Board of Regents Work Session

March 2017

March 23, 2017
2:45 p.m. - 3:45 p.m.

Ballroom, Kirby Student Center
University of Minnesota Duluth
1. Meeting Minnesota's Rural and Native American Health Care Needs

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AGENDA ITEM: Meeting Minnesota’s Rural and Native American Health Care Needs

☐ Review ☐ Review + Action ☐ Action ☒ Discussion

☐ This is a report required by Board policy.

PRESENTERS: Brooks Jackson, Dean of the Medical School, Vice President for Health Sciences
            Paula Termuhlen, Regional Dean, Medical School, Duluth Campus
            J. Neil Henderson, Executive Director, Memory Keepers Medical Discovery Team
            Randall Seifert, Senior Associate Dean, College of Pharmacy

PURPOSE & KEY POINTS

The purpose of this work session is to engage the Board in a discussion about the impact of the University’s health science schools, with special emphasis on health care for rural and American Indian communities and identifying opportunities to meet the growing needs of an aging population. The session also will include an update on the UMD Medical School, College of Pharmacy, and the newly formed Medical Discovery Team.

As part of its land grant mission, the University is committed to training the health care workforce for greater Minnesota and researching specific needs of rural and American Indian communities. With 1,700 sites around the state, the Medical School fosters unique and innovative research, offers training in health issues facing Minnesotans, and provides high-quality patient care.

According to its 2017 report to the legislature, the Minnesota Rural Health Association finds the state’s rural populations on average to be older, lower income, and less healthy. These populations also face a shrinking health care workforce. The 2016 Health Equity of Care Report, produced by Minnesota Community Measurement, shows poorer health outcomes in Greater Minnesota and across the state; the lowest health outcomes are for patients from American Indian communities.

Key questions include:

- What is the Board's vision for the University's health science presence in Greater Minnesota?
- How would the Board prioritize expansion in the broader agenda of the University?
- Where does the Board see opportunity for greater impact?
- Does the Board believe the academic health center should expand the number of professions it trains?
BACKGROUND INFORMATION

- The School of Dentistry includes a community service requirement for graduation. Students can fulfill this requirement in several rural clinics, including in Hibbing and Willmar, or with underserved urban clinics including the Native American community clinic in Minneapolis and the Indian Health Service.

- The School of Nursing offers a program to reduce childhood obesity in rural Minnesota and training Doctor of Nursing Practice students in a statewide network of clinics to serve the mental health needs of remote communities.

- The College of Veterinary Medicine offers training for students through a partnership between the College and Davis Family Dairies, and the VetFAST program to address the nationwide shortage of food animal veterinarians.

- The School of Public Health is home to the University of Minnesota Rural Health Research Center.

- The University of Minnesota College of Pharmacy's Duluth campus opened in 2003, with a goal of providing more pharmacists for Minnesota's rural communities.

- The University of Minnesota Medical School, Duluth Campus, was founded in 1972 to serve the needs of rural Minnesota and American Indian communities.

- The Medical School's Rural Physician Associate Program was started in 1971 to encourage students to practice in rural Minnesota.

The docket includes a summary of these programs.
Board of Regents

Session on
Health Sciences Education
Impact on Greater Minnesota

Brooks Jackson, MD, MBA
Dean of the Medical School
Vice President of Health Sciences

March 23, 2017
University of Minnesota
Academic Health Center

Mission:

- Prepare the next generation of health professionals who will care for our families and communities throughout Minnesota
- Discover and deliver new treatments, cures, and ways to promote health in all communities
- Contribute to the economic vitality of our health industries in Minnesota
Academic Health Center Facts

• One of the most comprehensive health sciences centers in the nation

• Six schools:
  o Dentistry
  o Medicine
  o Nursing
  o Pharmacy
  o Public Health
  o Veterinary Medicine

• Center for Allied Health Professions

• 90+ Centers and Institutes
Academic Health Center Facts

• 6,200 students in 62 programs (professional, graduate, undergraduate)
• Students train at 1700 clinical sites around the state
• 70 percent of all health professionals working in Minnesota were trained at the University of Minnesota
**Rural Impact – School of Nursing**

- 9,000+ graduates living & working in Minnesota today
- Bachelor of Science in Nursing established in Rochester in 2002
  - School of Nursing/UMR collaboration continues to evolve
  - Now offering a guarantee option for freshmen
- Clinics and hospitals in 7 Western Minnesota communities benefit from training, support in diagnosing and treating peripheral artery disease
  - Improving access and efficiency of care
  - Led by Prof. Diane Treat-Jacobson, PhD, RN, funded by Margaret A. Cargill Foundation
- Research on childhood obesity is helping with prevention and support efforts for families in New Ulm area
  - Led by Prof. Jayne Fulkerson, PhD, funded by NIH
  - Partners: Allina Health and the Minneapolis Heart Institute Foundation
Rural Impact – School of Nursing

- Dedicated outreach to students at U of M Morris, Crookston, Duluth has led to 14 graduates from system campuses entering the Master of Nursing program since 2014

- Certified Registered Nurse Anesthetists are the sole provider of anesthesia care in more than half (maroon) of Minnesota Counties.

