

House Health & Human Services Reform Committee

University of Minnesota Academic Health Center

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January 27, 2015



UNIVERSITY OF MINNESOTA

Driven to DiscoverSM

Academic Health Center

Innovative expertise in education and research leading to better health and vital economy in Minnesota.

Academic Health Center

Meeting Expectations:

<p>70% of all health professionals working in Minnesota trained at the University</p>	<p>Leading work in</p> <ul style="list-style-type: none"> • diabetes • infectious diseases • neuroscience • cancer • cardiovascular research 	<ul style="list-style-type: none"> • Global impact in prevention and health improvement • 1 million human and animal visits • 1,700 educational rotations in Minnesota
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Through our:

Schools and Colleges	Centers and Institutes	Clinics and Hospitals
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In Disciplines of:

Dentistry	Medicine	Nursing	Pharmacy	Public Health	Veterinary Medicine
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Driving Initiatives in:

Education	Research	Clinical/Outreach
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AHC Mission

- Prepare the next generation of health professionals who will care for our families and communities
- Discover and deliver new treatments, cures, and ways to promote health
- 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: *Dentistry, Medicine, Nursing, Pharmacy, Public Health, Veterinary Medicine, and a Center for Allied Health Professions*
- 20 Interdisciplinary Research and Education Centers
- 6,200 students in 62 programs (professional, graduate, undergraduate)
- Conduct over \$400 million in health research annually
- Provide care to over 1,000,000 patients



AHC EDUCATION PROGRAMS



AHC Professional Education Programs

- Professional Programs
 - Doctor of Medicine (MD)
 - Doctor of Pharmacy (PharmD)
 - Doctor of Dental Sciences (DDS)
 - Doctor of Veterinary Medicine (DVM)
 - Doctor of Physical Therapy (DPT)
 - Doctor of Nursing Practice (DNP)
 - Master of Occupational Therapy (MOT)
 - Master of Public Health (MPH)
 - Master of Healthcare Administration (MHA)
- Graduate Programs: e.g., Bioethics (MS) , Health Informatics (MS, MHI, PhD), Nursing (MN)
- Baccalaureate Programs:
 - Bachelor of Nursing (BSN), Bachelor of Dental Hygiene (BSHD), Bachelor of Dental Therapy (BSDT) , Mortuary Science (BS), Clinical Laboratory Science (BS)



Health Professions Education

- Highly regulated through accreditation standards, licensure and certification requirements for practice
- High workforce demand driven by an aging population, retirements, and health care reform
- High number of applicants; high retention; and high “on-time” graduation rates
- Lengthy time to educate and train health professionals: didactic and experiential



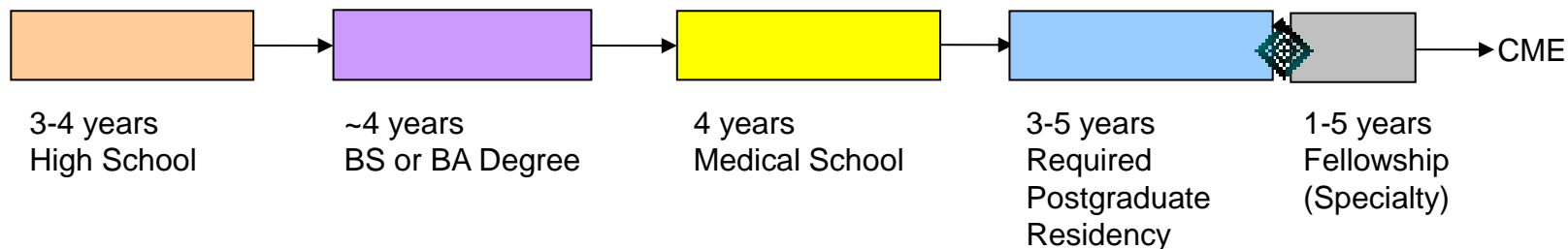
Health Professions Education

- Clinical and experiential learning, including over 1,700 affiliated training sites across Minnesota and internationally
- Competencies demonstrated through standardized patients and examinations
- Use of simulation and technology for competency development
- Interprofessional education and training

