Summer Undergraduate Research Experience

Doctor of Medicine Class of 2017

What is a Community Health Center?

Doctor of Physical Therapy Class of 2015 begins clinical studies
UND is ahead of the curve when it comes to monitoring health care trends and identifying future needs. To help improve the overall health of our state’s population, the School of Medicine and Health Sciences has created a Master of Public Health Program, training students like Lucy how to prevent health problems by promoting healthful lifestyles.
FEATURES

SIM-ND
Simulation in Motion-North Dakota provides education and training in medical and trauma events to help providers in the state deliver high-quality health care in the safest way possible.

Summer Undergraduate Research Experience
Several innovative programs fund undergraduate research experiences at the School.

Doctor of Medicine Class of 2017
The Doctor of Medicine Class of 2017 in their white coats.

What is a Community Health Center?
Non-profit community-driven clinics provide high-quality primary and preventive care to all individuals, with or without insurance and regardless of their ability to pay.

Doctor of Physical Therapy Class of 2015 begins clinical studies
Students received white coats at Entrance Into Professional Service Ceremony.

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UNIVERSITY OF NORTH DAKOTA SCHOOL OF MEDICINE AND HEALTH SCIENCES
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We have four major initiatives underway at the School, two of which will make us better and two of which will allow us to better serve our stakeholders. While all are separate projects, they are all interrelated. The first two are our reaccreditation efforts in preparation for a site visit by the Liaison Committee on Medical Education (LCME) in March 2014 and the continuing reconstitution of the organization of our basic sciences departments into a single department headed by Dr. Malak Kotb.

Preparations for the LCME visit include a detailed self-study by the School, and a separate and independent self-study by the medical students. While both are required components of the LCME process, both are critically important as part of an institutional commitment to ongoing quality and continuous improvement. Although such a process can uncover embarrassing institutional lapses and issues, I welcome this critical self-evaluation process. It is inherently similar to the ongoing professional education and lifelong learning that we expect of our students and graduates; why should institutions such as your School be any different?

The reorganization of the four prior basic science departments (anatomy and cell biology; microbiology and immunology; pharmacology, physiology, and therapeutics; and biochemistry and molecular biology) into a single department is progressing nicely. Essential to this restructuring is a reorganization of our research efforts along problem-based lines. What this means is that multidisciplinary teams composed of basic scientists with different skills and backgrounds work together studying a disease or scientific problem such as dementia or the immune response.

The most mature of our research areas is neurosciences, and we plan to request "Center" designation for it from the State Board of Higher Education.

The two last initiatives that will permit us to better serve North Dakota and the region are both fundamental parts of the Health Care Workforce initiative (HWI) that aims to improve the delivery of health care across the state by reducing disease burden, increasing the supply of health care workforce through enhanced retention along with class size expansion, and improving the efficiency and quality of health care through the development of health care provider teams schooled in interprofessional care principles. All four components of the HWI are underway, with class size expansion perhaps the major focus at present. When finished, we will be adding 64 more medical students (16 per year), 90 health sciences students (30 per year), and 51 residents (post-MD degree trainees, with 17 per year added).
And to house these 205 new trainees (not to mention the requisite added faculty and staff), we are building a new medical school and health sciences facility in which to house everyone. State Senator and principal in JLG Architects Lonnie Laffen has nicely summarized the current status of the building in his article in this issue of North Dakota Medicine on page 15.

“Compared with other medical schools in the United States, we are one of the smallest. And to be clear—our agenda is one of the largest.”

Each of these four initiatives is a major undertaking. Doing all four at the same time has been—and will continue to be—a challenge for our School. Compared with other medical schools in the United States, we are one of the smallest. And to be clear—our agenda is one of the largest. But none of the initiatives can wait, and as I’ve indicated, they are interrelated. So we will call on our dedicated faculty and staff members, along with our students, to shoulder the burden. And they will be getting help—thanks to the Legislature’s financial support of the HWI, we have funds available to add faculty (and some staff). I am quite confident of a successful outcome in response to our combined efforts. And how will we know success when we achieve it? By the following benchmarks:

- Acknowledgement as the premier community-based medical school in the United States. Of the 141 U.S. medical schools, 26 are designated as “community-based” since they neither own nor operate their own hospital. Our goal is to be the leader of the pack of those 26 schools. Based on research funding, for example, currently we are No. 6 on the list.
- Continued development of focused areas of research excellence.
- Ongoing development of our innovative education programs, including patient-centered and team learning, interprofessional education, and lifelong learning.
- And most importantly, through these efforts, even better service to the people of North Dakota and the region.

It promises to be an exciting next couple of years!

Joshua Wynne, MD, MBA, MPH
UND Vice President for Health Affairs and Dean
Awards honor rural and public health providers

Rural and public health providers, volunteers and organizations were recognized with awards at the 2013 Dakota Conference on Rural and Public Health annual awards banquet.

The North Dakota Public Health Association (NDPHA) presented two awards:

- **Chelsey Matter**, Blue Cross Blue Shield of North Dakota, was named the Public Health Worker of the Year. This award recognizes an NDPHA member who has made a significant contribution in the field of public health in the past year.
- **Bev Voller**, Emmons County Public Health, Linton, was presented the Outstanding Service Award. The Outstanding Service Award honors an individual who has exhibited continued excellence in the field of public health.

In addition to the awards, NDPHA also recognizes individuals’ length of service in public health with Longevity Awards. Recipients were the following:

- 35 years of service—**Colleen Pearce**, North Dakota Department of Health.
- 20 years of service—**Barbara Andrist**, Center for Tobacco Prevention and Control; **Linda Anderson**, Fargo Cass Public Health; **Denise Cochran**, Custer Health; **Doreen Ott**, Southwestern District Health Unit; **Jeanne Prom**, Center for Tobacco Prevention and Control; **Brenda Stallman**, Traill District Health Unit; **Elizabeth Tyree**, UND College of Nursing and Professional Disciplines; and **Karen Volk**, Wells County District Health Unit.
- 10 years of service—**Vonda Bechtel**, Custer Health; **Deb Flack**, Richland County Health Department; **Dawn Mayer**, North Dakota Department of Health; **Nikki Medalen**, Minot State University; **Kelly Nagel**, North Dakota Department of Health; and **Arvy Smith**, North Dakota Department of Health.

The Dakota Conference on Rural and Public Health planning committee presented seven awards:

- **Jo Vilhauer**, Wishak Hospital Clinic Association, was presented the Outstanding Rural Health Professional Award. This award is presented to a health care professional located in rural North Dakota who has demonstrated leadership in the delivery of rural health services.
- **Jacquelyn Lindsey**, RN, FNP-C, St. Luke’s Hospital and Crosby Clinic, was the recipient of the Outstanding Rural Health Provider Award. The Outstanding Rural Health Provider Award is presented to a health care clinician whose practice is in rural North Dakota and who has made an important contribution to their community and area.
- **Gilman Beck** was named the Outstanding Rural Health Volunteer for his years of service with Altru Hospice (16 years), Hospice of the Red River Valley (12 years), and 34 years as an EMT with Northwood Ambulance Squad. The Outstanding Rural Health Volunteer Award recognizes the contributions made by a community person who has volunteered to contribute their energy, time, and skill toward the betterment of rural health care.
- **Coal Country Community Health Centers** was named the Outstanding Rural Health Program for their contributions to the award-winning documentary Resolana: Voice of the People. This award is presented to a program that delivers services in innovative ways, highlights coordination among providers, or improves the quality of care to rural residents.
- **Sheila Trontvet**, NP, Grafton Family Clinic, was presented the Outstanding Rural Educator/Mentor Award. This award recognizes a professional who has made outstanding contributions to the education, development, and placement of new health care professionals in rural North Dakota communities.
- **Mandy Rath**, FNP, Kidder County Community Health Center was the recipient of the Emerging Rural Leader Award. This award recognizes a new professional who has demonstrated tremendous promise for and commitment to improving the health of rural North Dakota residents.

The Rural Collaborative Opportunities for Occupational Learning in Health (R-COOL-Health) Scrubs Camps program, which provides minigrants through a competitive process for rural communities to host one-day camps where students learn about careers in health care from local professionals, presented one award:

- **Northeast Education Services Cooperative** in Devils Lake was named the R-COOL-Health Scrubs Camp of the Year.

The Dakota Conference is a joint effort by Altru Health System of Grand Forks; the North Dakota Public Health Association; the North Dakota Rural Health Association; the UND College of Nursing and Professional Disciplines; and the UND Center for Rural Health.