[Note: U of M is not the only CRNA program in MN.]
2003: College expanded to Duluth in response to a profound shortage of pharmacists in MN, especially in rural communities

# of pharmacists practicing in Greater Minnesota increased by 869 from 2002 to 2016

The state overall is now in balance in its demand for pharmacists
Rural Impact – College of Pharmacy

Rural health care
- Several programs address shortage of mental health professionals
- Work with communities in northern Minnesota to address heroin and opioid abuse
- Student pharmacists and faculty provide disease screening services at community health fairs throughout Minnesota
- Expansion of rural training sites, e.g., ANI Pharmaceuticals in Baudette

Native American communities
- Research for Indigenous Community Health (RICH) center works with tribal communities to reduce American Indian health disparities and increase American Indian health equity
- RICH received part of a $1 million gift from the Shakopee Mdewakanton Sioux Community’s Seeds of Native Health program
- Training partnership with Red Lake Indian Health Service
Rural Impact – School of Dentistry

We educate the rural dentist workforce.
- 74% of rural dentists
- 78% of rural dental therapists
- 50% of all Minnesota dental hygiene educators

Economic and social benefits to rural communities.
- Employment: Rural dentists employ 2-7 staff members
- Healthy communities: Research documents link between oral health & improved health status
- Quality of life: Healthcare access is requirement for communities seeking to retain residents/businesses and attract new residents/businesses
- Community planning: Availability of dental care in rural communities supports future decision making related to community needs

Community engagement:
- Mentoring & pipeline programs
- Community-based education & patient care
Rural Impact – School of Dentistry

Community-based education provides care for patients & clinical education for students

(May 11, 2015 to May 6, 2016)

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* Led fundraising, design, construction & equipment efforts
** Led design, construction & equipment efforts

Dental health professional shortage area
Dental Outreach Sites
Mobile Dental Clinic stop
Resident rotation

* Led fundraising, design, construction & equipment efforts
** Led design, construction & equipment efforts
Rural Impact – Medical School

University of Minnesota Medical School - Duluth Campus

• Founded in September 1972 focused on fulfilling the needs of rural Minnesota and Native American communities
• 40% of Duluth campus alumni practice in communities smaller than 20,000
• We have graduated more Family Physicians than any other U.S. medical school
• There have been 116 Native American graduates who began medical school at our Duluth campus
• Our Medical School is ranked 2nd nationally in the number of American Indian medical school graduates

Rural Physicians Associate Program

• Third-year medical students live and train for nine months in non-metropolitan area.
• Over the past 46 years the Rural Physicians Associate Program has sent 1,545 students to train in 114 MN towns.
Rural Impact – Medical School

Rural Physician Preparation: Laddered Curriculum
In addition to RPAP, other opportunities for students to explore rural medicine include:

- **Rural Observership Experience (ROE):** Students spend 2-3 days living with and shadowing rural physicians before starting medical school.
- **Rural Academy Leadership:** Students participate in care of patients in HOPE Clinic, an interprofessional student-run free clinic.
- **Family Medicine Preceptorship:** This course allows students to experience Family Medicine training in multiple rural settings.

Memory Keepers Medical Discovery Team: Rural & American Indian Health

- The Memory Keeper Medical Discovery Team, led by Dr. Neil Henderson, is focused on Vascular Dementia in rural populations, including tribal communities.
- The Medical Discovery Team will develop interventions and research to meet the challenges of health disparities among people living their lives far from the resources of urban population centers.
Rural Impact –
College of Veterinary Medicine

- Veterinarians Promote Community Health
  - Strengthening the Human-Animal Bond
  - Prevent zoonotic disease
  - Educate animal owners
Rural Impact –
College of Veterinary Medicine

• Diverse Practices
  – Clinical Services
  – Herd Health Consultant
  – Regulatory Role
  – Sustainability

• Targeted Education
  – National dairy education grant
  – Online training
Rural Impact –
College of Veterinary Medicine

• Native American communities
  – SIRVS outreach
  – Little Earth Urban Partnership
  – Youth Education
  – Grand Portage Research
Rural Impact – School of Public Health

- **Rural Health Research Center** partners with the federal Office of Rural Health Policy to identify key information for policymakers regarding rural health. Current research includes:
  - Obstetric Unit Closures.
  - Skilled Nursing Facility Care for Rural Residents.
  - Transportation as a Social Determinant of Health.
  - Swing-Bed Care.

