2017 COMMUNITY REPORT

VITAL SIGNS

Educate Discover Serve

UND School of Medicine & Health Sciences
University of North Dakota
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  Assistant Dean, Northwest Campus, Minot
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  Vice President for Health Affairs and Dean
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 (Section 15-52)

Educate

- More than 1,200 part-time or volunteer clinical faculty in more than 30 communities throughout the state help to educate medical students and residents.
- There are four clinical campuses located in Bismarck, Fargo, Grand Forks, and Minot.
- Health sciences students receive training not only in North Dakota but also across the country, including occupational therapy and public health programs in Casper, 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 teaching and serves as a valuable resource for healthcare professionals throughout North Dakota and the region.
- An interprofessional healthcare course provides students with a strong practical understanding of the various healthcare professionals on their team.

Discover

Areas of Research Strength

- Aging
- Cancer and the environment
- Eating disorders and obesity
- 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 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. In 2017, researchers received grants dedicated to projects studying cancer, infectious disease, and epigenetics, among other awards.

Serve

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

### Graduate Programs

Doctor of Philosophy 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

### Master of Public Health

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

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

**Occupational Therapy**
- Two year pre-occupational therapy program and three year Master of Occupational Therapy
- Three year pre-occupational therapy program and three year Occupational Therapy Doctorate (starting Aug. 2019)

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

**Physician Assistant Studies**
- Two-year Master of Physician Assistant Studies
Our biennial budget is $219,006,578. 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 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.
Sources of Donations, Fiscal Year 2017

- Retained Donors: 401
- Reengaged Donors: 172
- New Donors: 47
- Total Donors: 620

- Alumni: 502
- Friends: 89
- Corporations/foundations/matching gifts: 20
- Other: 9
- Total Donors: 620

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

Grant Edland
Second-Year Medical Student
Fargo, N.D.
### Uses of Donations, Fiscal Year 2017

- **Students**: $2,052,243 (42%)
- **Educators (faculty)**: $1,519,488 (31%)
- **Programs**: $1,078,400 (22%)
- **Priority Needs**: $272,900 (5%)

**Total**: $4,923,031

### Fiscal Year 2016

- **Retained Donors**: 509
- **Reengaged Donors**: 153
- **New Donors**: 51

**Total Donors**: 713

- **Alumni**: 570
- **Friends**: 90
- **Other**: 28
- **Corporations/foundations/matching gifts**: 25

**Total Donors**: 713

- **Students**: $6,810,848.71
- **Priority Needs**: $1,629,247.15
- **Programs**: $488,467.72
- **Educators (faculty)**: $154,217.78

**Total**: $9,082,781.36

### Fiscal Year 2015

- **Retained Donors**: 584
- **Reengaged Donors**: 291
- **New Donors**: 178

**Total Donors**: 1,053

- **Alumni**: 762
- **Friends**: 218
- **Other**: 38
- **Corporations/foundations/matching gifts**: 35

**Total Donors**: 1,053

- **Students**: $960,019
- **Priority Needs**: $453,152
- **Programs**: $45,050
- **Educators (faculty)**: $39,298

**Total**: $1,497,519
The School’s faculty also teach courses in biomedical sciences (anatomy, physiology, pharmacology, biochemistry, microbiology, immunology) that enroll over 1,000 undergraduate students each semester who will become physicians, therapists, nurses, nutritionists and dietitians, exercise scientists, music therapists, public health professionals, teachers, and forensic scientists.