NIH renews UND neuroscientist’s study of molecules that stimulate learning and memory

The National Institutes of Health has renewed the funding of a University of North Dakota neuroscientist’s study of a vital molecular facilitator of learning and memory. Saobo Lei, PhD, an associate professor in the Department of Basic Sciences at the University of North Dakota School of Medicine and Health Sciences, will receive a $1.04 million R01 grant over the next three years for his work on molecules found in cells of the central nervous system that activate learning and memory. The NIH’s grant renewal is recognition of the significance of Lei’s work in pursuing potential treatments for neurological diseases that affect learning and memory, such as Alzheimer’s, anxiety, epilepsy, and schizophrenia.
UND announces site for School of Medicine and Health Sciences building

University of North Dakota President Robert Kelley announced that a site has been selected for the new home of the UND School of Medicine and Health Sciences. The location is an 8.25-acre plot of land on the southwest corner of the intersection of North Columbia Road and Gateway Drive in Grand Forks.

Several potential sites on the UND campus were considered and evaluated, based on factors such as parking availability, pedestrian access, size of buildable area, and proximity to steam/gas sources. A public forum about the building project was held in June, and public input was invited.

Noted President Kelley, “The selection of a building site is a critical milestone in the construction of our new School of Medicine and Health Sciences facility and, ultimately, our ability to better serve the state of North Dakota. Many people were involved in this process, and I particularly want to thank the Site Recommendation Committee charged with evaluating building site options and providing recommendations.”

Members of the Site Recommendation Committee included
- Joshua Wynne, M.D., M.B.A., M.P.H., UND vice president for health affairs and dean of the School of Medicine and Health Sciences (chair);
- Alice Brekke, UND vice president for finance and operations;
- Randy Eken, associate dean for administration and finance of the School of Medicine and Health Sciences;
- Brad Gengler, city planner, City of Grand Forks;
- Lonnie Laffen, president and CEO, JLG Architects; and
- Peggy Lucke, UND associate vice president for finance and operations.

Groundbreaking for the new facility is expected to take place in July of 2014, with completion of construction anticipated by July 2016. With the site selected, the Building Committee will shepherd the project through to completion.

NIH selects Jonathan Geiger to serve on vital neurological study section

Jonathan D. Geiger, PhD, Chester Fritz Distinguished Professor and principal investigator for the Center of Biomedical Research Excellence grant on Pathophysiological Signaling in Neurodegenerative Diseases at the University of North Dakota School of Medicine and Health Sciences, has been selected to serve on the NeuroAIDS and Other End-Organ Diseases Study Section for the National Institutes of Health’s (NIH) Center for Scientific Review (CSR). Geiger will serve a term that began July 1, 2013, and will end on June 30, 2019.

“Members are selected on the basis of their demonstrated competence and achievement in their scientific discipline as evidenced by the quality of research accomplishments, publications in scientific journals, and other significant scientific activities, achievements and honors,” said Richard Nakamura, Ph.D., director of the Center for Scientific Review at the NIH, when he informed UND President Robert Kelley of Geiger’s selection.

“This is a great recognition for our work and for me,” Geiger said. “Although this represents a great deal of additional work for me, it is a huge recognition by your peers that you are doing excellent work and that your reasoned opinion matters. I have served on 80 such study sections over my career and have chaired over a dozen of these interesting but intense meetings. As always, I look forward to participating in study sections because you get to interact with some of the very best scientists nationwide and you get to read some very impressive applications for grant funding.”

“I want to take this opportunity to emphasize the importance of Dr. Geiger’s participation in assuring the quality of the NIH peer-review process,” Nakamura said.
SIM-ND

By Juan Pedraza

Simulation in Motion-North Dakota provides education and training in medical care, enabling facilities in the state to deliver high-quality health care in the safest way possible.

The ND-STAR team that supports SIM-ND are (front, from left) Joyce Sang, Amy Malheim, and Jon Allen; and (back, from left) Joseph Miller,
In a world of massive open online courses, Tweets, and other remote communications, the human touch is rarely there.

However, health care professionals who must keep their skills honed still need that face-to-face, hands-on contact with expert trainers focused on their needs.

The University of North Dakota School of Medicine and Health Sciences is playing an exciting new role in delivering just that kind of training to rural health care practitioners throughout the state. The program, called SIM-ND (Simulation in Motion-North Dakota), provides education and training in medical and trauma events to help providers in the state deliver high-quality health care in the safest way possible.

As the coordinating site and grant manager for the SIM-ND program, the SMHS is putting trainers in touch with health care professionals with four specially equipped and staffed, custom-built trucks stationed in the state’s four largest cities.

These trucks—one each in Bismarck, Fargo, Grand Forks, and Minot—are revolutionizing how health care training is presented at North Dakota’s rural health care facilities. The SIM-ND program is supported, in part, by the state’s five largest health systems: Altru Health System, Essentia Health, Sanford Health, St. Alexius Medical Center, and Trinity Health.

This new system will provide on-site training at the critical access hospitals and EMS services around the state. The scheduling of each of the trucks’ visits will be managed through the North Dakota Simulation, Teaching and Research Center for Healthcare Education (ND STAR) at the School.

“This program is exciting because it will take training using cutting-edge technology right into our communities, particularly in western North Dakota.”

“It’s really a terrific way to do ongoing health care training for emergency medical personnel, nurses, physicians, and other practitioners,” said Jon Allen, MD, director of the program and a faculty member in the Department of Internal Medicine and the Office of Medical Education at the School of Medicine and Health Sciences.

ND STAR at UND was awarded $4.98 million for SIM-ND by the Leona M. and Harry B. Helmsley Charitable Trust in 2012.

“Our investment in the simulation program in North Dakota, we feel, will change lives,” said Walter Panzirer, trustee of the Leona M. and Harry B. Helmsley Charitable Trust, in a UND release about the program when it was first announced last year.
The great distances rural volunteer emergency personnel have to travel to receive their training are a key factor behind the push to set up SIM-ND.

“These four large trucks—each containing a custom-made classroom—are staffed by a three-person crew that will be teaching in each mobile simulation unit,” Allen said. Members of the crew are all trained educators; one of them doubles as the driver, one as a simulation technician, and one as a team leader. Each truck has a crew that was specially chosen by each hospital, and they all have two rotating crews, for a total of about 36 people statewide engaged in providing the SIM-ND-based training to first responders and other medical personnel.

Rosenbauer, a well-known manufacturer of fire trucks and rescue and emergency equipment, built the trucks at their factory in Lyons, S.Dak., and delivered them to UND this spring.

Each truck contains a simulated trauma or ER room, simulated ambulance, and a control room. The truck can stage any type of medical environment with electronically controlled human patient simulators that look and act like patients: they talk, react to pain and medication, and thus simulate what might happen in real life with a person such as a heart attack victim requiring emergency medical attention. The training is geared to emergency room nurses, paramedics, and physicians.

“It looks and feels like a real ambulance or emergency room,” Allen said. ND STAR trained the educators, manages the operation of all four mobile simulation units, schedules all programming for the units, and provides
ongoing monitoring, evaluation, and development. The North Dakota Department of Health provides oversight of the entire project.

“Emergency health-care personnel are a critical part of our health-care system,” said State Health Officer Terry Dwelle, MD. “And it’s important they receive the training and experience needed to maintain and enhance their skills.”

The three-year grant began August 1, 2012.

During the first year, the grant covered 100 percent of the costs of the trucks, simulators, equipment, and a major portion of salaries; during the next two years, the grant will cover a portion of the ongoing expenses with the five major health systems in the state each contributing with UND and the ND Department of Health to cover the remainder. When the grant money is gone, 100 percent of the operating capital will come from the five major health systems, the ND Department of Health, and UND.

“This program is exciting because it will take training using cutting-edge technology right into our communities, particularly in western North Dakota, where rapid growth from the oil boom has affected the population,” Dwelle said. “Helmsley’s investment in SIM-ND will allow us to take training right to the health care workers in the state who need it.”

“The truck-based simulators are expected to last eight to 10 years, and the trucks themselves will handle more than 1 million miles each,” Allen said. “There’ll be technology upgrades, of course; this is a never-ending project of service to the state.”
Katie Collette—PhD student, mentor, biomedical researcher, developing expert on adult neurogenesis. Meet today’s working scientist, with a life as complex as the scientific question she’s investigating.

Collette and her colleagues in the biosciences are blazing new tracks in science and medicine: good thing, too, because the country is in deep need of a new generation of scientists, technicians, engineers, and mathematicians, or so-called STEM (science, technology, engineering, and mathematics) professionals.

“It’s vital to us that we have people like Katie who’re dedicated to becoming scientists,” said Van Doze, a neuroscientist at the University of North Dakota School of Medicine and Health Sciences (SMHS) and Collette’s PhD advisor. Before joining Doze’s lab as a PhD student, Collette worked there for two summers as an undergraduate.

Collette, who’s in her fourth year of a doctoral program in neuroscience, got a later-than-average start after quitting her first degree program—in art. She kick-started her college studies at age 28 through the
McNair Scholar program and got a chemistry degree. Today, with a scientific book chapter and other publications already notched into her resume, Collette credits a lot of her success to working in Doze’s research lab as an undergraduate.