- **Upper Midwest Agricultural Safety and Health (UMASH) Center** increases agricultural worker health and safety. Current research includes:
  - “Return to Work” program to safely return the worker to the workplace.
  - Zoonotic Disease Surveillance in Minnesota Agricultural Workers.
  - Occupational Hazards in Pork Production Associated with Production Practices
  - Seguridad en Las Lecherias: Immigrant Dairy Worker Health and Safety

- **Minnesota Technical Assistance Program (MnTAP)** partners with around 250 rural and metro businesses every year across the state to help business produce less waste and save water and electricity.
Opioids
• SPH research shows that the number of babies born with opioid withdrawal in rural areas has increased seven-fold between 2004 and 2013 and that reproductive age women get the drug from doctors, relatives, and friends.

Native American Health
• SPH faculty examined the health status of Native Americans across Minnesota’s 11 reservations and found high uninsured rates and significant barriers to health services.
• SPH partners with the American Indian Cancer Foundation and the tribes to understand the complexities of culture and tribal regulations to forge solutions to reduce smoking.
• Minnesota Midwest AIDS Training and Education Center partners with organizations serving Native American tribes in northern Minnesota to provide training, technical assistance, and capacity building to increase health.

Miners’ Health
• SPH found that taconite workers have higher death rates from mesothelioma and is now working to identify the specific particles that are to blame.

Aging
• SPH and the Minnesota Department of Health created the Nursing Home Report Card, which is used across the state to determine the quality of care and quality of life for residents in long-term care.
Major Challenges in Health Education

- Changing health care environment
- Difficulty predicting future workforce needs and practice models
- Growing disincentives for choosing and practicing primary care
- Reduced state and federal funding for education and training: *impact on tuition and student debt*
- Difficulty finding training/practice sites that model health care the way it should be delivered: *working in teams with providers practicing at the top of their license*
- Access to clinical rotation sites for education
What We Have Done

• Increased enrollments in all of our schools
• Expanded programs
  o Pharmacy in Duluth in early 2000’s
  o Nursing and Allied Health in Rochester in early 2000’s
  o Nursing with Veterans Administration partnership
  o Doctor of Nursing Practice - 70% expansion 2014-2024
• Developed pipelines
  o Minnesota Future Doctors
  o Rural Physician Associate Program (RPAP)
  o Health Careers Centers
  o UM Morris and UM Duluth MN collaborative Nursing programming
What We Have Done

• Developed new degree programs
  o Doctor of Nursing Practice and other Advanced Nursing programs
  o Dental Therapy

• Revamping our curriculum
  o Team-based care and interprofessional education
  o Greater emphasis on simulation
  o Greater emphasis on prevention and wellness
Questions for the Regents

• What is the Regents vision for our health science presence in Greater Minnesota?
• How would the Regents prioritize this type of expansion in the broader agenda of the University?
• Where do the Regents see opportunity for greater impact?
• Do the Regents believe the AHC should be considering expanding the number of professions we train?
School of Dentistry – Training the Rural Dental Workforce

The University of Minnesota educates:
- 74 percent of rural dentists
- 78 percent of rural dental therapists
  - The U of M is the only U.S. Dental School to educate Dental Therapists
  - First graduates in 2011
  - Enhances capacity to serve underserved areas
- Dental Hygiene Program is unique
  - Team-based approach to education and patient care
  - Training alongside dentists with whom they will eventually work
- 50 percent of Minnesota’s dental hygiene educators are trained at the U of M

Economic and Social Benefits to Rural communities
- Employment: Rural dentists employ 2-7 staff members
- Healthy communities: Research documents link between oral health & improved health status
- Quality of life: Healthcare access is requirement for communities seeking to retain residents/businesses and attract new residents/businesses
- Community planning: Availability of dental care in rural communities supports future decision making related to community needs

Community Engagement
- Mentoring, pipeline and admissions programs
  - Rural Students comprise at least 20 percent of each incoming DDS class
  - Mentoring - Minnesota Collaborative Rural Oral Health Project (MN-CROHP)
    - HRSA-funded (five-year) program targeting 13 counties in Northeast, West Central and Southeast Minnesota
    - 19 area dentists are matched with students
    - Students spend three weeks in the summer shadowing at rural dental offices
  - Pipeline program – Hibbing
    - Targets high school students in Northeastern Minnesota
    - Taught by MN-CROHP students and a U of M faculty member who directs the Hibbing Community Dental Clinic
Community-based education Provides Care for Patients and Clinical Education for Students

**Key Benefits**
- Provides much-needed care for patients in underserved communities
- Educational experiences for students
- Applies the resources of the U of M to address community needs
- Maximizes resources through private partnerships
- Immerses students in rural life and encourages entry into rural practice

**Seven fixed-site clinics**
- Total patients served: 6,301
- Total patient visits: 22,720

**Mobile Dental Clinic**
- Serving underserved rural communities
- UCare’s loss of public program contracts closed the clinic for 8 months in 2016
- Current funding from Schulz Family Foundation ends in July 2017