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

### Student Enrollments by Major, Fall 2017

<table>
<thead>
<tr>
<th>Major</th>
<th>Number</th>
</tr>
</thead>
<tbody>
<tr>
<td>Anatomy and Cell Biology (Graduate—Master and Doctoral)</td>
<td>2</td>
</tr>
<tr>
<td>Biochemistry and Molecular Biology (Graduate—Master and Doctoral, includes Pathology)</td>
<td>7</td>
</tr>
<tr>
<td>Biomedical Sciences (Graduate—Master and Doctoral)</td>
<td>26</td>
</tr>
<tr>
<td>Clinical and Translational Science (Graduate—Master and Doctoral)</td>
<td>6</td>
</tr>
<tr>
<td>Microbiology and Immunology (Graduate—Master and Doctoral)</td>
<td>3</td>
</tr>
<tr>
<td>Pharmacology, Physiology, and Therapeutics (Graduate—Master and Doctoral)</td>
<td>2</td>
</tr>
<tr>
<td><strong>Total</strong></td>
<td><strong>46</strong></td>
</tr>
</tbody>
</table>

#### Medical Doctor

<table>
<thead>
<tr>
<th>Year</th>
<th>Class Year</th>
<th>Number</th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td>Class of 2021</td>
<td>79</td>
</tr>
<tr>
<td>2</td>
<td>Class of 2020</td>
<td>77</td>
</tr>
<tr>
<td>3</td>
<td>Class of 2019</td>
<td>84</td>
</tr>
<tr>
<td>4</td>
<td>Class of 2018</td>
<td>62</td>
</tr>
<tr>
<td><strong>Total</strong></td>
<td></td>
<td><strong>302</strong></td>
</tr>
</tbody>
</table>

#### Post-MD Degree

<table>
<thead>
<tr>
<th>Degree (Training in family medicine, geriatric medicine, hospitalist, internal medicine, psychiatry, surgery, and transitional)</th>
<th>Number</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Total</strong></td>
<td><strong>131</strong></td>
</tr>
</tbody>
</table>

### Health Sciences

#### Athletic Training

<table>
<thead>
<tr>
<th>Program</th>
<th>Number</th>
</tr>
</thead>
<tbody>
<tr>
<td>Pre—Athletic Training</td>
<td>25</td>
</tr>
<tr>
<td>Bachelor of Science</td>
<td>21</td>
</tr>
</tbody>
</table>

#### Medical Laboratory Science

<table>
<thead>
<tr>
<th>Program</th>
<th>Number</th>
</tr>
</thead>
<tbody>
<tr>
<td>Pre—Medical Laboratory Science</td>
<td>74</td>
</tr>
<tr>
<td>Certificate</td>
<td>83</td>
</tr>
<tr>
<td>Bachelor of Science</td>
<td>134</td>
</tr>
<tr>
<td>Master of Science</td>
<td>48</td>
</tr>
</tbody>
</table>

#### Occupational Therapy

<table>
<thead>
<tr>
<th>Program</th>
<th>Number</th>
</tr>
</thead>
<tbody>
<tr>
<td>Pre—Occupational Therapy</td>
<td>98</td>
</tr>
<tr>
<td>Professional Year I (Undergraduate)</td>
<td>63</td>
</tr>
<tr>
<td>Professional Year II (Undergraduate)</td>
<td>59</td>
</tr>
<tr>
<td>Professional Year III (Graduate—Master)</td>
<td>57</td>
</tr>
</tbody>
</table>

#### Physical Therapy

<table>
<thead>
<tr>
<th>Program</th>
<th>Number</th>
</tr>
</thead>
<tbody>
<tr>
<td>Pre—Physical Therapy</td>
<td>204</td>
</tr>
<tr>
<td>Doctoral</td>
<td>158</td>
</tr>
<tr>
<td>Physician Assistant (Graduate—Master)</td>
<td>64</td>
</tr>
<tr>
<td>Public Health</td>
<td>29</td>
</tr>
<tr>
<td><strong>Total</strong></td>
<td><strong>1,117</strong></td>
</tr>
</tbody>
</table>
Our goal is for our students in the health sciences and medicine to meet or exceed the accepted standard on nationally recognized exams measuring academic progress.