For Amber Nielsen, a New England, N.Dak., native, and honors major, Doze’s research lab provided her with a key opportunity to do hands-on research that proved vital to her admission to medical school. She started at the SMHS this summer, right after finishing her second undergraduate year of summer lab work and her honors degree. She worked in collaboration with Collette this summer.

“The medical schools such as UND’s encourage people to get lab and research experience before applying,” said Nielsen, who valued her research time not just for the science but for the connections she made there. Both Collette and Nielsen said they also appreciated the opportunity to mentor younger undergraduates just starting their research experiences.

“I thought neuroscience would be interesting because my grandma has had Parkinson’s for 25 years, and she’s now in a nursing home with advanced dementia,” Nielsen said.

Several programs fund these undergraduate research experiences at the UND School of Medicine and Health Sciences.

- 12 students were funded by the Research Experiences for Undergraduates (REU) program—funded by the National Science Foundation—which supports active research participation by undergraduate students in any of the NSF-funded areas of research, including biology and neuroscience. REU projects involve students in meaningful ways in ongoing research programs or in research projects specifically designed for the REU program.
- 24 students were funded by Research Experiences for UND Undergraduates (REFUNDU), which is supported by UND’s INBRE grant. INBRE is a program of the National Institute of General Medical Sciences, under its Institutional Development Award (IDeA) Networks of Biomedical Research Excellence (INBRE) grants. Like similar programs funded by other agencies, this is to provide a “pipeline” for these students to continue in health-related or biomedical research careers within IDeA states such as North Dakota. The program also aims to enhance the science and technology knowledge of the state’s workforce.

For many years, the National Institutes of Health has made a special effort to stimulate research at educational institutions that traditionally have not received significant levels of competitive research funding from the NIH. The IDeA Program was established for the purpose of broadening the geographic distribution of NIH funding for biomedical and behavioral research.

The INBRE program began in 2001 by providing planning grants for three years. The program was funded again in 2004 to establish inclusive statewide multidisciplinary research networks with a scientific focus to promote the development, coordination, and sharing of research resources and expertise that will expand the research opportunities and increase the number of competitive investigators in the IDeA-eligible states. INBRE also was intended to enhance the caliber of scientific faculty at research institutions and undergraduate schools, thereby attracting more promising students to these organizations.

Since the NIH is also very concerned about the underrepresentation of minorities in biomedical and behavioral research, the inclusion of investigators and institutions that serve these populations within the INBRE is strongly encouraged.

The focus is on undergraduates who are keenly interested in science careers.
Six students were funded by the National Institute of Environmental Health Sciences (NIEHS) Short-Term Educational Experiences for Research (STEER) program. The goal is to use environmental health sciences to understand human disease and improve human health. Ultimately, it’s about helping these students get into health and environmental science careers to have the greatest effect on preventing disease and improving human health. NIEHS seeks to provide innovative research opportunities for students in environmental health.

The balance of the 58 students were funded by individual labs or by outside funding sources, such as the American Physiological Society, which funded one student this summer.

“There are a variety of funding sources, but they all have a common theme,” Doze said. “The focus is on undergraduates who are keenly interested in science careers. Our programs here train and encourage these students—the next generation of scientists and researchers. Some will go to graduate schools and get their science PhDs in the biosciences; others will get joint degrees in business, law, or medicine. We’re not just training folks to become faculty members at universities.”

Some will go directly into medicine or allied health professions such as physician assistants, nurse practitioners, occupational therapists, physical therapists, and medical lab scientists. Doze said there are other professions learning the bioscience ropes—such as bioinformatics specialists from computer science and mathematics who’ve enrolled in the undergraduate summer research program.

Additionally, the undergraduate research experience programs include Native Americans—this year, a record 12 were enrolled, plus two faculty members from regional tribal schools who were learning to use special gene analyzing equipment that will be provided to both Turtle Mountain Community College and to Cankdeska Cikana Community College, where they teach.

“Four students participated in the new Tribal Undergraduate Research Training and Learning Experience program for Native American students, which is funded by the Seven Generations Center of Excellence in Native Behavioral Health,” Doze said.

“What I’ve seen over the nine years that we’ve been running these undergraduate research programs is that all of these students want to go into science, research, or health care,” Doze said.

Peer mentoring is an essential part of the experience for students who’ve “been there before.”

“For example, I have a couple of very good graduate students, including Katie Collette, who’re peer-mentoring students,” he said. “Both were once undergraduates in my lab.”

With this ninth cohort of undergraduates in research programs around the SMHS, Doze notes that when the program started in his lab, there were three students.

“We’ve seen a twentyfold growth, and we want to see more,” he said. “Funding for these programs appears to be stable, even as the federal government struggles with budget limitations. I think that’s because everyone—including the funding agencies—realizes that we need many more STEM students. And it’s not just the feds—Dean Joshua Wynne is very supportive of undergraduate research, which is why we can support so many.”

Next step?

“100 would be a very nice number, and that’s just in the SMHS and biology,” Doze said. “Actually we’d like to double this program, and we think we can support that with our existing labs.”

In terms of national STEM policy, the dollars are very well-leveraged, Doze says.

“This year’s program cost about $250,000, very cost-effective,” Doze said. “It’s money well-spent.”

We’ve seen a twentyfold growth, and we want to see more.
On June 12, 2013, health care delivery for generations of North Dakotans took a historic step forward with the kickoff for the new University of North Dakota School of Medicine and Health Sciences building.

The event itself was the culmination of three years of hard work by the North Dakota Legislature and the UND School of Medicine and Health Sciences (UND SMHS), who first developed a Health Care Workforce Initiative (HWI) in 2010 to train and retain professionals and improve the efficiency of health care to the state and its residents, and then evaluated the effectiveness of the existing programs and facilities at the SMHS to determine what they had, how well they used it, and what else they needed to implement the HWI. The results would be dramatic.

The space utilization study, conducted by JLG Architects and Perkins+Will in 2010, showed a top-tier educational model that was bursting at the seams in too-tight quarters. The current facility, a conversion of a 60-year-old hospital building, was beyond the maximum capacity to accommodate the current enrollment, let alone increase it, and was in danger of affecting the overall academic programs. As an example, teaching wet labs were scheduled at 174% of their utilization. The study was conclusive: more students would require additional room.

The study also analyzed three options for growth, which ranged from an addition and renovation with minimal financial investment and a minimal increase in educational opportunities and space, to a new building that would meet the HWI target of a 24% increase in class size and provide excellent service for students for years to come. All three options were presented to the 2013 session of the North Dakota Legislature, and they in turn provided a total funding of $122.45 million to incorporate the academic, research, and administrative functions of the SMHS’s Grand Forks campus under one new roof.

I personally happen to wear two hats—one as president and CEO of JLG Architects and another as a North Dakota state senator representing District 43 in Grand Forks. Speaking from both fronts—this project is very special. It is hard to have imagined, only a few short years ago, that the state of North Dakota could become the world’s economic shining star. Those of us born and raised here have heard that we live in a “fly-over state.” While we never believed it, it is nice to see those planes now headed directly here. We are living in an amazing time with unprecedented population growth. Our state will have large infrastructure needs as we go forward, and I am proud that we
placed health care and the UND SMHS at the top of that list.

It is truly an honor and privilege for me that my architecture firm was chosen to lead the design team. My original business partner and I, both native North Dakotans, started JLG twenty-five years ago, and now employ 85 staff from every corner of the state. All of our engineering partners are also from North Dakota. I think it is especially cool that the new facility will be designed by North Dakotans.

The process to build a new home for our state’s medical and health sciences needs will take three years and will open in July of 2016. The design process began in June with what we call “programming”—a fancy word for writing down what needs to go into it. The process involves a lot of discussion with the faculty, staff, and School leaders. Every facet will be planned in collaboration with those who will use it. At the kickoff event itself, the architecture teams presented two dozen building elements ranging from “Flexibility” to “Food Service” to “Outside Spaces” and asked the audience to mark those they felt were important in order to gauge initial priorities.

The rest of the design process will last until next spring and is conducted in three phases:

- Schematic Design: This phase lays out the concept for the entire project. How big, what rooms, where does one park, what does it look like and, mostly importantly—does that all fit within our appropriation?
- Design Development: Adds all of the detail. What are the finishes? What type of engineering systems and how do we make the project more sustainable? What furnishings will it need? And, of course—does all of that still fit within our appropriation?
- Construction Documents: This phase is the longest and turns all of the previous work into technical drawings and specifications, which the construction team will use to order materials and build the project, starting in the spring of 2014 (some earthmoving could even start sooner).