**Outreach sites are public-private partnerships – Examples include:**
- Willmar
  - Responded to a request from Rice Regional Hospital
  - Hospital-based clinic serving patients in 17 counties
- Hibbing
  - Partnered with Hibbing Community College dental assisting program
  - U of M led efforts to expand existing clinic
  - Students from both programs learn together, expanding access and enhancing education

**Native American Community Partnership**
- School of Dentistry partners with four rural Native American/IHS clinics
- Additional partnership with the Native American Community Clinic in South Minneapolis
  - School of Dentistry led effort to raise funds to build and equip the clinic
- Before partnering with the School of Dentistry, all of these clinics had difficulty finding licensed dentists to staff their clinics
- Since we began sending students to these clinics, each of them has hired at least one of our graduates
- For our students, the Native American/HIS clinics provide a rich cultural and clinical experience that is not available at any other site
Workforce

Through its four programs - the Bachelor of Science in Nursing, the Master of Nursing, the Doctor of Nursing Practice and the PhD in Nursing – the University of Minnesota School of Nursing produces registered nurses, nurse practitioners, certified nurse anesthetists, clinical nurse specialists, nurse midwives, nurse informaticians, health care administrators, nursing faculty and nurse scientists.

In 2016, the School of Nursing:

- Produced 310 nursing graduates
- Had more than 9,000 nursing alumni living and working in Minnesota
- Had the nation’s largest full-time enrollment of Doctor of Nursing Practice students
- Ranked 12th nationally by US News and World Report

The School:

- Prepares BSN students on the Twin Cities campus and on the University of Minnesota Rochester campus
- Offers online program delivery options for all 13 of the DNP specialties to expand access to working students and those in rural areas
- Master of Nursing program is an accelerated 16-month RN-prep program for people who have a four-year degree in another field.
- Nurse practitioners, nurse midwives and nurse anesthetists provide important access to patients in Greater Minnesota.
- Certified Registered Nurse Anesthetists were the sole providers of anesthesia care at surgery centers and hospitals in more than half of Minnesota counties (2014 survey conducted by the School of Nursing)
- Nurse anesthesia graduates from the last two years are working in Marshall, Bovie, Red Wing, Perham, Princeton, Blue Earth and Crookston.
In its sentinel report, *The Future of Nursing*, updated in 2015, the Institute of Medicine/National Academies of Science recommended that more nurses be educated at higher levels to expand access and reduce health care costs. This report recommended that by 2020, 80 percent of all Registered Nurses have four-year degrees. In Minnesota, we are well below 50 percent on this measure today.

**Nursing Science and Outreach**

School of Nursing faculty are actively engaged in externally-funded research addressing Alzheimer’s disease, peripheral artery disease, cardiovascular disease, resilience in adolescence, childhood obesity, nursing home safety, childhood cancers and research discoveries to help older adults stay in their homes and live independently longer.

Nearly all our research has an outreach component.

Examples of current externally-funded outreach/research:

- **Western/Central Minnesota**: Clinics and hospitals in 7 Western Minnesota communities benefit from training, support in diagnosing and treating peripheral artery disease. [Capacity building, program development, led by Prof. Diane Treat-Jacobson, PhD, RN, funded by Margaret A. Cargill Foundation]

- **New Ulm**: Families in New Ulm area benefit from translation of school’s research on childhood obesity prevention into support for families. [Led by Prof. Jayne Fulkerson, PhD, funded by National Institutes of Health. Partners: Allina Health and the Minneapolis Heart Institute Foundation.]

- **Northern Minnesota**: A new clinical partnership with Northern Pines Mental Health Center, which has facilities in six rural communities in northern Minnesota. will bring DNP students to Northern Minnesota to give students practical supervised experiences delivering mental health and primary care in underserved communities.
Role of Veterinary Medicine in Promoting Community Health

- Improve animal care to promote and expand the benefits of the human animal bond
  - Animal ownership has been linked to improved emotional and physical health
- Provide vaccination and flea and tick prevention programs to prevent the transmission of zoonotic diseases
- Offer spay and neuter services to reduce animal numbers
  - Results in better use of resources, decreased animal bites, and better management of disease
- Research to promote wildlife and environmental health
  - Preservation of culturally important species for food and spiritual well-being
  - Promotes safer environments
- Client Education to complement animal and human wellness by providing valuable information to animal owners
  - Disease prevention
  - Nutrition
  - Animal behavior

Background

- Diverse veterinary services needed in rural communities with a focus to serve food animal producers
  - Clinical services and herd management consultation
  - Routine regulatory services
  - Prudent use of drugs in food animal production
  - Enhance biosecurity and promote food safety
  - Promote and oversee animal welfare
  - Respond to disease outbreaks
- Rural practice may be less sustainable and/or attractive for veterinarians
  - High attrition rate among new veterinarians in food animal practice
  - Difficulty earning an acceptable income in private practice when primarily providing care in response to problems
  - Significant student debt
  - Social and lifestyle issues related to living in rural communities, including working hours and conditions
  - Lack of mentorship and intellectual stimulation
USDA currently has a Veterinary Medicine Loan Repayment Program for veterinarians who agree to work in underserved areas
  o Expected to expand services into areas that were previously underserved