### Student Performance on Nationally Recognized Exams

<table>
<thead>
<tr>
<th>Program</th>
<th>UND SMHS Pass Rate</th>
<th>National Pass Rate</th>
</tr>
</thead>
<tbody>
<tr>
<td>Athletic Training</td>
<td>88%</td>
<td>82%</td>
</tr>
<tr>
<td>Medical Laboratory Science</td>
<td>96%</td>
<td>72%</td>
</tr>
<tr>
<td>Occupational Therapy</td>
<td>100%</td>
<td>98%</td>
</tr>
<tr>
<td>Physical Therapy</td>
<td>96%</td>
<td>94%</td>
</tr>
<tr>
<td>Physician Assistant</td>
<td>94%</td>
<td>96%</td>
</tr>
<tr>
<td>Medicine</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Step 1</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Basic Science</td>
<td>96%</td>
<td>95%</td>
</tr>
<tr>
<td>Step 2</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Clinical Knowledge</td>
<td>95%</td>
<td>95%</td>
</tr>
<tr>
<td>Clinical Skills</td>
<td>100%</td>
<td>96%</td>
</tr>
<tr>
<td>Step 3</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Independent Clinical Practice</td>
<td>100%</td>
<td>98%</td>
</tr>
</tbody>
</table>

Sources: Data are from the most recent examination in each respective area.
Our goal is to exceed the national benchmark for completion.

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

**Doctor of Medicine (four-year program)**

- 2006: 64 Students Admitted in 2006, 55 Students Graduated in 2010 = 86%
- 2010: 62 Students Admitted in 2007, 63 Students Graduated in 2012 = 97%
- 2011: 62 Students Admitted in 2008, 63 Students Graduated in 2012 = 94%
- 2012: 62 Students Admitted in 2009, 62 Students Graduated in 2014 = 87%
- 2013: 62 Students Admitted in 2010, 62 Students Graduated in 2015 = 89%
- 2014: 62 Students Admitted in 2011, 62 Students Graduated in 2016 = 94%
- 2015: 62 Students Admitted in 2012, 62 Students Graduated in 2017 = 91%

**Master of Physician Assistant Studies (two-year program)**

- 2008: 58 Students Admitted in 2008, 56 Students Graduated in 2010 = 91%
- 2010: 58 Students Admitted in 2010, 55 Students Graduated in 2012 = 95%
- 2012: 58 Students Admitted in 2012, 58 Students Graduated in 2014 = 95%
- 2013: 34 Students Admitted in 2014, 33 Students Graduated in 2016 = 97%
- 2014: 36 Students Admitted in 2015, 36 Students Graduated in 2017 = 92%
- 2015: 36 Students Admitted in 2016, 33 Students Graduated in 2017 = 94%
- 2016: 36 Students Admitted in 2017, 33 Students Graduated in 2018 = 92%

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.

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

* Number Graduated/Number Admitted = Completion Rate
Doctor of Physical Therapy (three-year program)

- 48 Students Admitted in 2009
  - 47 Students Graduated in 2012 = 98%

- 50 Students Admitted in 2010
  - 46 Students Graduated in 2013 = 94%

- 49 Students Admitted in 2011
  - 47 Students Graduated in 2014 = 94%

- 52 Students Admitted in 2012
  - 47 Students Graduated in 2015 = 90%

- 51 Students Admitted in 2013
  - 51 Students Graduated in 2016 = 100%

- 52 Students Admitted in 2014
  - 48 Students Graduated in 2017 = 92%

Master of Occupational Therapy (three-year program)

- 41 Students Admitted in 2009
  - 40 Students Graduated in 2012 = 93%

- 49 Students Admitted in 2010
  - 45 Students Graduated in 2013 = 92%

- 48 Students Admitted in 2011
  - 45 Students Graduated in 2014 = 94%

- 53 Students Admitted in 2012
  - 47 Students Graduated in 2015 = 89%

- 55 Students Admitted in 2013
  - 51 Students Graduated in 2016 = 98%

- 61 Students Admitted in 2014
  - 58 Students Graduated in 2017 = 95%
Residency Training
After graduating from medical school, physicians must complete residency training, a period of advanced intensive training in a chosen medical specialty before independent practice as a physician. Depending on the medical specialty, medical school graduates complete anywhere from three to seven years of residency training after medical school.

