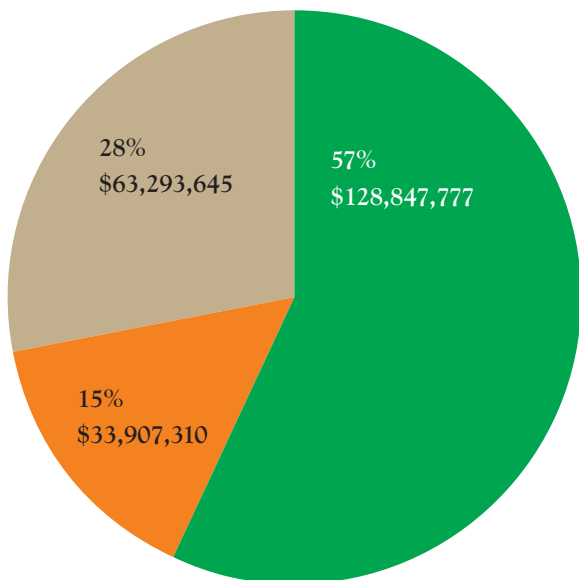
# EDUCATE, DISCOVER, SERVE

Biennial budget is \$226,048,731 The majority comes from non-state sources such as grants, contracts, patient revenue, and tuition.

## UND School of Medicine & Health Sciences

Expenditures: 2015-2017

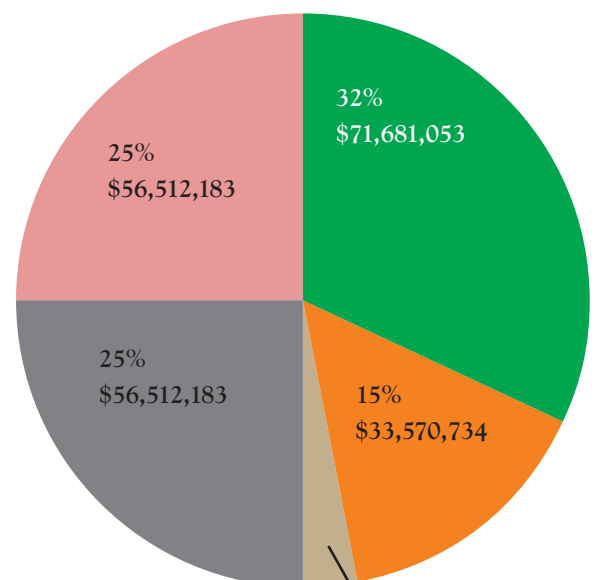
Total: \$226,048,731\*



- Salaries
- Fringe Benefits
- Operating & Equipment

Revenue: 2015-2017

Total: \$226,048,731



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

\* Revised for \$5,024,193 General Fund Reductions

For every \$1 appropriated to the School by the Legislature, the School generates over \$2 in grants, contracts, tuition, and service revenues. The total direct economic impact of the SMHS over the next three biennia should exceed \$450 million.

# The New School of Medicine and Health Sciences Building



In May 2013, the 63rd Assembly of the North Dakota Legislature approved funding a new \$123.76 million, 325,000-square-foot, four-story University of North Dakota School of Medicine and Health Sciences (SMHS) building, which features an open design, floating glass stairwells and abundant windows and light. The building was dedicated on Friday, October 14, before an overflow crowd of more than 350.

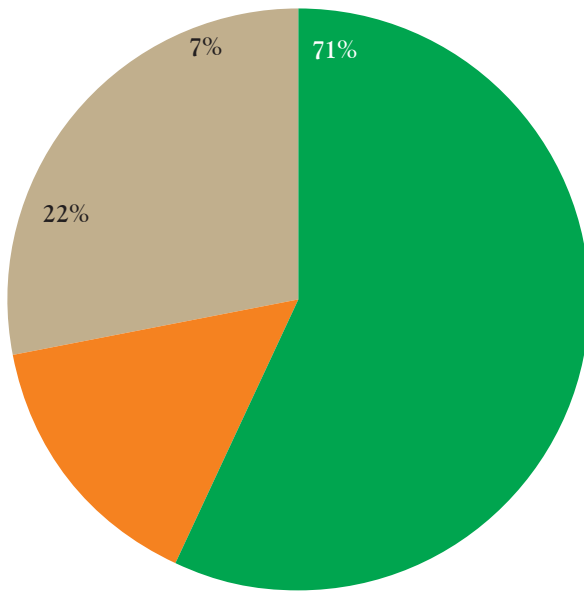
The structure has a north-south oriented “Main Street” around which there are clustered various classrooms, small-group rooms, an auditorium, simulation center, and learning communities. To the east is a wing for faculty, staff, and administrative offices, and the west wing houses much of the School’s research enterprise.