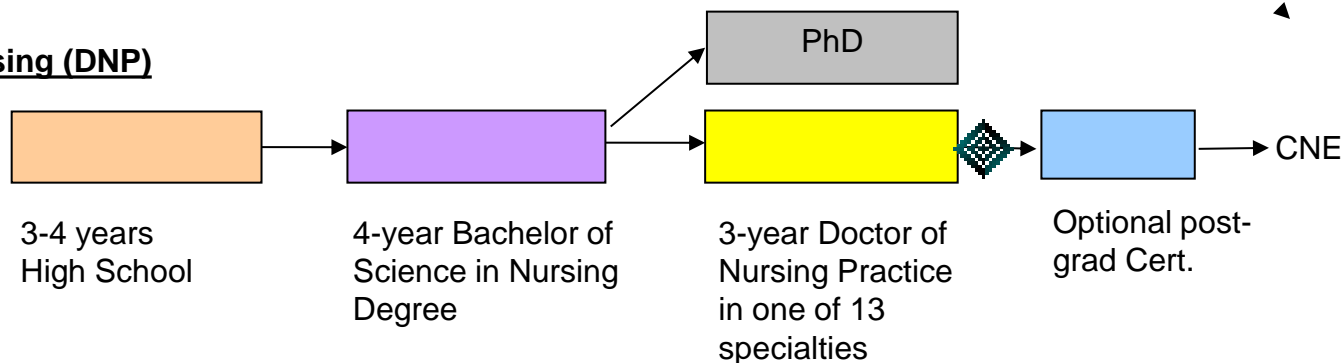


Length of Doctoral Education Medicine, Nursing

Medicine (MD)

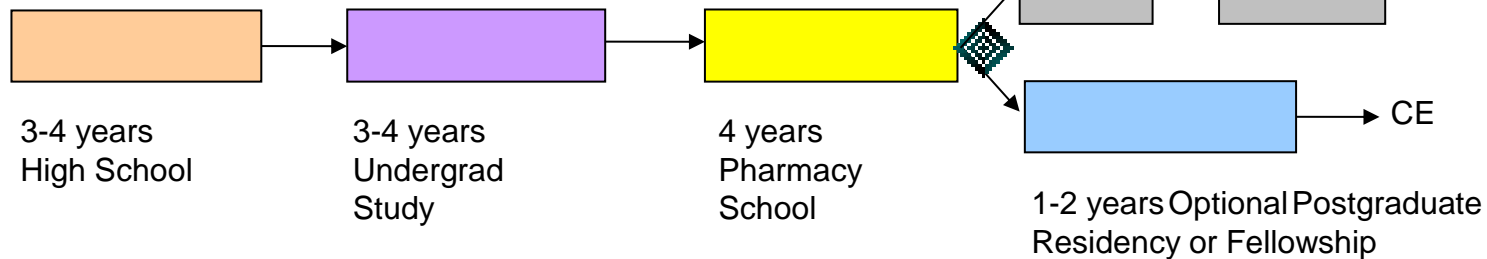


Nursing (DNP)

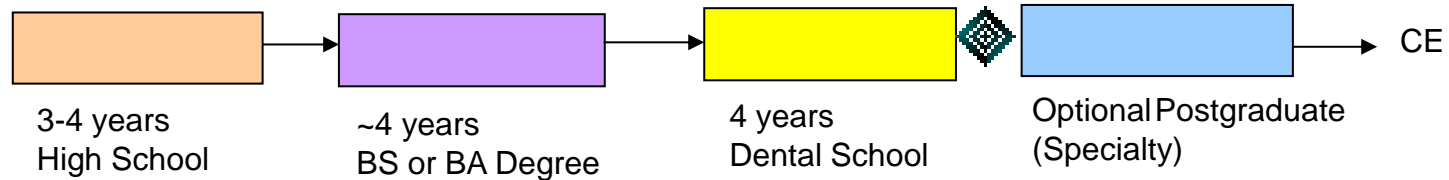


Length of Doctoral Education Pharmacy and Dentistry

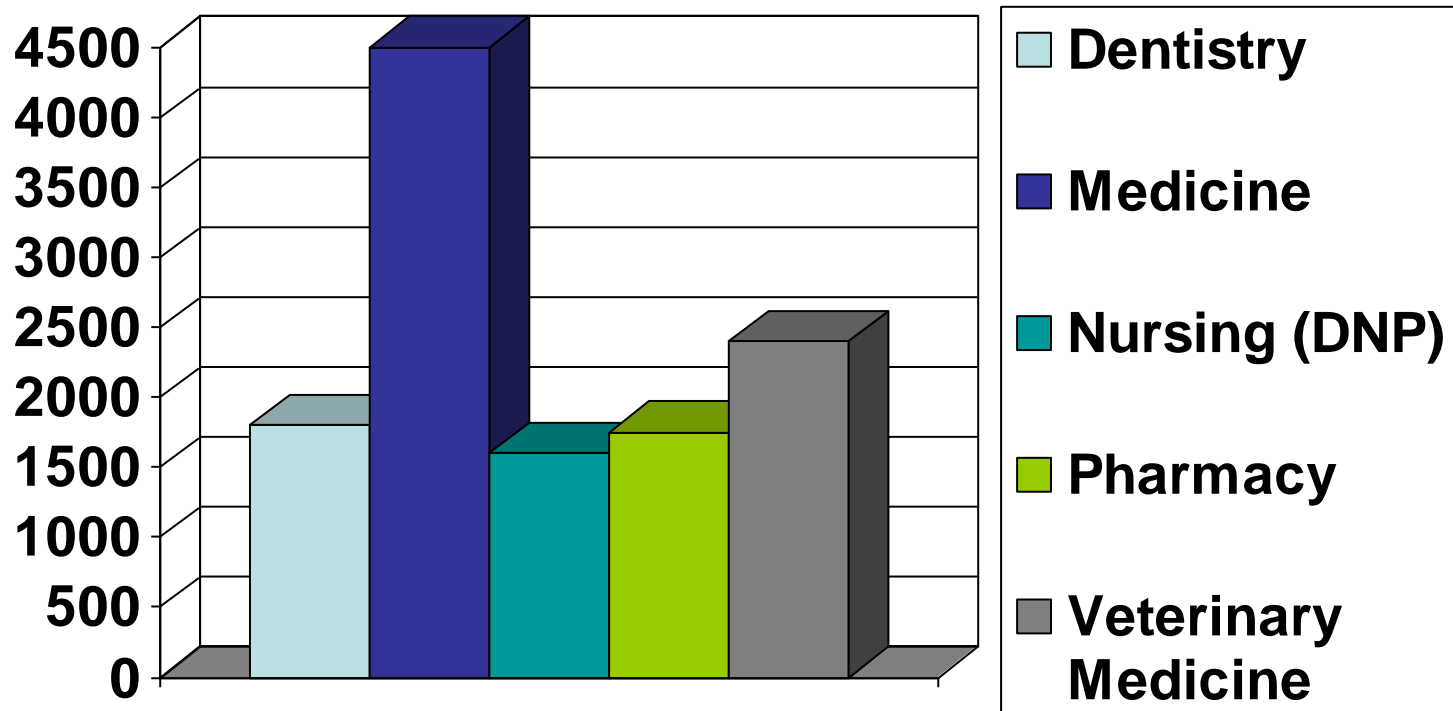
Pharmacy (PharmD)