Residency training throughout North Dakota is provided in eight specialties.

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

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

- Altru Health System Family Medicine Program in Grand Forks
- UND Family Medicine in Bismarck (Fort Yates), Hettinger, Minot (Garrison), and Williston
- UND Psychiatry Program (Telemedicine)
- UND Surgery Rural Track (Dickinson, Jamestown, Williston)

*The Family Medicine Program in Grand Forks is sponsored by Altru Health System. The Fargo Family Medicine residency program will offer rural rotations in Watertown, Jamestown, Hillsboro, and Valley City starting the 2018-2019 academic year.

**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.

New UND SMHS graduate Erin Follman, MD, finds out where she will complete a residency on Match Day 2017 in Grand Forks.
Our goal is to exceed the national average of students going into family medicine by 100 percent.

A study recently completed by the American Academy of Family Physicians (AAFP) noted that the University of North Dakota School of Medicine 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.


Graduates Entering a Family Medicine Residency 2008–2017

Average 2008–2017
- UND SMHS 18.7%
- NATIONAL 8.4%
- UND SMHS GOAL (double national average)

Sources:
Medical Education Division
American Academy of Family Physicians, Leawood, Kan.
Family Medicine, STFM Journal
Department of Family & Community Medicine, University of North Dakota School of Medicine 6/17

*U.S. seniors successfully matching in the National Resident Matching Program
In the fall semester of their final year of school, medical students apply to programs through which they hope to complete a residency—the period of advanced training in a medical specialty that students complete before engaging in independent practice as a physician. Residency interviews are conducted anywhere between October and January of that academic year for standard residencies.

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

According to the NRMP, in 2017 more than 18,539 U.S. medical school seniors participated in the residency match, and 17,480 matched to first-year positions, for an overall match rate of 94.3 percent.

This year, 64 UND School of Medicine and Health Sciences MD students successfully matched with residency programs. North Dakota and Minnesota received the highest number of resident matches.
More than 710 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 and Health Sciences or Completed an In-State Residency

<table>
<thead>
<tr>
<th>Specialty</th>
<th>Percentage</th>
</tr>
</thead>
<tbody>
<tr>
<td>All Specialties</td>
<td>44%</td>
</tr>
<tr>
<td>Family Medicine</td>
<td>72%</td>
</tr>
<tr>
<td>Internal Medicine</td>
<td>50%</td>
</tr>
<tr>
<td>Obstetrics and Gynecology</td>
<td>63%</td>
</tr>
<tr>
<td>Pediatrics</td>
<td>42%</td>
</tr>
<tr>
<td>Psychiatry</td>
<td>46%</td>
</tr>
</tbody>
</table>


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

<table>
<thead>
<tr>
<th>Specialty</th>
<th>Percentage</th>
</tr>
</thead>
<tbody>
<tr>
<td>Athletic Trainers</td>
<td>25%</td>
</tr>
<tr>
<td>Occupational Therapists</td>
<td>52%</td>
</tr>
<tr>
<td>Medical Laboratory Scientists</td>
<td>40%</td>
</tr>
<tr>
<td>Physician Assistants</td>
<td>38%</td>
</tr>
<tr>
<td>Physical Therapists</td>
<td>51%</td>
</tr>
</tbody>
</table>