Current Initiatives

*National Institute of Food and Agriculture grant*
  • Partnership between the National Center of Excellence in Dairy Veterinary Education and the Center for Animal Health and Food Safety
  • Develop on-line training modules that will be accessible to both veterinary students and rural practitioners across the country
    o Dairy Food Systems and Regulatory Medicine
    o Calf Health
    o Lameness
    o Mastitis and Milk Quality
    o Reproduction and Transition Cow Management
  • Aim to make new graduates more practice-ready for rural veterinary medicine and enhance capabilities and services that are provided by existing veterinarians
  • Goal to allow rural veterinary practitioners to increase income by offering new, advanced, and value-added services
  • Will allow for a virtual practice community and mentoring

*Minnesota Department of Agriculture and Food and Drug Administration grant*
  • Partnership between the Minnesota Department of Agriculture and the Center for Animal Health and Food Safety
  • Develop on-line training modules that will be accessible to both veterinary students and rural practitioners in Minnesota
    o Prudent Antimicrobial Usage
    o Residue Avoidance
  • Aim to make new graduates and existing veterinarians more able to guide food animal producers in appropriate antibiotic usage and comply with regulatory guidelines
  • Goal to allow veterinary practitioners to promote food safety and prudent use of medically important antibiotics

Meeting Minnesota’s Native American Health Care Needs

* SIRVS (Student Initiative for Reservation Veterinary Services)
  o Student-led organization that provides veterinary care to Native American communities
  o Wellness care, including physical exams, vaccinations, parasite prevention, and basic diagnostic procedures are provided to dogs and cats
  o Spay and neuter surgery services are provided at the majority of veterinary clinics
  o Communities served include the White Earth, Leech Lake, and Mille Lacs Bands of Ojibwe, and the Lower Sioux Indian Community
  o Work has been on-going since 2009
  o SIRVS provides 100-125 surgeries and over 500 wellness exams annually
• Little Earth Urban Partnership
  o New collaboration between the Little Earth of United Tribes in Minneapolis and VeTouch (Veterinary Treatment Outreach for Urban Community Health), a student-led organization that provides veterinary care in urban communities
  o Pilot wellness clinic in February 2017 which provided service to over 100 animals

• Youth Education and Outreach
  o Provide the opportunity for school groups to tour and shadow at community veterinary clinics
  o Individual students (middle and high school) can work with veterinary student teams to learn about veterinary work at community clinics
  o VetCamp delivered to Leech Lake youth in 2016
    o VetCamp is a formal program delivered by veterinary students for school aged children addressing the roles of veterinarians, common veterinary tasks, and animal health concerns such as parasites and toxins

• Student Externships
  o Native American students that participate frequently on-site at community clinics have the opportunity to participate in youth externships at the University of Minnesota Veterinary Medical Center
  o Four externs have participated in 2016, two from Leech Lake and two from White Earth

• Grand Portage Research Partnership
  o CVM researchers collaborate with tribal biologists to study moose, deer, and wolf health on the Grand Portage Reservation
  o LCCMR and College of Veterinary Medicine Signature Program funding to evaluate chemicals of emerging concern in water and in association with the safety and security of subsistence fish species

Future Work

1. Continued student-run clinics in Native American communities to provide wellness and spay/neuter services
2. Investigated expansion of services at student-run clinics to provide canine and feline dental care
3. Continue to expand education opportunities for Native American youth interested in animal health, ecosystem sciences, and veterinary medicine
4. Investigate partnerships with Duluth, Morris, and Crookston campuses for student training and outreach
5. Proposed learning centers in cooperation with community partners at Grand Portage for ecosystem health research and at Leech lake for animal care and veterinary medicine
RURAL IMPACT — SCHOOL OF PUBLIC HEALTH CENTERS

Rural Health Research Center partners with the federal Office of Rural Health Policy to identify key information that policymakers may need regarding rural health. Current research includes:

- **Obstetric Unit Closures**
  - Between 2010-2014, 7 percent of rural hospitals closed their obstetric units, requiring women to travel an average of 29 miles to receive care. This project examines the relationship between closures and maternity care and birth outcomes.

- **Skilled Nursing Facility Care for Rural Residents**
  - This research examines the barriers to long-term care in rural areas and their implications for people with complex care needs, including obesity, dementia, and behavioral health problems.

- **Transportation as a Social Determinant of Health**
  - This project explores how transportation is tied to health outcomes for rural residents and identifies best practices to improve health in rural areas.

- **Swing Bed Care**
  - Under Medicare, some rural hospitals are eligible to participate in the “swing bed” program that allows people to stay in the hospital for acute care or nursing home-level care. Research examines quality of care and recommends appropriate, cost-effective use of these beds.