Dentistry (D.D.S.)



Required Clinical Hours per Student



Enrollments in Health Professions Programs

	2009	2013
School of Dentistry	465	477
Medical School	942	969
School of Nursing	620	849
College of Pharmacy	431	429
School of Public Health	510	577
College of Veterinary Medicine	362	399



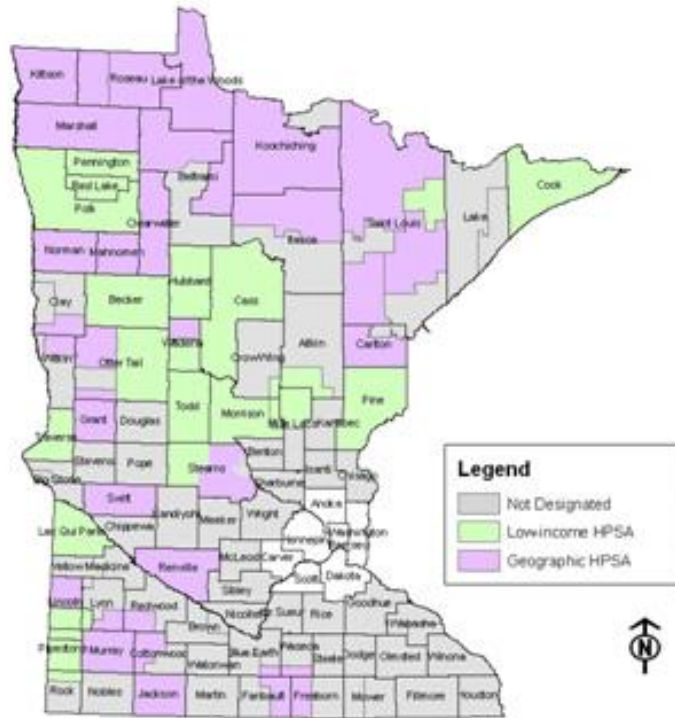
Average Student Loans by Degree 2013

Degree	# of Graduates	% w / Loans	Average Loans
Doctor of Dental Surgery (DDS)	107	91%	\$206,134
Medical Doctor (MD)	220	91%	\$162,430
Doctor of Pharmacy (PharmD)	168	90%	\$138,949
Doctor of Nursing Practice (DNP)	109	74%	\$ 68,104
Master of Nursing (MN)	62	91%	\$ 45,410
Bachelor of Science in Dental Hygiene (BS)	19	63%	\$ 24,266
Bachelor of Science in Nursing (BSN)	123	72%	\$ 33,161