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

### School of Medicine and Health Sciences Alumni

<table>
<thead>
<tr>
<th>Specialty</th>
<th>Number</th>
</tr>
</thead>
<tbody>
<tr>
<td>Medical Laboratory Scientists</td>
<td>2,324</td>
</tr>
<tr>
<td>Athletic Trainers</td>
<td>253</td>
</tr>
<tr>
<td>Physicians</td>
<td>2,168</td>
</tr>
<tr>
<td>Physical Therapists</td>
<td>1,812</td>
</tr>
<tr>
<td>Occupational Therapists</td>
<td>1,893</td>
</tr>
<tr>
<td>Physician Assistants</td>
<td>1,812</td>
</tr>
<tr>
<td>Public Health Professionals</td>
<td>30</td>
</tr>
</tbody>
</table>

### UND SMHS Medical Doctor Program Outcomes

<table>
<thead>
<tr>
<th>Metric</th>
<th>Percentile Rank</th>
</tr>
</thead>
<tbody>
<tr>
<td>Graduates entering primary care (2002—2006)</td>
<td>85th</td>
</tr>
<tr>
<td>Graduates practicing in rural areas (2002—2006)</td>
<td>97th</td>
</tr>
<tr>
<td>Graduates practicing in family medicine (2013—2015)</td>
<td>98th</td>
</tr>
<tr>
<td>Fraction of class identifying as American Indian</td>
<td>99th</td>
</tr>
</tbody>
</table>

Source: Missions Management Tool, 2017 AAMC
Growing Our Own: Innovative Programs to Produce Healthcare Providers for North Dakota

Healthcare Workforce Initiative (HWI)
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 other shortage specialties and increase the number of providers for rural North Dakota. Students accepted for the RuralMed Program have the entire cost of tuition waived in return for their practicing in North Dakota. Students will not have to borrow money for tuition and accrue interest for medical education. Currently, 22 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 interdisciplinaty experience in a rural primary care setting that is open to third-year students at the UND 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. More than 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 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, a student might balance the work week with time in the primary care preceptor’s office, time in surgery, an obstetrics & gynecology shift, and emergency room time. An important feature of the new MILE is that students develop a panel of patients whom they follow throughout the year, accompanying them to consultant visits and procedures, and following them through hospitalizations.

R-COOL-Health Scrubs Camps

Rural Collaborative Opportunities for Occupational Learning in Health (R-COOL-Health) Scrubs Camps are one-day learning experiences where students are able to explore healthcare careers from their local healthcare providers through hands-on, interactive activities. Since the program’s start in 2010, 5,072 students, 2,044 volunteers, and 373 communities have participated in 69 Scrubs Camps across the state. 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-six North Dakota junior high students participated in the seventh annual Scrubs Academy, held at the University of North Dakota campus in June. Since the Academy’s start in 2011, 357 students have attended (260 from rural communities) from 167 communities. Students participated in a dissection, explored the inside of a 32-foot inflatable colon, and learned more about anatomy, medical laboratory science, emergency medical services, mental health, occupational therapy, physical therapy, public health, nutrition, music therapy, 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. 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.

North Dakota Area Health Education Center

Since 2009, the North Dakota Area Health Education Center has utilized federal, state, and private funding to support learning opportunities for 16,968 participants reaching all 53 North Dakota counties. Of that total, 11,577 students have participated in health career awareness events and activities, and 103 students enrolled in health profession programs have completed rural clinical rotation experiences.
For fiscal year 2017 (July 1, 2016–June 30, 2017), total research funding was $20,412,330. Of the 28 community-based medical schools in the United States, the SMHS is ranked in the top quarter of schools in external funding for sponsored projects. The School’s goal is to be in the top four.

The School of Medicine and Health Sciences aims to take research from “lab bench to bedside.”

To accomplish this strategy, the School recently appointed Marc Basson, MD, PhD, MBA, FACS, to the post of senior associate dean for medicine and research.

“I am so pleased that Dr. Basson has accepted these additional responsibilities,” said UND Vice President for Health Affairs and SMHS Dean Joshua Wynne, MD, MBA, MPH, in a release about the selection of Basson to his expanded portfolio.