To date, the design team has met with 238 members of 19 different user groups at the SMHS—including clinical sciences, physical therapy, library, and students—in order to best understand what they like and don’t like about the current facility and how the new building will better serve their functions well into the future. Together these groups have identified department synergies, Top-10 Big Ideas, and gross-square-footage targets, and have discussed the concepts of “societies” or learning communities and how they can be broken down in scale to better connect to the interprofessionalism that takes place within the health care field. After each workshop, the architectural team organizes all of the information gathered into programming diagrams that are reevaluated at the next workshop.

“... A new facility that will ultimately have a profound effect on the health and well-being of the entire state of North Dakota.”

Also as a part of this collaborative planning process, a group of key SMHS leaders and the architectural team toured two new medical schools—the Virginia Commonwealth School of Medicine and the University of Central Florida College of Medicine—to learn more about national trends for the future of health care education and to see how they integrated (or didn’t integrate) health sciences and research. At both schools, students aren’t broken up into formal programs, and are instead in learning communities based on their school year. Each community has its own “home floor” with a lecture hall, breakout spaces, SCALE-UP (student-centered active learning environment for undergraduate programs) classrooms and labs to reduce class sizes, connect students to their classmates, and provide a sense of ownership. The main auditorium is organized in a lecture-style learning hall that is instantly transformed for group
work. Interestingly, the first class of 120 at the UCF College of Medicine graduated debt-free because of large donations from the local area to show support for the increased health care opportunities the new school provided to the community.

As programming continues, one major milestone has already been reached—the selection of the site for the new SMHS. A committee chaired by Dr. Josh Wynne considered eight different sites on the University of North Dakota campus. The sites were rated based on multiple technical, operational, and strategic factors, including required site demolition, parking, proximity to other SMHS programs, expandability, and visibility. The committee ultimately selected the northeast corner of the Bronson Property, which will create a signature entrance to UND at the corner of Columbia Road and Gateway Drive and provide the possibility for future growth and a vision of a health care education campus. In-depth analysis will come in the following months to determine the best placement of the new facility on this site.

There is much more to come over the next year. In early July, the University selected Minneapolis-based PCL Construction and Grand Forks-based Community Contractors to act as the construction managers at risk, and they will work closely with JLG Architects and the rest of the design team beginning in schematic design, which is where preliminary building plans and illustrations will start to take shape. In the meantime, the conversations continue as we look forward and think ahead about a new facility that will ultimately have a profound effect on the health and well-being of the entire state of North Dakota.
Doctor of Medicine

Tanner Anderson, Drayton, N.Dak.
Rebecca Asp, Hankinson, N.Dak.
Ryder Bekkedahl, Fargo, N.Dak.
Larae Beth, New Salem, N.Dak.
Amy Borys, Cando, N.Dak.
Kiesha Bullock, Alexandria, Minn.
Anna Bury, Bismarck, N.Dak.
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Jennifer Dobis, Fargo, N.Dak.
Andrew Dockter, Bismarck, N.Dak.
Tyler Downing, Locust Grove, Okla.
Jason Duscherer, Bismarck, N.Dak.
Shelby Dvorak, Dickinson, N.Dak.
Courtney Euscher, Gwinner, N.Dak.
Erin Follman, Devils Lake, N.Dak.
Zachary Fowler, Minot, N.Dak.
Alec Ganske, Mankato, Minn.
Marcus Geffre, Mayville, N.Dak.
Ashley Gierke, Valley City, N.Dak.
Kelsey Gladen, Wahpeton, N.Dak.
Malia Grosskreutz, Honomu, Hawaii.
Michael Gruchalla, Fargo, N.Dak.
Amanda Gusiaas, Carrington, N.Dak.
Wesley Halseth, Minot, N.Dak.
Erik Heitkamp, Lisbon, N.Dak.
Regan Helbling, Fergus Falls, Minn.
Christopher Hellekson, Billings, Mont.
Kimberly Herman, Ypsilanti, N.Dak.
Alec Hildenbrand, Minot, N.Dak.
Alexander Johnson, Bismarck, N.Dak.
Brynn Johnson, Borer, Minn.
Class of 2017

Brady Junes, Menahga, Minn.
Lee Kiedrowski, Dickinson, N.Dak.
Brent Klinkhammer, Mahnomen, Minn.
Ethan Kraft, Fargo, N.Dak.
Bradley Kvamme, West Fargo, N.Dak.
Cole Laber, Napoleon, N.Dak.
Bryan LaBore, Bismarck, N.Dak.
Grant Larson, Fargo, N.Dak.
Lucy Ledyard, Whitefish, Mont.
Heather Liebe, Cary, N.C.
Matthew McGee, Minot, N.Dak.
Steven McKnight, Gig Harbor, Wash.
Megan Meyer, Fairmount, N.Dak.
Amber Nielsen, New England, N.Dak.
Adam Nygard, Grand Forks, N.Dak.
Cassandra Paden, Oregon City, Ore.
Sejal Parikh, Grand Forks, N.Dak.
David Parker, Wildomar, Calif.

Scott Poswilko, Dickinson, N.Dak.
Brandon Potter, Denver, Colo.
Kara Prussing, Bismarck, N.Dak.
Stephen Rostad, Kindred, N.Dak.
Kyle Rudningen, Clearwater, Minn.
Hasanga Samaraweera, Fargo, N.Dak.
Mark Schlotterback, Billings, Mont.
Laura Schumacher, Thompson, N.Dak.
Joclyn Seiler, Rugby, N.Dak.
Shubha Singh, Fargo, N.Dak.
Erika Stein, Langdon, N.Dak.
Christopher Traynor, Fargo, N.Dak.
Laurel Wessman, Fargo, N.Dak.
Emily Woods, Forest River, N.Dak.
What is a Community

Non-profit community-driven clinics provide high-quality primary and preventive care to all individuals, with or without insurance and regardless of their ability to pay.

By Mark Barclay and Kristine Morin

Many cohesive efforts are being implemented across North Dakota to help ensure the entire state has local access to quality primary care services. Some of these efforts focus on expanding the number of health care providers educated or trained in North Dakota. Others focus on providing incentives for health care providers to practice in underserved areas. To complement these and other very important strategies, there is a growing focus on expanding services through innovative models of health care delivery. Federally qualified health centers, sometimes referred to as community health centers (CHCs) are a growing presence across North Dakota that focus on providing care for the underserved.

According to the Community HealthCare Association of the Dakotas (CHAD), community health centers are “non-profit community-driven clinics providing high-quality primary and preventive care to all individuals, with or without insurance and regardless of their ability to pay.” Every CHC provides medical, and behavioral and mental health services, and in addition, some offer other services, such as dental care. With the additional CHC focus on community-driven care, transportation, translation, case management, and health education services are also offered.

The three types of CHCs are (1)
federally qualified health centers that are grant-supported through the Health Resources and Services Administration (HRSA); (2) non-grant supported centers (typically referred to as “look-alikes”); and (3) outpatient health programs and facilities operated by tribal organizations. According to HRSA, “For more than 45 years, HRSA-supported health centers have provided comprehensive, culturally competent, quality primary care services to medically underserved communities and vulnerable populations.”

Community health centers differ from traditional clinics in a number of important ways. First, CHCs are located in or serve a high-need community. They can serve both underserved rural and urban areas. Second, CHCs must be governed by a community board that is composed of a majority of health center patients who represent the population served. Third, CHCs provide support services (education, translation, transportation) in addition to primary health services. Finally, CHCs must make services available to all regardless of their ability to pay. However, it is important to understand that CHCs are not free clinics. They accept Medicare, Medicaid, and third-party insurance, but must also offer a sliding fee scale. Patients that qualify may receive a discount on their medical, dental, and prescription drug services, depending on their household size and gross income.

In North Dakota, there are four federally qualified health centers: Coal Country Community Health Centers with locations in Center and Beulah; Family HealthCare Center in Fargo; Northland Community Health Center with locations in McClusky, Rolette, Rolla, and Turtle Lake; and Valley Community Health Center with locations in Northwood, Larimore, and Grand Forks (dental). According to a recent National Association of Community Health Centers study, North Dakota’s four CHCs serve a population that is 75% rural and 66% have incomes at or below poverty guidelines. According to that same study, 32,404 patients were served by North Dakota CHCs in 2011.

**Benefits of Community Health Centers**

Community health centers benefit their communities and the entire health care delivery system in a number of ways. By providing preventive services along with services not typically offered in other primary care settings such as dental and behavioral health, CHCs can serve those most in need. The CHC health system is designed to serve vulnerable populations that may not have access to these services otherwise. According to the National Association of Community Health Centers, CHCs save the health care system over $24 billion annually through effective management of chronic illness and reducing emergency room visits.