Health Professional Shortage Area-HPSA

Health Professional Shortage Areas
Primary Care

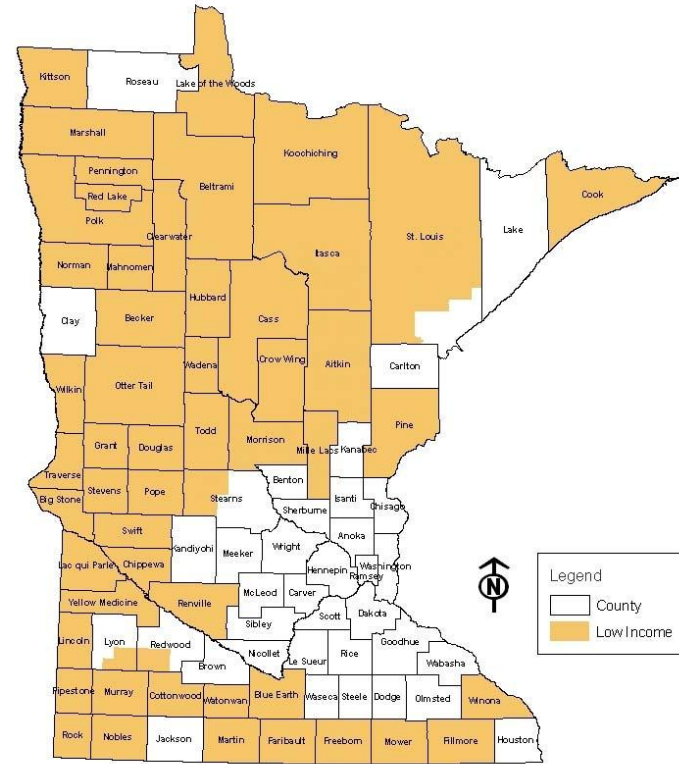


Source: Minnesota Department of Health, Office of Rural Health and Primary Care



PL 10/24/09/09_011

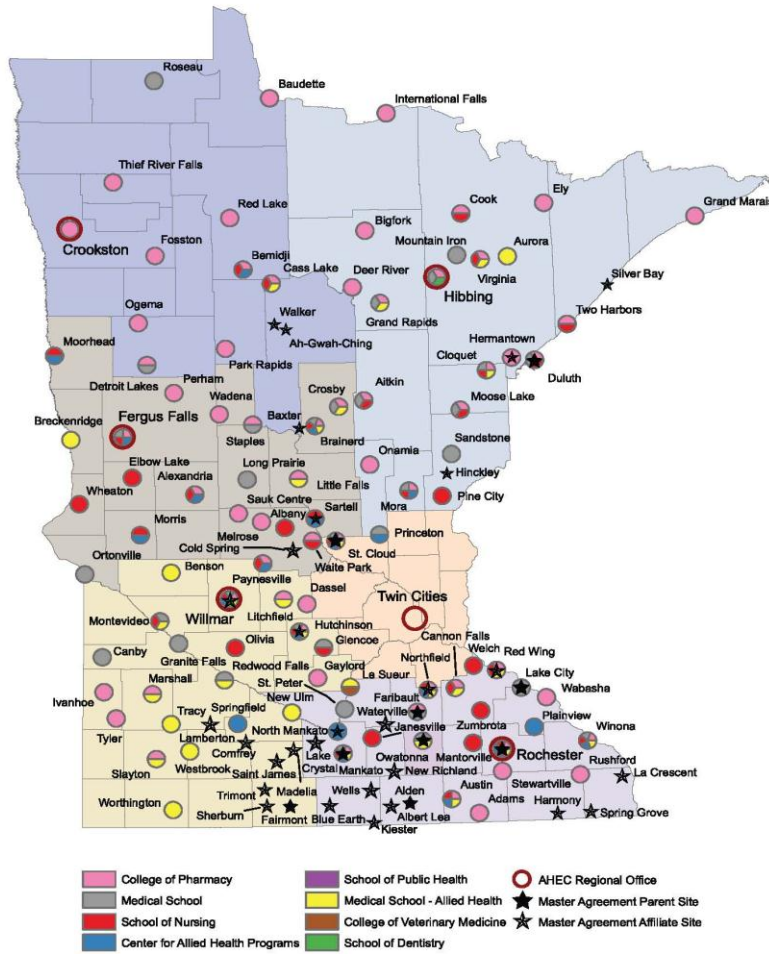
Health Professional Shortage Areas
Low Income Dental HPSA Designations



Data Source:
Minnesota Department of Health
Office of Rural Health and Primary Care
State DD HPSA Nov 2011.mxd



University of Minnesota Academic Health Center Affiliation Agreements



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
 - Pharmacy in Duluth in early 2000's
 - Nursing and Allied Health in Rochester in early 2000's
 - Nursing with Veterans Administration partnership
 - Doctor of Nursing Practice - 70% expansion 2014-2024
- Developed pipelines
 - Minnesota Future Doctors
 - Rural Physician Associate Program (RPAP)
 - Health Careers Centers
 - UM Morris and UM Duluth MN collaborative Nursing programming



What We Have Done

- Developed new degree programs
 - Doctor of Nursing Practice and other Advanced Nursing programs
 - Dental Therapy
- Revamping our curriculum
 - Team-based care and interprofessional education
 - Greater emphasis on simulation
 - Greater emphasis on prevention and wellness



Selected Outcomes for Minnesota

Nationally ranked in primary care

- *US News and World Report* ranks the Medical School 6th in primary care; 4th in rural medical; and 11th in family medicine
- Our primary care residency slots fill—including Family Medicine for the past 2 years
- Half of our medical students and residents choose primary care
- Our Nursing, Pharmacy, Dentistry, Public Health, Veterinary Medicine and Allied Health programs supply most of the Minnesota workforce in their fields
- Our Doctor of Nursing Practice program is 3rd largest in the country.
- National Center for Interprofessional Practice and Education



AHC HEALTH RESEARCH



The Range of Health Research

- Basic
- Translational
- Clinical
- Population
- Patient outcomes and health care delivery
- Policy



What Characterizes Health Research?