“We have just come off our most successful year ever from the standpoint of external funding, and I expect Marc to help guide us to even greater heights of achievement,” Wynne said.

Basson said the new strategy focusing on translational research involves more than just new efforts in the lab.

“I see this new focus as building bridges between researchers and clinicians to help us get more research results to patients,” said Basson, himself an administrator, teacher, and active researcher. “This is a national issue: we know that we already do excellent research here, but we need to close the gap between the researchers (the bench) and patients (the bedside). This is all about improving health outcomes.”

Basson points to the good science behind a promising drug therapy, for example.

“In order for that drug to affect health outcomes, the challenge is to get doctors to prescribe it,” Basson said. “Thus we see the fundamental mission of the medical school is to do research that improves the health of North Dakota.”

“North Dakota’s challenge is that we don’t have an army of clinicians in a university hospital that is connected to our medical school, so there’s some separation of scientists and clinicians,” he said. “Our researchers today do not have as much contact with doctors or patient samples as we would like, so the translational aspect of research is hampered.”

So, he adds, the “Bench to Bedside” conundrum is how to bridge that gap.

“It’s a fundamental challenge,” Basson said. “So much so that the National Institutes of Health [NIH] is funding initiatives nationally to bring the bench closer to the bedside.”

“We’re building bridges between clinicians and our basic scientific enterprise, as well as bridges between clinicians and researchers, such as those at our Center for Rural Health and our Master of Public Health Program in our Department of Population Health,” Basson said.

Part of the School’s new research strategy includes tapping into data accumulated by Sanford Health and the U.S. Department of Veterans Affairs.

“That’s also part of seeing more bridges built,” Basson said. “We want to encourage clinicians to collaborate with researchers; there’s a dividend for both participants. We must help them become more productive and help direct their work toward a translational bent.”

### Studying Issues that Matter to North Dakotans

- Applied microbiology
- Cancer
- Drug discovery and targeted therapeutics
- Immune and inflammatory diseases
- Molecular and genetic bases of diseases
- Neurodegenerative diseases
- Obesity
- Substance abuse
FY 2015
Sponsored project awards
by sponsor type

- Federal: 81.61%
- State: 2.01%
- Private (Other): 6.32%
- Foundation: .38%
- Voluntary Health (Health-oriented non-profits): 9.69%
- International: 10.66%
- Private (Industry): 1.48%

Total number of proposals: 126
Total number of awards: 75
Total funding: $27,547,820

FY 2016
Sponsored project awards
by sponsor type

- Federal: 83.38%
- State: 3.47%
- Private (Other): 10.66%
- Foundation: .52%
- Voluntary Health (Health-oriented non-profits): .31%
- International: .18%
- Private (Industry): 6.32%

Total number of proposals: 183
Total number of awards: 123
Total funding: $27,759,188

FY 2017
Sponsored project awards
by sponsor type

- Federal: 76.67%
- State: 9.28%
- Private (Other): 8.86%
- Foundation: 5.19%
- Voluntary Health (Health-oriented non-profits): 9.28%
- International: 8.86%
- Private (Industry): 9.28%

Total number of proposals: 127
Total number of awards: 93
Total funding: $20,412,330
The Center for Rural Health (CRH) at the School of Medicine and Health Sciences serves North Dakota, the region, and the nation. It focuses the majority of its resources on the state’s 53 counties and generally works with 100 or more communities each year. The CRH provides technical assistance to all 38 rural North Dakota hospitals, 36 of which are critical access hospitals. CRH works closely with other groups too, such as public health, emergency medical services (EMS), and tribal health. Assistance is directed at improving access to quality health care services, the viability of rural health systems, and community engagement. CRH administers a variety of funding sources used to support and assist rural communities in North Dakota totaling:

- $1,556,381 for fiscal year (FY) 2012
- $1,763,662 for FY 2013
- $1,365,904 for FY 2014
- $1,389,561 for FY 2015
- $1,335,317 for FY 2016
- $4,157,348 for FY 2017