Community health centers also have a positive effect on their communities. As a result of the requirement that the board of directors consist of a majority of CHC consumers, a community voice develops in CHC leadership and operations. In addition, CHCs reduce the burden on local hospital emergency rooms, and provide valuable services such as free immunizations for uninsured children and prenatal care. Finally, CHCs bring significant financial impact to their communities and are a good federal investment. In 2009, a federal investment of $2.2 billion generated $20 billion in total economic benefits in rural and urban communities nationwide.

**North Dakota Success Stories**

**Coal Country Community Health Centers**

Coal Country Community Health Centers (CCCHC) is a CHC that was founded through a grant in 2003. With locations in Beulah and Center, CCCHC was established to better serve the counties of Dunn, Mercer, and Oliver. There is a

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“I felt a **personal obligation** to bring it back. . . . I had a great patient following who is now without help, and if I don’t, **who will?**"
critical access hospital located in Hazen—Sakakawea Medical Center (SMC)—only about ten minutes away from the clinic in Beulah. The proximity of these two health facilities could seem, at first glance, like a recipe for competition or mixed community loyalties. For Hazen, Beulah, and the surrounding communities, however, collaboration has increased between the two entities in addition to Custer Health, the local public health unit, Mercer Country Ambulance, and Knife River Care Center, a skilled nursing facility in Beulah. This may be because of the current management structure of the CCCHC and SMC. Darrold Bertsch, CEO of Sakakawea Medical Center, also currently serves in a leadership role for Coal Country.

The collaborative management relationship between Coal Country Community Health Centers and Sakakawea Medical Center formally started in March 2011 when the CCCHC board reached out to SMC to provide some management and revenue cycle support during a time of leadership transition. Though a competitive spirit had existed for years, the organizations put the needs of the patients and communities to the forefront and started what is now a very positive and unique collaborative relationship. Over the past two and a half years, the organizations have worked closely with various regulatory agencies such as HRSA’s Office of Rural Health Policy and the Bureau of Primary Healthcare, which have helped navigate regulatory, programmatic, and service requirements. Bertsch credits the success of this innovative relationship to the professionals at both facilities, acknowledging, “None of this would have been possible without the support and commitment of the boards, providers, and staff of both organizations, along with the support of our local communities.”

For Bertsch and the teams at both Coal Country Community Health Centers and Sakakawea Medical Center, working together in such an intimate way has resulted in many positive outcomes. “I guess first and foremost, the overall attitude and personalities of our organizations have changed to one of working together as health care providers to accommodate the health and wellness needs of the communities that we serve,” he said. An example of this is the recent completion of a community health needs assessment conducted by the UND Center for Rural Health. This process involved Sakakawea Medical Center, Coal Country Community Health Centers, Custer Health, Mercer County Ambulance, and Knife River Care Center. The assessment of the area’s health needs is a powerful tool to help inform and guide the strategic planning that is currently underway involving representatives from not only the key health facilities but also a number of local citizens from Beulah, Hazen, and the surrounding communities. With so many local health care entities involved, the resulting information will provide a better health care picture of Dunn, Mercer, and Oliver counties.

None of this would have been possible without the support and commitment of the boards, providers, and staff of both organizations, along with the support of our local communities.

In addition to the successful completion of a community health needs assessment, Bertsch notes how the cohesiveness of CCCHC and SMC has resulted in other positive outcomes, such as expanded teamwork, “Our providers and staff have always worked together very well, and I really feel that this working relationship has been enhanced as well,” and financial improvements, “By working together to eliminate duplication of services and sharing of resources, we have improved the financial viability of our organizations, placing us in a better position to deal with the uncertainties of health care reform.”
Northland Community Health Center
In a time when North Dakota needs access to primary care possibly more than ever, one CHC is increasing its capacity to provide care to the underserved. Northland Community Health Center (NCHC) currently has sites in McClusky, Turtle Lake, Rolla, and Rolette. By the end of the year, they plan to open another facility in Bowbells and are also working on a location in Minot.

Bowbells, which is located 70 miles northwest of Minot, had its only clinic close in October 2012. For physician assistant Shelly Bartow, who spent years developing a patient following in Bowbells, losing the clinic meant people would lose access to care. “I felt a personal obligation to bring it back... I had a great patient following who is now without help, and if I don’t, who will?” Looking for assistance, Bartow reached out to the Center for Rural Health (CRH), which is located at the UND School of Medicine and Health Sciences. The CRH has a mission of connecting resources and knowledge to strengthen the health of people in rural communities.

As part of its mission, through state appropriated funding, the CRH provides assistance to all rural North Dakota health care facilities—often in person—to help coordinate efforts around access to primary care along with recruitment and retention of health care providers. Bartow reached out to the CRH, looking for assistance in reopening the clinic. Through an on-site visit in Turtle Lake, CRH staff were able to connect Bartow with Nadine Boe, chief operations officer at NCHC. Boe recalled, “We had already started working on the new facility application for Minot, and after hearing about the opportunity in Bowbells from the Center for Rural Health, we started to consider whether we could open two new sites, one in Minot, the other in Bowbells. After contacting Shelly and Dan Linster (the mayor of Bowbells), we were very interested in helping the community of Bowbells reopen their clinic. Having community support, and a well-established, dependable provider like Shelly were vital to our interest, and ultimately our success.”

After receiving word that the clinic would reopen as part of NCHC, the Bowbells community development corporation successfully came up with money to remodel and update the old clinic. As a result of the connection made between Bartow and NCHC, the Bowbells community will once again have access to primary care, with the addition of upgraded facilities, and the assurance they won’t be turned down for care regardless of their ability to pay. “This situation really was a win for everyone involved,” Boe said. NCHC is currently finalizing the necessary paperwork for the facility’s accreditation and hopes to reopen the clinic in October of this year.

There are other efforts around North Dakota to expand CHCs. Currently, Valley Community Health Center is working in partnership with a Grand Forks-based organization, the Alliance for Healthcare Access, to explore the possibility of opening a CHC in Grand Forks. In addition, Family HealthCare in Fargo just pulled together $15 million to greatly increase their capacity to offer services. As these efforts progress, the impact of North Dakota CHCs will continue to grow into more primary care access, cost savings, and community development.
Melanie Troftgruben, PA-C ’02, returns to the unique climate of Antarctica to deliver medical services.

By Jessica Sobolik

People in North Dakota think their winters are rough. Where Melanie Troftgruben, PA-C ’02, is stationed, the winter season runs from February to October. Temperatures average -20 degrees Fahrenheit with wind chills ranging between -40 and -90. For most of the time she’s there, the sun doesn’t rise all day. There are no flights in or out during that time.

“It’s not much different than growing up in North Dakota,” the St. Thomas, N.Dak., native joked. “The winter has some similarities to northern North Dakota with the exception of complete darkness and the length of the winter.”

Troftgruben has returned for a second season as a physician assistant at McMurdo Station on Ross Island, Antarctica, which is south of New Zealand. McMurdo, established in 1955, is one of three stations maintained by the National Science Foundation (the other two are Palmer and South Pole). McMurdo is the largest of the three and serves as a gateway for U.S. teams.

Troftgruben is contracted through the University of Texas Medical Branch in Galveston to provide medical services for the nearly 150 people who reside there for this winter season. She is part of a team consisting of a physician, physician assistant, and physical therapist.

“The caseload is mostly urgent care
and family practice because of the predeployment screening, such as physicals, lab work, electrocardiograms, chest X-rays, stress tests, and psychiatric evaluation,” she said.

Station employees often work on the ice shelf nine hours a day, six days a week. The most common ailments are sprains and strains related to the extreme cold. Other cases have included typical colds, flu, rashes, dental fractures, allergies, appendicitis, gallbladder disease, gastroenteritis, chest pain, and respiratory issues.

Occasionally, Troftgruben sees a life-threatening emergency, requiring an evacuation from the base. However, if this occurs between March and mid-August, flights to and from the base are discontinued because the runway is buried by snow, preventing a plane from coming in. When this happens, which it did in April, all 120–200 base employees (depending on annual research projects and infrastructure upgrades) come together to build a 10,000-foot ice runway. They grade and level it, and install electrical cable, lighting, radar, generators, and heaters to accommodate a Boeing C-17 Globemaster III, an Air Force transport aircraft. During this project, windchills could range from -50 to -80 degrees.

The locale poses other unique challenges, as well. “The dry, cold environment causes early disintegration and breakdown of medical supplies and equipment,” Troftgruben said. “Healthy eating can be problematic. We lose fresh fruit and vegetables by May, and the food is served buffet style.”

The lack of sunlight becomes problematic for workers with sleep disturbances or seasonal affective disorder. “The challenge is maintaining a regular schedule, utilizing bright lighting in rooms, adding full-spectrum lighting, and keeping a regular exercise program,” she said.

Still, Troftgruben finds beauty even in the days with 24 hours of darkness with the aurora australis, moonlight that illuminates the Ross Sea, and the crisp, clean air. Overall, she likes Antarctica.