The building brings all eight SMHS degree programs—MD, athletic training, medical laboratory science, occupational therapy, physical therapy, physician assistant studies, graduate studies (biomedical sciences and pathology), and public health—under one roof for the first time. That will enable students to learn in communities, and learn to work as part of a team, a valuable skill in today’s healthcare industry.

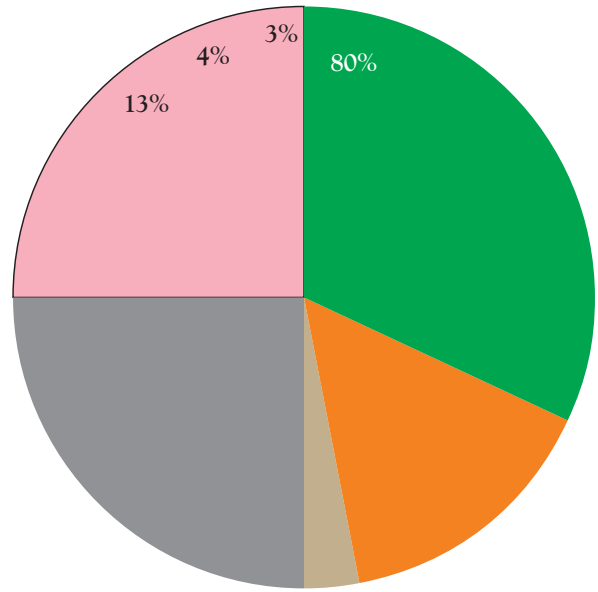
The building allows the School to fully implement its Healthcare Workforce Initiative, a four-pronged plan to help address North Dakota’s healthcare workforce needs now and in the future by reducing disease burden, retaining more of the School’s graduates for practice in North Dakota, training more practitioners, and improving the efficiency of the state’s healthcare delivery system.

# EDUCATE, DISCOVER, SERVE

## Philanthropy Sources of Donations Fiscal Year 2016



|                      |            |
|----------------------|------------|
| Retained Donors      | 509        |
| Reengaged Donors     | 153        |
| New Donors           | 51         |
| <b>Total Donors:</b> | <b>713</b> |

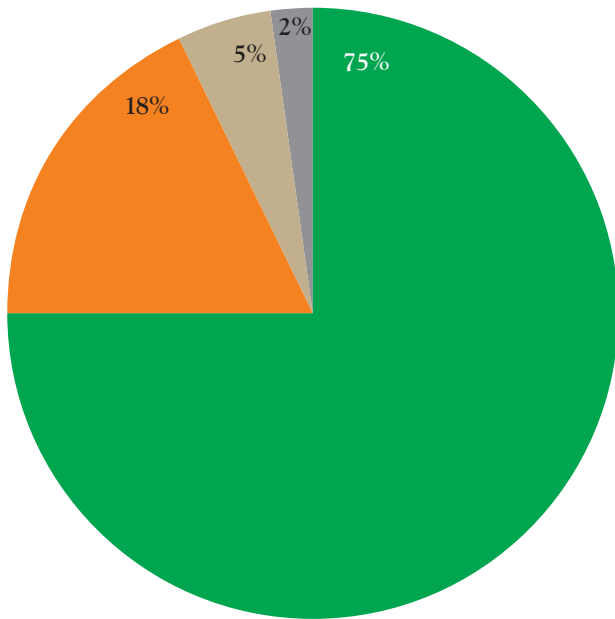


|   |            |
|---|------------|
| Alumni                                  | 570        |
| Friends                                 | 90         |
| Other                                   | 28         |
| Corporations/foundations/matching gifts | 25         |
| <b>Total Donors:</b>                    | <b>713</b> |

"Your donation will allow me to become a better doctor, and I can't thank you enough for that."

—Grant Edland  
first-year medical student  
Fargo, N.Dak.

## Philanthropy Uses of Donations Fiscal Year 2016



|                     |                       |
|---------------------|-----------------------|
| Students            | \$6,810,848.71        |
| Educators (faculty) | \$1,629,247.15        |
| Programs            | \$488,467.72          |
| Priority Needs      | \$154,217.78          |
| <b>Total:</b>       | <b>\$9,082,781.36</b> |

“This support will help me in achieving my goal of becoming a physician dedicated to serving the people of North Dakota.”

—Haley Amoth  
first-year medical student  
Langdon, N.Dak.