**FY 2015**
- $767,767 to support rural hospitals in improving quality, finance, and operation; integrate EMS and innovative health care models and engage communities (federally supported Rural Hospital Flexibility Program, Small Hospital Improvement Program, Critical Access Hospital Quality Network, and the Statewide Stroke Care Improvement Program); and the Blue Cross Blue Shield Rural Health Grant Program (BCBSHGP)
- $621,794 for Health Workforce Development (federal and state funds to support the Area Health Education Center, Scrubs Camps/Academies, and workforce development assistance to rural communities)

**FY 2016**
- $813,696 to support rural hospitals in quality improvement, finance, and operation (federally supported Rural Hospital Flexibility Program, Small Hospital Improvement Program, Critical Access Hospital Quality Network, Statewide Stroke Care Improvement Program), and BCBSHGP
- $521,621 for Health Workforce Development (federal and state funds to support the AHEC, Scrubs Camps/Academies, and workforce development assistance to rural communities)

**FY 2017**
- $957,201 to support rural hospitals to improve quality, finance, and operation, and integrate EMS and innovative health care models and engage communities (federally supported Rural Hospital Flexibility Program, Small Hospital Improvement Program, State Office of Rural Health, and Rural Health Network Development Program)
- $565,735 for Health Workforce Development (federal and state funds to support the AHEC, Scrubs Camps/Academies, Dakota Conference on Rural and Public Health, and workforce development assistance to rural communities)
- $191,747 for the Traumatic Brain Injury (TBI) Network
- $50,000 for BCBSHGP
- $2,372,665 to serve tribal communities within North Dakota, and across the nation, to help improve health outcomes and the well-being of American Indians. CRH Native programs have a predominantly indigenous staff with expertise in Native geriatrics, elder abuse, mental health, suicide prevention, health disparities, community-based participatory research, tribal participatory research, resiliency, and health and wellness. The CRH has worked with 234 of the 560 federally recognized tribes.

The individual projects funded include:
- Native Aging in Place Project ($580,000)
- National Resource Center Native American ($340,000)
- Wac’in Yeya HOPE (suicide prevention of Native youth) ($103,493)
- Centers of Excellence on Native American Behavioral Health ($682,505)
- Native American Elder Justice Initiative ($316,667)
- National Indigenous Elder Justice Initiative INNOVATION Grant ($350,000)
Christie Stayman (L) from Grand Forks and Kambree Kvamme (R) from Carrington during the 2017 Scrubs Camp cardiology session. Tyson Holm, second year medical student, is giving instructions for dissecting the pig heart, while SMHS Dean Joshua Wynne looks on.

As a community-based school, the UND SMHS relies on area physicians who have voluntary clinical faculty appointments at the School to teach our students in the clinical setting. Without their dedication, the SMHS could not carry out its educational mission. Faculty and students across SMHS also step outside the classroom and clinic to engage in community service initiatives each year. Here are some highlights from 2017:

- In May, the Global Friends Coalition (GFC) awarded two occupational therapy graduate students the Occupational Therapy Student Award in recognition of their valuable contributions to GFC, an organization that assists resettled refugees in the Red River Valley. GFC and the Department of Occupational Therapy have had an ongoing collaboration since 2014, partnering students with new Americans. The program’s goal is to help former refugees connect to the greater Grand Forks community and provide students with the foundational skills for addressing occupational deprivation and advocating for their clients.

- Also in May, the American Lung Association of North Dakota presented its 2017 Lifetime Achievement Award to Associate Professor Eric L. Johnson, MD, in the Department of Family and Community Medicine at the SMHS. Johnson is the president of Tobacco Free North Dakota and the physician consultant to NDQuits. He is the medical director for the SMHS Physician Assistant Program and assistant medical director for Altru Health System’s Diabetes Center. He also is the president of the American Diabetes Association North Dakota Affiliate.