“There is a sense of community and teamwork here despite different cultural groups, ages, and educational backgrounds,” she said. “I find the problem solving and ever-changing environment exciting.”

Health Research

Antarctica is a hotbed of research activity, mostly weather-related. However, the McMurdo clinic is assisting in a viral research project coordinated by the California Department of Public Health (CDPH) and Dean Winslow, MD. The clinic collects nasal swabs on all cold and flu patients, freezes them, and sends them to the CDPH for processing at the end of the winter season.

Unfortunately, the U.S. government’s sequestration has affected the continent, as well. “All subcontractors have been asked to cut back by approximately 20 percent, and many science projects have been placed on hold,” Troftgruben said.

McMurdo Station

Built on bare volcanic rock, McMurdo Station includes a harbor, landing strips on sea ice and shelf ice, and a helicopter pad. It has approximately 85 buildings, including dorms, a firehouse, power and water-distillation plants, stores, clubs, and warehouses. All are linked by above-ground water, sewer, phone, and power lines.

For more information about the station, including a live webcam, visit: www.nsf.gov/geo/plr/support/mcmurdo.jsp.
Ashwini Gade, FM Res ’12, is now with Sanford Continuing Care Centers in Bismarck. She is certified by the American Board of Family Medicine.

Kim Waffensmith, BS MLS ’11, was recently hired by Riverwood Healthcare Center in Aitkin, Minn., to oversee the lab and radiology departments. On the staff of Central Lakes Clinic in Crosby, Minn., from 1985 to 2011, Waffensmith recently had the position of director of ancillary services, where she managed the departments of lab, radiology, and information technology, and served on the senior management team.

Jonathan Eklof, MD ’10, has joined St. Alexius Medical Center in Bismarck. A native of Langdon, N.Dak., Eklof completed an internal medicine residency at Gundersen Lutheran Medical Center in La Crosse, Wis.

Dan Morgan, MD ’10, recently completed his residency at the University of Kansas School of Medicine-Wichita Family Medicine Residency Program at Wesley Medical Center in Wichita, Kans.

Stacie Wellman, MD ’10, is now with West River Health Services in Hettinger, N.Dak. Wellman specializes in family medicine with special interests in women’s health and obstetrics.

JoLyn Seitz, MD ’09, recently joined the staff at Sanford Bemidji Main Clinic as a full-time OB/GYN physician.

Mark Klabo, PA ’08, has joined Essentia Health’s clinic in Valley City. He will be caring for adults and children. Klabo is certified as a physician assistant by the National Council on Certification of Physician Assistants.

Chad St. Germain, MD ’08, recently joined the Sanford Bemidji (Minn.) Main Clinic as a full-time radiologist.

Esperanza (Hope) Cleland, MD ’07, is now at the Valley Bone & Joint Clinic in Grand Forks. Cleland specializes in rheumatology and will treat arthritis and other ligament disorders.

Lance Norman, MS OT ’06, is now a Senior Leadership Team member at RiverView Health in Crookston, Minn., as the vice president of Ancillary Services. Norman has been with RiverView Health since 2011 as the director of Rehabilitation Services. He oversees the outpatient departments that include the laboratory, diagnostic imaging, rehab services, and the care center. He will also continue his role in upper extremity rehabilitation for area orthopedic physicians as well as keeping a component of direct patient care specific to support some of the complex hand work needs of orthopedic patients.

Jeffrey Row, MD ’97, has joined St. Alexius’ Archway Mental Health Services in Bismarck as an adult psychiatrist. Row previously was medical director of the eating disorder unit at MeritCare hospital in Fargo.

Andrew Wilder, MD ’97, has joined Mid Dakota Clinic in Bismarck. A native of Williston, he completed a diagnostic radiology residency at the University of Oklahoma Health Sciences Center in Oklahoma City, followed by a musculoskeletal imaging fellowship at the University of Nebraska Medical Center in Omaha. Wilder is board-certified in diagnostic radiology and family medicine.
ALUMNI NOTES

‘80s

Thomas Moraghan, MD ’89, has joined the Essentia Health St. Joseph's-Brainerd (Minn.) Clinic. Moraghan serves as the area’s only full-time endocrinologist. He specializes in treating conditions and diseases of the glands and hormones. Moraghan is certified by the American Board of Medical Specialties in internal medicine and endocrinology.


Dale Klein, MD ’82, family medicine physician at Sanford North Mandan Clinic, passed the 2013 Maintenance of Certification for Family Physicians Examination given by the American Board of Family Medicine. The American Board of Medical Specialties designed this certification to ensure that physicians meet the highest standards of accountability. Dr. Klein has been with Sanford Health, legacy Medcenter One, for 28 years.

‘70s

Rup Nagala, FP Res ’78, has achieved Board Certification in Interventional Pain Management from the American Board of Interventional Pain Physicians. Nagala is also board-certified in geriatrics, family medicine, phlebology, and sports medicine. He practices at the Sanford Health Oakes (N.Dak.) Clinic.

Brad Buell, MD ’77, has joined the Otolaryngology Department at Essentia Health’s South University Clinic in Fargo.

Got news?

We want to hear it!

Please send your news items for the next issue of North Dakota Medicine to Kristen Peterson: kristen.peterson@med.und.edu or call 701.777.4305.

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See job description at med.UND.edu/physician-assistant/job-opportunities.cfm.

UNIVERSITY OF NORTH DAKOTA

SCHOOL OF MEDICINE & HEALTH SCIENCES

New building
Coming in 2016
Ralph Donald Cushing Jr., BS Med ’65, died Friday, January 4, 2013, at the age of 69. He was born December 28, 1943, in Quincy, Mass., to Ralph and Lenora (née Mallory) Cushing. His childhood was spent in southern Ontario, Canada; Minnesota; and finally in several towns in North Dakota, where his father was a pastor in the United Methodist Church. He and his wife Barbara married December 1964. Both received a Bachelor of Science in Medicine from the University of North Dakota in 1965, and transferred to Wayne State University School of Medicine, from which they graduated in 1967. His internship, residency in internal medicine, and subspecialty training in infectious diseases were completed at Detroit Receiving and Hutzel hospitals. He remained on the faculty of internal medicine at Wayne State until coming to Bon Secours Hospital in 1982 to direct a newly created residency program in internal medicine. He continued to practice medicine at Bon Secours, now Beaumont Hospital Grosse Pointe, until July 2011, when his health began to decline. In addition to the practice of medicine, he had a special interest in medical ethics, which led him to pursue a Master of Arts in Religious Studies from the University of Detroit Mercy in 1999. He served on several ethics committees, including those of Bon Secours, St. John, and Detroit Receiving hospitals, and the Archdiocese of Detroit. Dr. Cushing's second home was a cottage on Indian Harbour Lake in Nova Scotia, Canada, where he farmed trees and took as many opportunities as possible to scuba dive.

William Bruce Henry, BS Med ’61, died suddenly on June 27, 2013. The oldest son of William and Mary Henry, he was born on February 4, 1936, in Moorhead, Minn. His early schooling was in Minnesota and continued at North Dakota State University and the University of North Dakota. He attained his MD from the University of Nebraska in Omaha in 1963. He practiced general practice in Rifle, Colo., and after more training entered an internal medicine practice in Oxnard, Calif., in 1972. He practiced at St. John's Regional Medical Center for 23 years in Camarillo, Calif. Bill had many interests among them skiing, bicycling, tennis, and finally motor homing. He and his wife, Judy, covered much of the United States, Mexico, and Canada, while his farm and took as many opportunities as possible to scuba dive.

Stanley Keck, BS Med ’53, died Thursday, June 29, 2013, of Litchfield Park, Ariz., passed away on June 29, 2013. He was born on a farm in Mandan, N. Dak., on January 16, 1919. He graduated from Dickinson State College. He went to the University of North Dakota to pursue his medical degree and graduated from the University of Texas in Dallas. He served his internship and residency in Denver, Colo., at Denver General and St. Joseph's. He opened and operated his own practice as a family physician and surgeon in Denver until 1987. He continued to practice medicine until reaching the age of 90. He served in the United States Army Air Corps as a flight instructor in World War II. He was a crop duster, educator, a loving husband and father, and a counselor and friend to many.