### Fiscal Year 2015

|                            |     |
|----------------------------|-----|
| Retained Donors            | 584 |
| Reengaged Donors           | 291 |
| New Donors                 | 178 |
| <b>Total Donors: 1,053</b> |     |

|   |     |
|---|-----|
| Alumni                                      | 762 |
| Friends                                     | 218 |
| Other                                       | 38  |
| Corporations/foundations/<br>matching gifts | 35  |
| <b>Total Donors: 1,053</b>                  |     |

|                           |            |
|---------------------------|------------|
| Students                  | \$ 960,019 |
| Priority Needs            | 453,152    |
| Programs                  | 45,050     |
| Educators (faculty)       | 39,298     |
| <b>Total \$ 1,497,519</b> |            |

### Fiscal Year 2014

|                          |     |
|--------------------------|-----|
| Retained Donors          | 507 |
| Reengaged Donors         | 151 |
| New Donors               | 70  |
| <b>Total Donors: 728</b> |     |

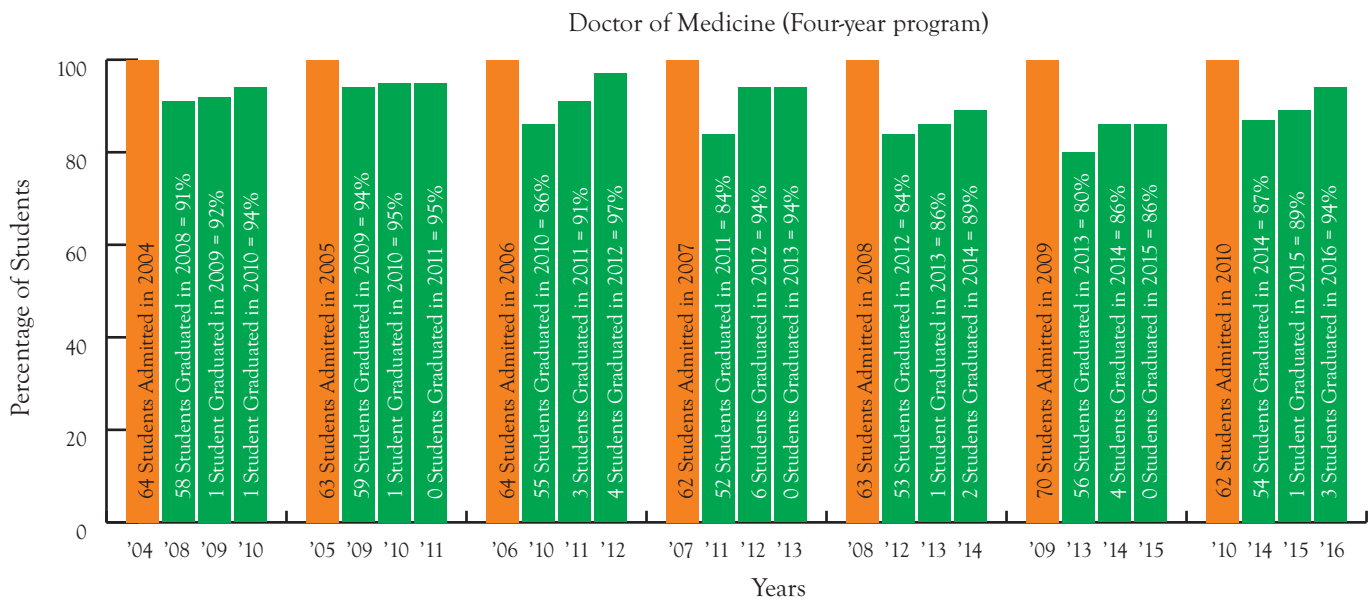
|   |     |
|---|-----|
| Alumni                                      | 576 |
| Friends                                     | 113 |
| Corporations/foundations/<br>matching gifts | 23  |
| Other                                       | 16  |
| <b>Total Donors: 728</b>                    |     |

|                           |              |
|---------------------------|--------------|
| Students                  | \$ 2,321,155 |
| Priority Needs            | 1,289,455    |
| Programs                  | 604,350      |
| Educators (faculty)       | 557,666      |
| <b>Total \$ 4,772,626</b> |              |

# EDUCATE

Completion rates\* measure the full-time, first-time students who enrolled in a professional degree program and completed their degree within the maximum allowable time, which varies based on the program. For medical doctorate 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.