- Highly competitive funding environment
- Peer reviewed
- Highly regulated
- Expensive: Faculty, staff, facilities and equipment
- Long timeline from initial idea to proof to adoption in practice
- Rigorous scientific method required for proof
- Many dead ends and failures



AHC-Wide Health Research Priorities

Programmatic Areas	Research Infrastructure
<ul style="list-style-type: none">• Cancer	<ul style="list-style-type: none">• Biomedical/Health Informatics
<ul style="list-style-type: none">• Neurological disease	<ul style="list-style-type: none">• Patient outcomes research and projects
<ul style="list-style-type: none">• Cardiovascular	<ul style="list-style-type: none">• Global health outcomes
<ul style="list-style-type: none">• Diabetes/Obesity	<ul style="list-style-type: none">• Clinical genomics and proteomics
<ul style="list-style-type: none">• Infectious disease	<ul style="list-style-type: none">• Drug discovery/ development
<ul style="list-style-type: none">• Pediatrics	

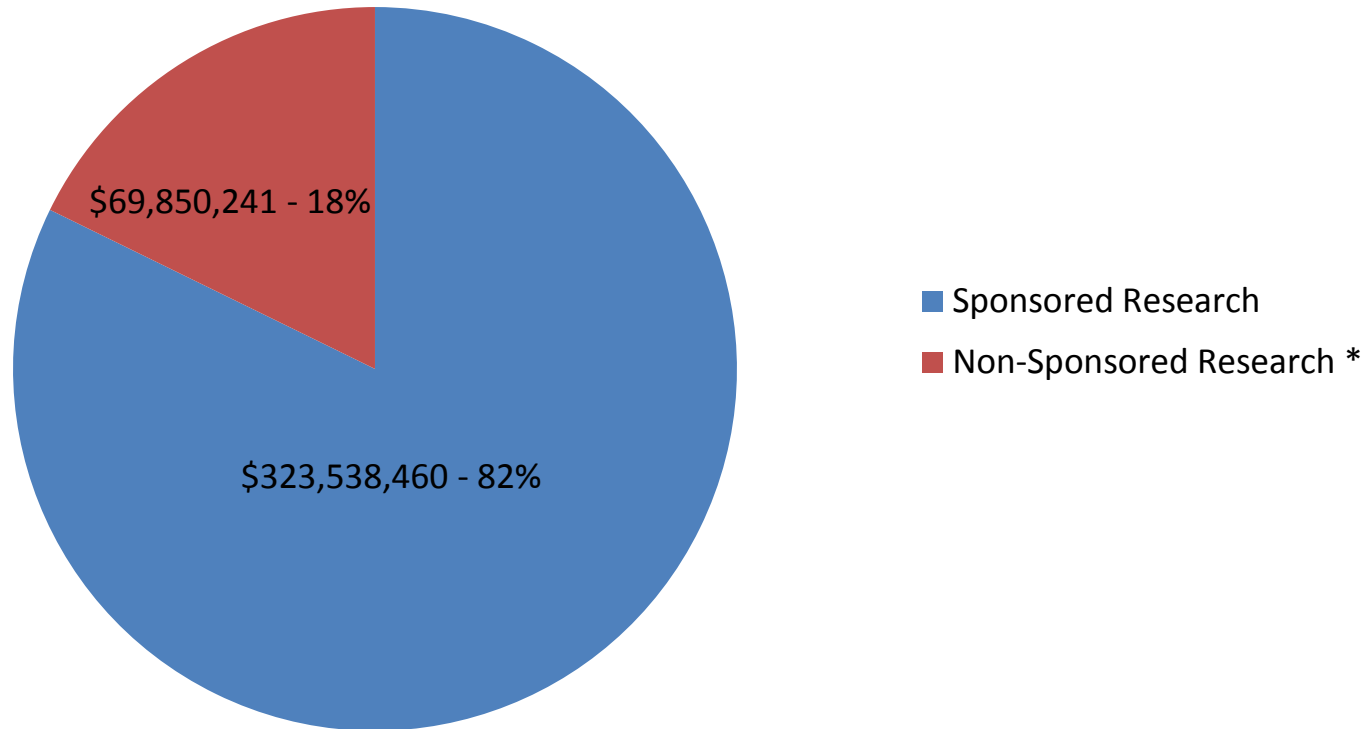


How is Health Research Funded at the University?

- Competitive grants and contracts
- Indirect cost recovery on grants and contracts
- State appropriations
- Clinical revenues
- Gifts and endowments
- Business and industry contracts
- Royalties and licensing fees



Total AHC Research (Sponsored and Non-Sponsored) for FY13 - \$393.4M



* Note: Non-sponsored research is typically funded by gifts, endowment earnings, clinical revenues, and state appropriations. Non-sponsored research is characterized as "Departmental Research" in the University accounting system.