- In June, ten medical students from the Doctor of Medicine Class of 2018 were inducted into the Gold Humanism Honor Society in Grand Forks for their commitment to fostering a culture of professionalism and humanism. Qualities displayed by Gold Award winners include: integrity; sound moral reasoning; compassion and empathy toward patients; effective communication skills; the ability to engender trust and confidence among patients, staff, and colleagues; and a deep commitment to humanitarian services.
A Stable Workforce
The faculty turnover rate (faculty who left their jobs) at the UND SMHS for FY 2016 was 9 percent. The turnover rate for all North Dakota University System (NDUS) faculty for that same year was 19 percent.

Likewise, the staff turnover rate at the UND SMHS for FY 2016 was 12.7 percent while the rate for all NDUS staff was 16.1 percent.

Benefited* Faculty and Staff for Fiscal Year 2016

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Benefited* Faculty and Staff for Fiscal Year 2017

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*Benefited appointment is 20 hours/week or more.

2017 Staff Recognition Luncheon Awards
Ashley Evenson, Program Manager with the Master of Public Health Program’s Department of Population Health, was honored with a Meritorious Service Award at UND’s annual Staff Recognition Ceremony and luncheon on May 9, 2017. According to Evenson’s nomination materials, she is “essential to upholding the missions and values of our program” and “makes everyone in the Masters of Public Health program feel welcome and appreciated.” At the ceremony, UND President Mark Kennedy, MBA, presented Evenson with her award.

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

30 Years of Service
Joy Mack, Psychiatry and Behavioral Science
Darlene Czapiewski, Occupational Therapy

25 Years of Service
Steven Adkins, Biomedical Sciences
Karen Rude, Center for Family Medicine-Minot
KayLynn Bergland, Center for Rural Health
Lisa Lee, Information Resources
Theresa Norton, Library Health Sciences

20 Years of Service
Sherri Johnson, Physical Therapy
Lisa Beehler, Center for Family Medicine-Bismarck
Janelle Studney, Education Resources
Susan Haugen, Internal Medicine
Vicki Link, Information Resources

15 Years of Service
Katrina Landman, Sports Medicine
Rose Barkie-Reynolds, Center for Family Medicine-Minot
Sharon Reistad, Center for Family Medicine-Minot
Michelle Meyer, Center for Rural Health
Originally conceived by UND SMHS Dean Joshua Wynne seven years ago, “Joggin’ With Josh” has been working to raise awareness among faculty, staff, and students as well as the Grand Forks community about heathful lifestyle choices, focusing on how adequate exercise can reduce one’s likelihood of developing life-threatening diseases. On September 7, the 5K or 10K run, walk, or jog was completed on a course around the neighborhood of the School.

**Kristine Sande, Center for Rural Health**
**Kathleen Fredericks, Indians into Medicine**
**Brandon Thorvilson, Information Resources**

**10 Years of Service**
**Sarah Abrahamson, Biomedical Sciences**
**Katherine Klein, Center for Family Medicine-Minot**
**Nancy Hostetter, Continuing Medical Education**
**Tracy Uhlir, Education Resources**
**Judy Solberg, Dean’s Office**
**Kristen Peterson, Alumni and Community Relations**

**5 Years of Service**
**Karen Cisek, Pathology**
**Sandra Monette, Physical Therapy**
**Carrie Germann, Center for Family Medicine-Bismarck**
**Paul Hanson, Cyclotron & Positron Operations**
**Billie Krush, Center for Family Medicine-Bismarck**
**Traci Lentz, Center for Family Medicine-Minot**
**Cheryl Lepp, Center for Family Medicine-Minot**
**Shae Samuelson, Education Resources**
**Marcia Francis, Library Health Sciences**
**Amy Malheim, Simulation Center**
E-NEWS

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

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

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

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

Vital Signs 2017 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.