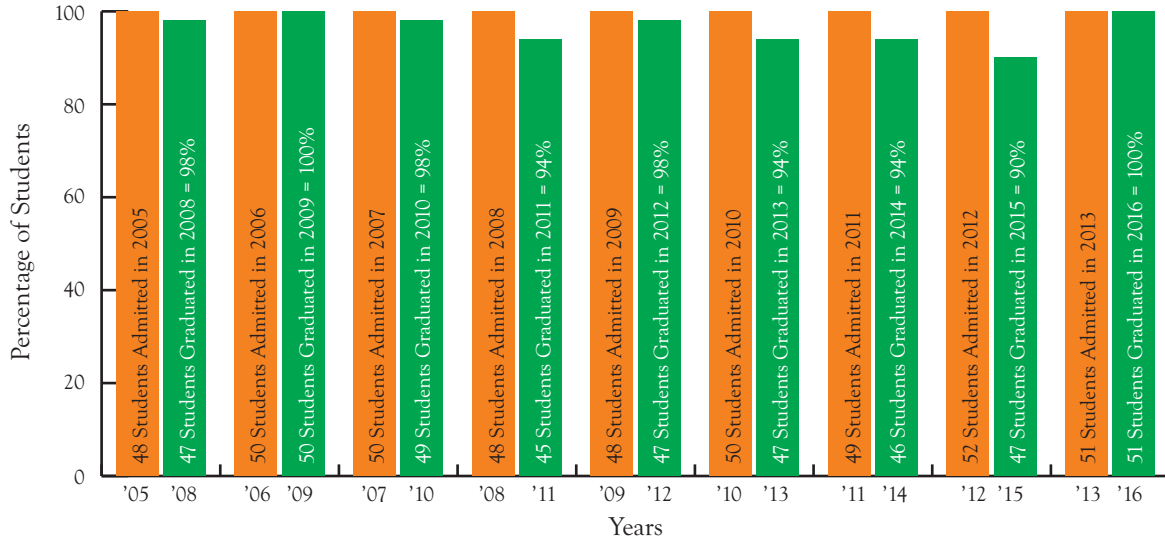
Our goal is to exceed the national benchmark for completion.



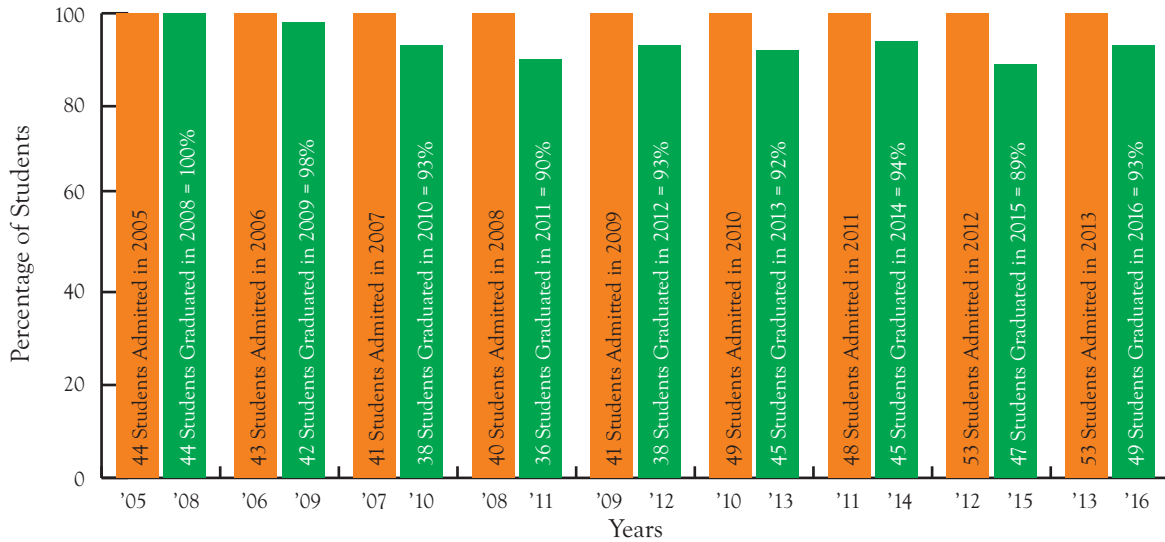
\* Number Graduated/Number Admitted = Completion Rate