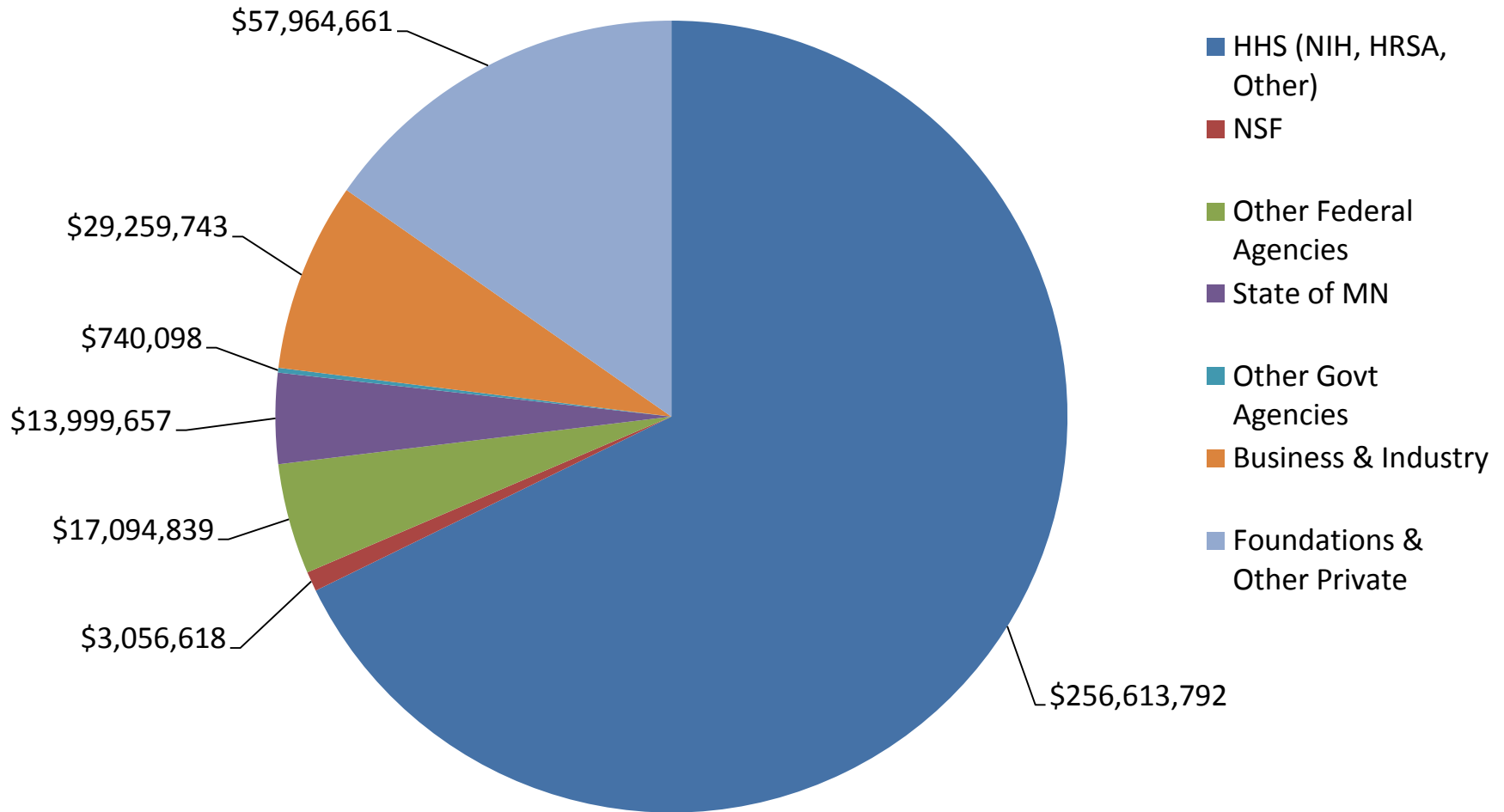


AHC Sponsored Research Expenditures FY 2013 in thousands

School or Unit	Expenditure	% of University Total
Medical School	\$188,383	26.0%
School of Public Health	\$86,495	12.0%
AHC Centers	\$62,806	9.0%
College of Veterinary Medicine	\$14,868	2.0%
College of Pharmacy	\$13,870	2.0%
School of Dentistry	\$8,513	1.0%
School of Nursing	<u>\$3,863</u>	<u>0.5%</u>
AHC Total	\$378,798	52.5%
University Total	\$721,590	



Sponsors of Health Research and Training in the AHC FY13 - \$378.7M



Changing Research Environment: Overall Decrease in NIH Funding

- Adjusted for inflation, the NIH budget decreased by \$6 billion (22.4 %) from FY 2003 to FY 2013
- The number of competing research project grants has also fallen sharply
 - FY 2003: NIH awarded 10,393 grants
 - FY 2013: NIH made 8,283 grants (20.3 % decrease)
- Awards for investigator initiated grants suffered even greater losses
 - Grants fell by 2,528 (34 %) between 2003 and 2013



What Are Our NIH Research Rankings?