Upper Midwest Agricultural Safety and Health (UMASH) Center increases agricultural worker health and safety. Current research includes:

- **“Return to Work”**
  - Research explores a mechanism for the clinician to understand farm work to develop a transitional plan that will safely and promptly return the worker to the workplace.

- **Zoonotic Disease Surveillance in Minnesota Agricultural Workers**
  - Project aims to reduce the number of illnesses among agricultural workers, their families, and others who are exposed to animal agriculture settings.

- **Occupational Hazards in Pork Production Associated with Production Practices**
  - Objective is to characterize risks to pork production workers associated with two main occupational health issues: injuries and airborne exposures in the working environment.

- **Seguridad en Las Lecherias: Immigrant Dairy Worker Health and Safety**
  - Research to bridge the gap in worker health and safety training among immigrant workers in dairy production.

Minnesota Technical Assistance Program (MnTAP) partners with around 250 rural and metro businesses every year across the state to help business produce less waste and save water and electricity.
Opioids
• Recent SPH research shows that the number of babies born with opioid withdrawal in rural areas has increased seven-fold between 2004 and 2013 and that reproductive age women get the drug from doctors, relatives, and friends.

Native American Health:
• SPH faculty examined the health status of Native Americans, including across Minnesota’s 11 reservations, and found high uninsured rates and significant barriers to obtaining health services. Recommendations include that Congress prioritize public health funding to tribal communities.
• Smoking rates on Native American reservations can be as high as 60 percent. SPH partners with the American Indian Cancer Foundation to better understand the complexities of culture and tribal regulations and to forge collaborative solutions with the tribes to reduce smoking.
• Minnesota Midwest AIDS Training and Education Center partners with organizations serving Native American tribes in northern Minnesota to provide training, technical assistance, and capacity building to reduce the burden of HIV, hepatitis C, STIs, TB, opioid use, and human trafficking

Miner’s Health:
• SPH researchers found that taconite workers have higher death rates from mesothelioma and they now working to identify the specific particles that are to blame for miners’ poor health outcomes.

Aging:
• SPH and the Minnesota Department of Health created the Nursing Home Report Card, which is used across the state to determine the quality of care and quality of life for residents in long-term care.
Expansion to Duluth - 2003

The College of Pharmacy, Duluth was founded in response to a profound shortage of pharmacists in the state that resulted in a dramatic loss of pharmacy services in various communities, especially in rural communities where retiring pharmacists could not find replacements for themselves.

There was a clear need and opportunity to recruit and return students from and to Greater Minnesota.

College of Pharmacy, Duluth emphasizes rural health care issues and the provision of pharmaceutical care in rural and tribal communities.

Outcomes of Expansion to Duluth

- Increased student enrollment by 50%
- Increased number of students from Greater Minnesota by more than 100% from 2002 to 2003
- Doubled number of students taking positions outside the metro Twin Cities area
- # of pharmacists practicing in Greater Minnesota increased by 869 from 2002 to 2016
Rural Focus - Mental Health and Interprofessional

Initiated several programs to address shortage of mental health professionals:
- Northern Pines Community Mental Health Center collaboration with Guidepointe Pharmacy in Brainerd to develop an advance practice residency in psychiatry
- Mental health collaborative focus with the DNP program in our 3rd and 4th year curriculum
- Partnerships with Wilder Foundation and Touchstone Mental Health - students complete a 10-week rotation
- Training partnership with Red Lake Indian Health Service to provide advanced training for their pharmacists

Rural Focus - American Indian Communities

Research for Indigenous Community Health (RICH) center:
- Mission: Reduce American Indian health disparities and increase American Indian health equity
- Collaborate with indigenous populations across Minnesota, the country and in other countries
- Work with tribal members and other health professionals to create culturally respectful interventions to reduce obesity, misuse of medicines, tobacco use and substance use within those communities
- 2015: received part of a $1 million gift from the Shakopee Mdewakanton Sioux Community’s Seeds of Native Health program to support a publicly accessible, comprehensive, multidisciplinary database on best food practices for nutrition, health and wellbeing

Rural Focus - Addiction

Work with communities in northern Minnesota to address heroin and opioid abuse:
- Carlton County Drug Court
- Community Forums on Heroin and Opioid abuse
- Drug Abuse Task Force efforts to reduce substance abuse

This work has led to numerous opportunities for faculty and students to engage with public health efforts across greater Minnesota with several counties and Tribal Nations
Overview of the College of Pharmacy

Randy Seifert, PharmD
Senior Associate Dean
College of Pharmacy, Duluth
About the College of Pharmacy

• Only pharmacy school in Minnesota
• Two campuses: Duluth and Twin Cities
• Ranked #2 (*U.S. News & World Report*)
• Recognized as an innovator

Offers:

• Doctor of Pharmacy (PharmD)
• Graduate degrees: Masters and PhDs
• Online courses for pharmacists, other pharmacy colleges, undergraduate students and other health professions
Expansion to Duluth - 2003

• Response to a profound shortage of pharmacists in MN, especially in rural communities

• Opportunity to recruit and return students from and to Greater Minnesota

• Goal: Provide more pharmacists to serve Minnesotans - especially in rural areas
One College, Two Campuses

- Same curriculum on each campus
- Intercampus instruction: connected by interactive television (ITV)
- Faculty and staff are shared between the two campuses

- Over 200 preceptors across MN ensure our students receive relevant clinical training with a clear understanding of the state’s communities and the citizens they care for
Outcomes of Expansion to Duluth

- Increased student enrollment by 50%
- Increased number of students from Greater Minnesota by more than 100% from 2002 to 2003
- Doubled number of students taking positions outside the metro Twin Cities area
- Added 869 pharmacists practicing in Greater Minnesota
  
  2002: 1,808
  2016: 2,677
Addressing Shortage of Mental Health Professionals in Rural MN

Innovative practice and training site partnerships
- Northern Pines CMHC – Guidepoint Pharmacy in Brainerd integration of comprehensive pharmacist services
- Touchstone – Wilder Foundation – St. Paul
- Human Development Center – Duluth

Workforce
- Mental health collaborative focus with the DNP program in our 3rd and 4th year curriculum
- Red Lake IHS pharmacist practitioner training program
- Sanford Health System – Bemidji

Research – community transitional care from Carlton County Jail
Research for Indigenous Community Health (RICH) Center

Mission: Reduce American Indian health disparities and increase American Indian health equity

Collaborate with indigenous populations and other health professionals across Minnesota to create culturally respectful interventions to reduce obesity, misuse of medicines, tobacco use and substance use within those communities

2015: received part of a $1 million gift from the Shakopee Mdewakanton Sioux Community’s Seeds of Native Health program to support a publicly accessible, comprehensive, multidisciplinary database on best food practices for nutrition, health and wellbeing
Addressing Addiction in Rural MN

Work with communities in northern Minnesota to address heroin and opioid abuse

- Carlton County Drug Court
- Community Forums on Heroin and Opioid abuse
- Drug Abuse Task Force efforts to reduce substance abuse

This work has led to numerous opportunities for faculty and students to engage with public health efforts across Greater Minnesota counties and Tribal Nations.
Our Vision

Fully integrate pharmacists into primary care and interprofessional teams to improve access and quality of rural health care

In many rural communities, pharmacists are the *only* full-time healthcare professional

- We need to build on that advantage to provide integrated interprofessional care

**Best way to achieve our vision is to create an “AHC North”**
University of Minnesota Medical School
Duluth campus

Paula M. Termuhlen, MD
Professor of Surgery and Regional Campus Dean
The University of Minnesota Medical School has two campuses in the Twin Cities and in Duluth.
Leadership Team

- Regional Campus Dean
- Associate Dean for Curriculum and Technology
- Associate Dean for Student Affairs and Admissions
- Associate Dean for Rural Health
- Associate Dean for Research
- Chair of Biomedical Sciences
- Chair of Family Medicine and Biobehavioral Health
- Director of Global Medical Research Institute
- Director of Graduate Programs/AHC Liaison
- Director of Women’s Mentoring Group
- Director of Center for American Indian and Minority Health
Duluth Mission

The mission of the University of Minnesota Medical School, Duluth campus is to be a national leader in improving healthcare access and outcomes in rural Minnesota and American Indian/Alaska Native communities.

We do this by:

• Educating medical students dedicated to serving rural Minnesota and American Indian/Alaska Native communities

• Fostering excellence in research

• Emphasizing the training of physicians in family medicine

• Creating strong partnerships locally, regionally, nationally and internationally

• Working in innovative, interdisciplinary and inter-professional teams
Unique Admissions Criteria

• Potential for rural practice
• Potential for Family Medicine
• Native American health interest
2016 Entering Class Statistics
Current 1st Year Students

- Entering Class Size-60
- Minnesota Residents-83%
- UIM-16.7% (AI/AN 15%)
- Women-42%
- SES Disadvantaged-37%
- 1st Generation College-47%

- 28 Minnesota counties represented
- Hometowns smaller than 20,000 – 88%
- Hometowns smaller than 7,500 – 55%
- Hometowns smaller than 2,500 – 42%
SUCCESS OF THE DULUTH MEDICAL SCHOOL PROGRAM

Championing Diversity

- 2nd in the nation for graduating American Indian physicians
- 48% of our alumni are Family Medicine physicians (9% nationally)
- 67% of our alumni practice primary care medicine
- 44% of our alumni practice in communities with populations less than 25,000 (5% nationally)
- 63% of our alumni practice medicine in Minnesota