Jennifer Dale (Lubken) Massie, BS OT ’94, of New Bern, N.C., passed away on Tuesday, June 4, 2013, at her home. Jennifer was born November 15, 1971, in Bemidji, Minn., the daughter of Richard and Colleen Lubken. Jennifer attended Horace May Elementary School, Bemidji Middle School, and graduated from Bemidji High School in 1990. She attended the University of North Dakota and graduated with a degree in occupational therapy in 1994. Jennifer was a Certified Hand Therapist with Carolina Orthopedic & Sports Medicine in Havlock, N.C., at the time of her death. Jennifer married Eric Massie on September 29, 2001, in Bemidji. Together they had three boys, Colin, Jack, and Charlie. Of all the roles Jennifer had in life, daughter, sister, wife, friend, therapist, and community member, there was none she enjoyed more, or was better at, than her role as a mother. Anyone who knew Jennifer knew that of all the things she accomplished in her life, the thing she was most passionate about and most proud of was her three boys. Jennifer enjoyed reading, cooking, scrapbooking, shopping, traveling, being active, and being outdoors. She especially loved spending time with her family at the beaches of the Outer Banks of North Carolina. Jennifer was an active volunteer at Brinson Memorial Elementary School, Relay for Life, and was a member and Sunday school teacher at Garber United Methodist Church.
Barbara Ann Melzer, BS PT ’72, PT, PhD, DPT, FAPTA, was born January 7, 1950, in Canby, Minn., the daughter of Simon and Loa Melzer. At the time of her passing, she was a professor of physical therapy at Texas State University. She was well known locally, nationally, and internationally as a consummate professional whose compassion, dedication, and commitment to excellence endeared her to students, colleagues, and leaders in her chosen profession of physical therapy. She has been recognized nationally and in Texas for her expertise and innumerable contributions to physical therapy accreditation and clinical education and her leadership in the professional association.

Donald C. Nabseth, BS Med ’40, 95, died on March 13, 2013, of natural causes at the Health Care Center of The Forum at Rancho San Antonio in Cupertino, Calif. Don was one of Boston’s most prominent vascular surgeons, with an unquenchable intellectual curiosity, making important contributions in areas of vascular surgery, including renal transplantation, limb reimplantation, portal hypertension, and venous disease. His early papers on kidney preservation and transplantation are especially noteworthy as well as his work on the prevention of kidney allograft rejection. He had a major role in developing new vascular surgical methods (axillofemoral bypass graft, in situ femoral popliteal bypass grafting) and was one of the first to challenge traditional inferior vena cava ligation as a treatment for deep vein thrombosis and pulmonary embolism. His work on venous valve auto-transplantation was way ahead of its time, and this remains an unconquered field today. He served on the American Board of Surgery, was a member of the American College of Surgeons, the Association for Veterans Administration Surgeons, and the New England Society for Vascular Surgery; and he presided as president of the Boston Surgical Society. He retired in 1987, becoming Professor of Surgery Emeritus at Tufts University School of Medicine, after a career spanning experiences as diverse as being a surgical intern on duty on the accident floor of the Boston City Hospital on November 28, 1942, the night of the Coconut Grove fire, to leading the Surgical Service at the Boston Veterans Administration Medical Center, where he contributed regularly to the rapidly changing field of vascular surgery, particularly related to transplant surgery. His humble North Dakota roots carried him far. Born in Van Hook, N.Dak., on October 20, 1917, Don grew up in Butte, N.Dak. He graduated from the University of North Dakota and attended Harvard Medical School, receiving his MD degree in 1942. He served in the U.S. Army Air Force as a flight surgeon from 1943 to 1945 between his surgical internship and residency. He returned to his residency at Boston City Hospital, completing it in 1949. Appointed as instructor in surgery at Tufts University School of Medicine in 1954, he rose to the rank of professor of surgery in 1965. He later played a major role at the Boston Veterans Administration Medical Center, serving as chief of the Surgical Service between 1965 and 1987. Although he attended as a surgeon at many hospitals in the Boston area between 1960 and 1987, his formative surgical years were spent at Boston City Hospital; and his most substantive scientific contributions were made during his time at the Boston Veterans Administration Medical Center.

Henry James (H. J., Hynie) Weyers, BS Med ’57, passed away on July 3, 2013. It was his 87th birthday. He passed away from natural causes in Fargo, N.Dak. Henry was born July 3, 1926, in Page, N.Dak., to Carmen (Jungnitsch) and William Weyers. He attended Page High School before enlisting in the U.S. Navy at the age of 17. During World War II, he served with distinction in the Pacific Theater of Operations. After World War II, Henry returned to North Dakota, where he worked as a carpenter before he began farming with his future brother-in-law, John Morton. He met his wife, Alvira (Qualley) at a barn dance near Tower City, N.Dak. When he was 28 years old, Henry decided to pursue a career in medicine. He received his bachelor’s degree from North Dakota State University. He attended medical school at the University of North Dakota and at the University of Kansas. He completed his residency in San Diego, Calif., in 1959. After Henry completed his residency, he returned to Fargo with his young family. During Henry’s 30-year medical career, he founded the West Fargo Medical Center, worked as chief of staff at St. John’s Hospital in Fargo, served as Cass County Coroner, and worked as the medical director of chemical and drug dependency at St. Ansgar Hospital in Moorhead, Minn. Henry sang “Welcome to My World” by Jim Reeves to every newborn baby he delivered. Henry was an avid musician. He played the accordion and bass guitar for a number of years with the country and western band Mark and the Marksmen. He also loved to polka, hunt, play cards, and tell jokes. After Henry retired in 1997, he and Alvira moved to Arizona. They lived in Apache Junction and Gold Canyon until they returned to Fargo in 2008. They moved to Touchmark, an assisted living community, where Alvira continues to reside.
Exceptional SMHS—Building a new vision

The University of North Dakota School of Medicine and Health Sciences is building for the future. As it constructs ties with the community and creates educational experiences, above all it remains dedicated to educating the next generation of health care professionals.

To continue its tradition, a new SMHS building will be constructed at Columbia Road and Gateway Drive in Grand Forks, providing a window into a new era of health care education in North Dakota. The new building will house education, research, faculty, and administration spaces.

The building will be funded with appropriations from the North Dakota Legislature. But while the Legislature has provided the funds to build and equip the building, we need ongoing financial support for our students, faculty, and programs.

“We cannot fulfill our mission or fully carry out our initiative without support from thoughtful and generous donors,” SMHS Dean Joshua Wynne said. “Your gifts can directly impact our students, faculty, and programs within our new building and at our campuses across the state to ensure quality health care for all North Dakotans.”

Our students

Our passionate students are the key to the future of health care delivery, and without them, the state would face a critical shortage of quality health care providers. Each of our students has committed significant time and effort to pursue their careers in public service.

Joycelyn Dorscher, MD, associate dean for Student Affairs and Admissions at the SMHS, says the average indebtedness at graduation from medical school alone (excluding undergraduate costs) stands at $167,000—a number that puts our students among the most indebted in the nation (73rd percentile).

Our tuition rates and other costs are among the most competitive in the nation. Yet students graduate from UND with a significant debt load, which includes tuition, books, food, and housing. For medical students, for example, the typical student graduates with more than $170,000 of debt.

To lessen this burden, financial support for students through scholarships and other assistance is our No. 1 priority.

The Adopt-A-Med-Student program is one way to support students as follows: First year, $5,000; second year, $3,750; third year, $2,500; fourth year, $1,250. This ensures that the adopted student will be spared any tuition increase while in school.

Endowed scholarships are investments that pay out a yearly sum to a student or students for tuition. A minimum investment of $25,000 will establish a scholarship to help offset costs associated with their UND education.

Our faculty

Our gifted faculty gently guide students along their chosen career paths.

In our tight-knit learning community, the School offers faculty a special place to teach and conduct research. Help us to recruit and retain topflight faculty who will inspire our students to achieve great things.

Endowed chairs ($2.5 million) and endowed professorships ($1 million) are investments that will ensure quality faculty for long into our School’s future.

Investments into endowed positions ensure that educators and researchers like Dr. Edward Carlson, Karl and Carolyn Kaess Professor of Anatomy and Cell Biology, can continue to do important work.

Carlson is the lead researcher in work involving treatment and prevention of kidney and eye diseases because of diabetes complications.

“The endowment is not only important, it’s absolutely critical to the ongoing work in our laboratory,” he said. “We absolutely could not function without the help of the Karl and Carolyn Kaess Professorship.”

Our programs

We strive to offer the most innovative and effective programs in health care education. Our small-group, patient-centered curriculum has been very successful for medical students, and we are working to create more active learning experiences with interprofessional health care teams through simulation training.

Meanwhile, our research programs aim to make discoveries in the laboratory that can help health care facilities across the state care for patients and populations with chronic diseases, and our Master of Public Health Program will analyze the health of our communities in order to promote and improve health.

Help us continue to develop new ways to discover, teach, and convey ideas that will change the way we deliver health care in North Dakota by supporting our programs.

“Medical education is extremely expensive, and sadly, substantial debt discouraged many of my classmates from pursuing primary care specialties.”

—Megan Thorvilson, MD ’13

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“The money they’ve given to the university generates interest, which allows us to keep our laboratory going. That is amazingly important. Because it’s invested, it’s a perpetual state of income for whoever is given this professorship.”