Ranking		School	Total NIH Awards
14/46	(30 th percentile)	School of Dentistry	\$5,946,968
30/144	(21 st percentile)	Medical School	\$145,455,318
15/75	(20 th percentile)	School of Nursing	\$2,587,683
14/72	(19 th percentile)	School of Pharmacy	\$5,554,902
5/58	(9 th percentile)	School of Public Health	\$48,901,542
13/28	(46 th percentile)	College of Veterinary Medicine	\$3,875,705
18/2,336	(Top 1 percent)	University of Minnesota	\$255,242,614

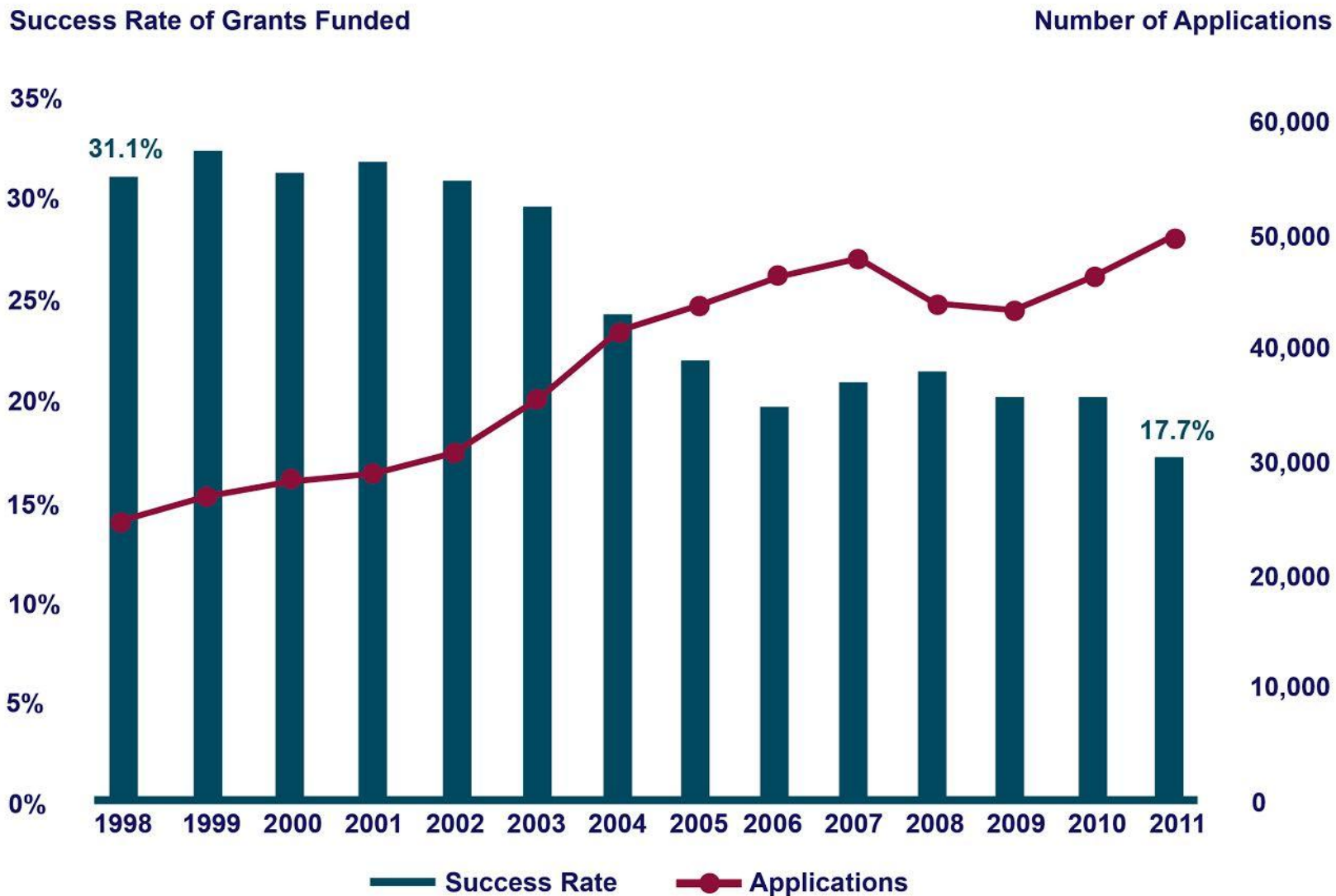
All data from the Blue Ridge Institute for Medical Research



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Number of NIH Research Applications and Funding Success Rates (1998 - 2011)



Trends in Health Research

- Interdisciplinary
- Team-based
- Multi-institutional
- Global
- Informatics and big data
- Genomics and personalized medicine
- Greater emphasis on reducing time from research to adoption



What are Minnesota's Strengths in this Changing Research World?