University of Minnesota Medical School Duluth
Other Educational Programs

Pipeline
• Native Americans into Medicine (NAM)*
  – CAIMH
• Bridges to Baccalaureate Degree**
• Pathways to Advanced Degrees in Life Sciences**

Graduate/Undergraduate
• Integrated Biological Sciences
  – UMD, COP, MSD
• Undergraduate teaching and mentorship
• Early MS admission collaboration with UMD
• Postdoctoral fellowships
  – Mix of NIH and other funded

*Regenerative Medicine Grant
**NIH funded
RESEARCH
Two Departments

**Biomedical Sciences**
- Chair: Lynne Bemis, PhD
- Faculty 23
- Women 51%
  - Professors 1
  - Assoc Professors 4
  - Assistant Professors 6
  - Instructors 1
- Underrepresented 23%
- Tenured/Tenure Track 64%
- Academic Track 36%

**Family Medicine and Biobehavioral Health**
- Chair: Ruth Westra, DO
- Faculty 17
- Women 57%
  - Professors 2
  - Assoc Professors 2
  - Assistant Professors 6
- Underrepresented 37.5%
- Tenured/Tenure Track 56%
- Academic Track 44%
Extramural Funding Successes

- 2 investigators with multiple NIH R-01
- Tenure-track faculty member with a new 5 year R-35 grant ($1.2 million)
- NIH Training Grants continuous since 1995
- More new grant submissions in first 3 quarters FY16 versus all FY15
  - 12/22 submitted FY16 to NIH
COMMUNITY ENGAGEMENT
Activities

• Community Advisory Board
• Minnesota Rural Health Association
• Brain Awareness Program
  – Celebrating 20 years!
• UMN Grand Challenges: Minnesota Precision Medicine Collaborative
• 2016 Cancer Moonshot
• Karpeles Medical Manuscript Museum
WELCOME!
Duluth Campus

The University of Minnesota Medical School, Duluth campus was founded and has since focused on fulfilling the needs of rural Minnesota and Native American communities. The Duluth campus welcomed its first class of 24 students — which included two Native Americans, a set of identical twins, and a nun — to school on September 20, 1972.

Forty years later, the mission of our Duluth campus remains the same and it has put up some impressive numbers.

- 40% of Duluth campus alumni practice in communities smaller than 20,000; the national rate for physicians practicing in communities that size is approximately 5%.

- The University of Minnesota Medical School has graduated more Family Physicians than any other US medical school.

- There have been 116 Native American graduates who began medical school in Duluth, which is home to our Center of American Indian and Minority Health. The center has made a tremendous impact in developing Native American physicians, pharmacists, and health professionals. Our Medical School is ranked second nationally in the number of American Indian medical school graduates.

Rural Physicians Associate Program

The Rural Physician Associate Program (RPAP) was established in 1971 to encourage students to practice in rural areas throughout Minnesota. RPAP is a unique opportunity in clinical training where third-year medical students live and train for nine months in non-metropolitan communities under the supervision of preceptors who are family physicians. Over the past 46 years the Rural Physicians Associate Program has sent 1,545 students to train in 114 MN towns.

- We currently have 1,190 RPAP alumni in practice nationwide.

- Of our 777 RPAP alumni practicing in Minnesota, approximately half are in rural MN.

- 75% of all our RPAP alumni are practicing in Primary Care fields
Rural Physician Preparation: Laddered Curriculum

In addition to the RPAP program the University of Minnesota Medical School has a ladder of opportunities for students to explore rural medical practice.

- **Rural Observership Experience (ROE):** Students interested in exploring rural practice spend 2-3 days living with and shadowing rural physicians just before starting medical school.

- **Introduction to Rural Family Medicine Course:** Initial introduction to rural communities, health systems, and physicians and clinics where students visit six rural communities.

- **Rural Academy Leadership:** Students participate in care of patients in HOPE Clinic, an interprofessional student-run free clinic. Students also complete a student leadership project.

- **OB Longitudinal Course:** Students attend appointments with mom and family, labor and delivery and post-partum care.

- **Family Medicine Preceptorship:** This course allows students to experience Family Medicine training in different settings; Duluth, Superior, WI, Two Harbors, and Cloquet.

- **Rural Family Medicine, Native American, and Minority Medical Scholars Program:** This program allows students to attend a rural site, five weeks in year one and two weeks in year two. Students present a poster on various health topics in their community at the MN Rural Health Conference in June.

- **Summer Internship in Medicine:** Students spend two weeks of their summer between year one and two working with a physician and other health professionals in rural communities.

Memory Keepers Medical Discovery Team: Rural & American Indian Health

The Memory Keeper Medical Discovery Team is focused on Vascular Dementia in rural populations, including tribal communities. Led by Dr. Neil Henderson, the team, based on the Medical School's Duluth Campus will work to preserve brain health by the improved understanding of dementia and diabetes as an interactive syndemic. The Medical Discovery Team will develop interventions and research to meet the challenges of health disparities among people living their lives far from the resources of urban population centers.