—Edward Carlson, PhD, Karl and Carolyn Kaess Professor of Anatomy and Cell Biology
for North Dakota health care education

Naming Opportunities

<table>
<thead>
<tr>
<th>Amount</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>$100 million</td>
<td>UND School of Medicine and Health Sciences building</td>
</tr>
<tr>
<td>$40 million</td>
<td>Health Sciences Educational Building</td>
</tr>
<tr>
<td>$15 million</td>
<td>Learning Center</td>
</tr>
<tr>
<td>$1 million–$10 million</td>
<td>Biomedical research facility $9 million Endowed chair, dean of the School $5 million Office of the Dean suite $4 million Simulation suite $3 million Basic Sciences suite $3 million Endowed faculty chair position $2.5 million Center for Rural Health suite $1.5 million Endowed faculty professorship position $1 million</td>
</tr>
<tr>
<td>$550,000–$700,000</td>
<td>Digital/biohazard lab $675,000 Learning hall $600,000</td>
</tr>
<tr>
<td>$100,000–$500,000</td>
<td>Med gross anatomy lab $500,000 Information Resources suite $500,000 PT/OT Anatomy lab $475,000 Classrooms, extra-large $450,000 Department of Pathology suite $400,000 Department of Occupational Therapy suite $350,000 Office of Medical Education suite $350,000 Classrooms, large $350,000 Lobby $350,000 Food vendor + seating $300,000 Library suite $300,000</td>
</tr>
<tr>
<td>$55,000–$95,000</td>
<td>Office of Alumni and Community Relations suite $60,000 Geriatrics suite $55,000</td>
</tr>
<tr>
<td>$25,000–$50,000</td>
<td>Simulation Center debriefing rooms $50,000 Faculty lounges/breakrooms $50,000 ICU patient simulation room $45,000 Conference rooms, small $35,000 Anatomy imaging area $35,000 Small-group learning spaces $35,000 Regional Campus office suite $25,000</td>
</tr>
</tbody>
</table>

Your commitment

The new building at the SMHS will serve as a solid foundation for medical education at the University of North Dakota.

To thank you and properly recognize you for financially supporting our students, programs, and faculty, a number of naming opportunities will be available throughout our 378,000-square-foot, four-story building. Named faculty positions are also available.

These naming opportunities are provided to recognize and honor your generous contribution to our students, faculty, and programs.

Please contact

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Doctor of Physical Therapy begins clinical studies

DPT Students
Class of 2015

Forty-eight physical therapy students, members of the Doctor of Physical Therapy (DPT) Class of 2015, started the clinical studies portion of their journey to become doctors of physical therapy at the University of North Dakota School of Medicine and Health Sciences. The students received white coats at the Entrance Into Professional Service Ceremony held at the school on July 11.

The students, 23 men and 25 women, range in age from 21 to 36 years, with the average age of 24. Most are from North Dakota.

Keynote speaker was Henry C. “Bud” Wessman, PT, JD, LNHA, professor emeritus and founder of the physical therapy program at UND in 1967. Wessman spoke about the importance of professional service. He has been involved in a variety of high level service activities, including state legislator (1979–1981), mayor of Grand Forks (1980–1988), and as executive director of the North Dakota Department of Human Services. He also directed state economic assistance programs including Medicaid and food stamps. In 1997, Wessman was nominated as a federal administrative judge to serve on the Provider Reimbursement Review Board of the U.S. Department of Health and Human Services Health Care Financing Administration, now known as the Centers for Medicare and Medicaid Services.

“The ceremony emphasizes to the students the professionalism required in the clinic and within the physical therapy profession,” said Tom Mohr, PT, PhD, Chester Fritz Distinguished Professor and chair of the Department of Physical Therapy.

After completing their first year of the professional component of the physical therapy curriculum, the students have to pass an intense, comprehensive examination of their knowledge before they begin their clinical studies. The first three years of the curriculum are considered to be pre-physical therapy (pre-professional). The professional component of the DPT requires three academic years and two summer sessions following completion of the 90-credit pre-physical therapy entrance requirement.

Clinical experiences are a crucial component of the UND physical therapy curriculum and take place at more than 300 clinical sites across the nation, the majority of which lie outside the Greater Grand Forks area. These experiences meld academic information with hands-on clinical experience. Students participate in direct delivery of physical therapy services in a variety of settings under the direction and supervision of one or more clinical instructors. A physical therapist is on-site during the delivery of any service by a student physical therapist.

“Students are making the transition from being a student to being a health care professional,” Mohr said. “With that transition comes a great deal of professionalism, responsibility and accountability to themselves and to their patients. For many students, this will be the first life experience they will have had that carries the level of responsibility that is expected of them. We have trained them well, they have worked hard, and we anticipate they will do a great job working as part of a health care team.”
Growing up on a Hopi reservation in Arizona, Pearlyn Tomosie would’ve never guessed that she’d become not only the first to graduate from college in her family but the first full-blooded Hopi woman to become a physician.

Born and raised on the Hopi reservation in Polacca, Ariz., Tomosie was raised in a single-parent home, with her mother and grandparents sharing the duties of being her caretakers.

Temosie was exposed to the health care field through her grandparents. Her maternal grandmother had metastatic breast cancer and her maternal grandfather has type 2 diabetes as well as alcoholic cirrhosis. Because of their ailments, her family was either making frequent trips to the nearby Indian Health Service hospital or the field health nurses were coming to her home.

“At a young age, I was always intrigued by the different medical instruments, medications, and medical ‘lingo,’” Tomosie said.

Also at that young age, Tomosie could appreciate that there was not only a language barrier but also a cultural barrier between the Caucasian physicians and nurses and her grandparents.

“This realization prompted me to formulate the dream of becoming a doctor,” Tomosie said.

UND bound

Temosie started her career at UND in 2008 after attending Northern Arizona University, where she obtained her undergraduate degree in microbiology and chemistry.

“I chose UND by chance,” Tomosie said. “Their INMED application process was the only one open when I decided to apply.”

She got an interview and made the decision to attend UND.

Temosie and her husband moved up to North Dakota leaving their families behind.

“We relied on each other for support and made it through,” Tomosie said. “We had family that would call from Arizona to check on us and to ask how school was going, which helped a lot.”

Attending school so far away from home was anything but easy, but Tomosie soon found it to be a blessing in disguise.

“It was tough being away from home, but it allowed me to focus on my studies at a much higher level,” Tomosie said.

Temosie soon realized that UND was the perfect fit for her.

“I loved the class sizes and how learning was often one-on-one at UND,” Tomosie said. “My classmates and professors were always so nice and welcoming, which made the transition from Arizona easier.”

A historic event

Temosie graduated from medical school in May of 2013, and upon crossing the stage, became the first full-blooded Hopi woman to become a physician. Her family held a reception for her, which the tribal chairman of the Hopi tribe attended and shared some words of encouragement.

“It’s all so surreal yet,” Tomosie said. “I don’t really look at it from that aspect. In my eyes, all I did was accomplish a lifelong goal of mine. Some days reality does hit, and I get taken aback by how far I’ve come, but most days, I’m still just Pearl.”

Making a difference

Temosie is currently doing her residency in family medicine in Albuquerque, N.Mex., at the University of New Mexico hospital with dreams of making a difference in the line of health care and cultural boundaries.

“It’s my long-term goal to eventually work in a place that is underserved and rural.”
The Center for Rural Health hosted a heartwarming and celebratory sendoff for Twyla Baker-Demaray, PhD, in the Vennes Atrium at the SMHS in Grand Forks on Friday, July 19. Twyla is the new dean of students at Fort Berthold Community College. Jacque Gray, CRH associate director, and CRH Director Gary Hart, presented Twyla with a Pendleton blanket in honor of her service to the center.

At the New Building Kickoff held at the School on June 12 for UND and SMHS students, faculty, and staff, Cathy Perry from the Medical Laboratory Science Program marks her choices for building elements she believes are important in designing the new facility.

On June 29, Jeanette Gratton was among the Grand Forks SMHS staff members who joined more than 12,000 participants in Run or Dye-Fargo 2013 to raise funds for the YMCA of Cass County, N.Dak., and Clay County, Minn.

Anatolie Usatii, MD, clinical assistant professor of surgery (and past surgery resident) along with his wife Natalia and their children and Celeste Sticca (upper right) enjoying the surgery orientation and welcoming picnic held in June at Lincoln Park in Grand Forks.

Chelsea Boger, an undergraduate in Jane Dunlevy’s lab, explains her research to Pramod Akula-Bala, a post doc in Keith Henry’s lab, at the University of North Dakota School of Medicine and Health Sciences’ 2013 Summer Undergraduate Research Experience poster session held on August 7 in the Vennes Atrium of the School.
Join us for Homecoming 2013!

October 11-12

www.med.und.edu/homecoming-2013

www.undalumni.org