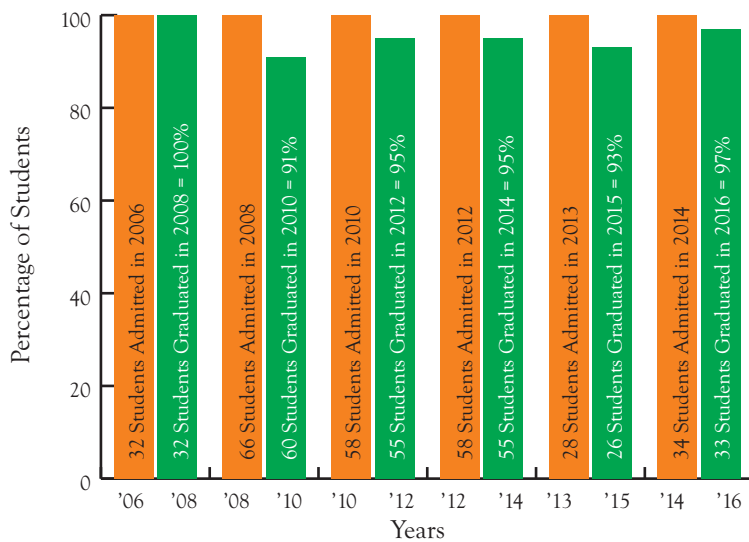
### Doctor of Physical Therapy (Three-year program)



### Occupational Therapy (Three-year program)



### Master of Physician Assistant Studies



(Two-year program. Beginning with the class matriculating in 2006, the program accepted a class every other year, but has returned, effective with the class matriculating in 2012, to an annual admission structure.)

# EDUCATE

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## Residency Training

Beyond the MD degree, the School of Medicine and Health Sciences provides residency training: a period of advanced intensive training for medical school graduates in their 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 through the School is provided in five specialties.

- Family Medicine (Bismarck—West River Health Services, Hettinger; and Minot—Mercy Medical Center, Williston)
- Internal Medicine (Fargo)
- Surgery (Fargo, Grand Forks)
- Psychiatry (Fargo)
- Transitional (Fargo)—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 specialty.

(An additional program in Family Medicine is provided through Altru Health System in Grand Forks.)

The School is providing funding to support the following new residency programs:

- Altru Health System Family Medicine Program—a rural track as part of the family medicine program.
- UND Family Medicine programs at Bismarck and Minot—a rural track located in Hettinger and Williston.
- UND Surgery Program—a rural track designed to train general surgeons for practice in rural areas of North Dakota and the region.
- UND Rural Psychiatry Program—training in providing behavioral and mental health care that will emphasize telemedicine approaches to improve patient access.
- St. Alexius Medical Center
  - Novel hospitalist training program with development of a rural hospitalist model.
  - Geriatrics training to care for North Dakota's aging population.

Approval for residency slots under the Healthcare Workforce Initiative was granted to the following residency programs:

- An additional psychiatry residency slot with an emphasis on telepsychiatry through our Department of Psychiatry and Behavioral Science.
- Five residency slots per year (three-year program) for a new family medicine program in Fargo, based at Sanford Health and with collaborative arrangements with Essentia Health in Fargo and various rural communities in the state.

On this page, Rolla, N.Dak., native Tatia Hardy, MD '16, and Gilby, N.Dak., native Betsy Dickson, MD '16, display their Match Day results, revealing that Tatia will complete her residency in internal medicine/pediatrics at the University of Nebraska Medical Center in Omaha, and Betsy will complete her obstetrics/gynecology residency at the University of Colorado School of Medicine in Aurora. Match Day for medical students is one of the most important milestones of their careers. On Match Day, March 18, members of the Doctor of Medicine Class of 2016 at the

University of North Dakota School of Medicine and Health Sciences and medical school seniors across the country opened envelopes to discover where in the United States they will hone their skills as resident physicians. Match Day is the culmination of the National Resident Matching Program, a private, not-for-profit corporation founded in 1952 at the request of medical students to standardize the residency selection process and establish a uniform date of appointment to positions in graduate medical education training programs.



Photo Credit Lonna Augustadt

# EDUCATE, DISCOVER, SERVE

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



Read Dean Joshua Wynne's weekly column in *E-News*, the School's digital newsletter delivered to your inbox.



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To subscribe to *E-News* or *North Dakota Medicine*, please contact Kristen Peterson, [kristen.peterson@med.und.edu](mailto:kristen.peterson@med.und.edu), (701) 777-4305.



See familiar faces posted on our Flickr account:  
<http://www.flickr.com/photos/undsmhs/>

If you would like further details about the information in this Community Report or the programs, departments, or research at the School, please contact Denis MacLeod, assistant director, Office of Alumni and Community Relations, UND School of Medicine and Health Sciences, (701) 777-2733, [denis.macleod@med.und.edu](mailto:denis.macleod@med.und.edu)

*Vital Signs* 2016 represents the good-faith effort of the UND School of Medicine and 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*.