- One of the most comprehensive AHC's in the nation
- History of strong interdisciplinary research
- Programs and centers of national strength
- Investments in research facilities: Bio Discovery District
- Investments in research infrastructure:
 - Global Health
 - Clinical and Translational Sciences Institute
 - Genomics
 - Informatics
 - Center for Magnetic Resonance Research



PATIENT CARE



Patient Care is Critical to Academic Health Center Schools

- Providing top quality care to Minnesotans
- Education and training of health professional students
- Clinical research and translation to practice
- Recruiting and retaining top faculty
- Financing the academic mission: half of the AHC's budget comes from seeing patients



U of M Patient Care in Minnesota

- University of Minnesota Health: statewide resource for patient care: primary to specialized care
- Over 1 million patient visits in our clinics and hospitals
- University of Minnesota Medical Center (UMMC) part of Fairview Health Services, is the primary teaching hospital
- University of Minnesota Physicians (UMP) is the second largest integrated practice in Minnesota



Clinical Practices in all AHC Schools

School of Dentistry

- Student and faculty clinics see more than 100,000 patients annually
- Outreach partnerships with clinics in the Twin Cities and across the state

School of Nursing

- Opening nurse-managed primary care clinic early 2015
- Faculty practice in: Psych-mental health, Primary care, Women's health, Pediatric care



Clinical Practices in all AHC Schools

College of Pharmacy

- State of the art medication therapy management program in partnership with six health care systems across the state
- Manages a medication therapy management network serving 35,000 University of Minnesota employees and their families



Clinical Practices in all AHC Schools

Community University Health Care Center

- Provides medical, dental and mental health services in Phillips Neighborhood of Minneapolis
- Serves very low income and recent immigrant patients
- More than 63,000 patient visits annually
- Services provided in seven languages
- Major training site with more than 225 AHC students and residents annually



Clinical Practices in all AHC Schools

College of Veterinary medicine

- One of the largest and most advanced veterinary hospitals in the world
- Sees more than 35,000 patients annually
- Full service referral center for small and large animals
- Specialized equine clinic



National Trends

- Hospitals, clinics, and health systems need to reduce costs to compete in the market
- Closer integration of education, research and care
- Closer integration of governance, organizational and administrative structure to align strategy and operations
- Faster track to move research discoveries to practice
- New models of interprofessional, team-based education, training and practice
- Focus on wellness and population health



Future of Patient Care at University of Minnesota

- The future is challenging
 - Reduced reimbursement rates
 - Intense market competition
 - High demand
- University is well positioned for future
 - Strong history of innovation
 - Interprofessional team-based care
- All AHC schools are planning to grow their clinical practices and are examining opportunities to increase collaboration and integrate practices across schools



Future of Patient Care at University of Minnesota

- Focused on triple aim
 - Improved access
 - Improved patient quality and experience
 - Reduced cost
- UM Health will open new Ambulatory Care Clinic in January 2016
 - Replaces outdated, over capacity clinics
 - Improved service, longer hours, new models of care



Our Commitment

- As state's land grant University, the U of M plays an essential role in the health of Minnesota:
 - Educating/training the state's health professional workforce
 - Discovering new treatments, cures, ways to promote health
 - Helping shape health policy
 - Developing and piloting new models of care
 - Providing top quality health care services to the state
- We are committed to continuing that work and meeting the challenges ahead in the changing world of health care, an aging population, and health disparities



Governor's Committee on the Medical School



Governor's Committee

- Medical Discovery Teams
 - 100 new tenure-track faculty
 - Restoring Medical School to 1990 levels
 - Target for top 20 ranking in NIH funding in 5 years
- Research Infrastructure Investment
 - Bio-Specimen Depository
 - Clinical Data Repository



Governor's Committee

- Workforce issues
 - Expand RPAP and Metro PAP
 - Duluth Rural Scholars Program and Clinical Facility
 - Expand pipeline programs
 - Scholarships for underrepresented populations
- Facilities
 - Health Science/Clinical Research Building
 - Funds for planning a new Health Sciences Building in Duluth



2015 Legislative Request: Healthy Minnesota



Legislative Request: Healthy Minnesota

Health Professional Workforce

- Statewide network of interdisciplinary primary care teaching clinics
- Expand education/training programs to address shortages:
 - Dentistry
 - Mental health
 - Geriatrics
- Encourage students from underrepresented communities to pursue health professional careers
- Increase scholarships and loan forgiveness programs for students who choose to work in underserved communities



Legislative Request: Healthy Minnesota

- Investments in research and new models for care and health promotion
 - Research focus on cancer, heart disease, stroke, diabetes, obesity, and arthritis
 - Creation of a Minnesota Electronic Health Library



MeHL: Minnesota Electronic Health Library

<http://hsl.lib.umn.edu/about/mehl>



Minnesota Electronic Health Library

Evidence-Based Care

24x7

ACCESS TO
EVIDENCE-BASED
CLINICAL RESOURCES



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Minnesota Electronic Health Library

Informed Patients

1 in 3

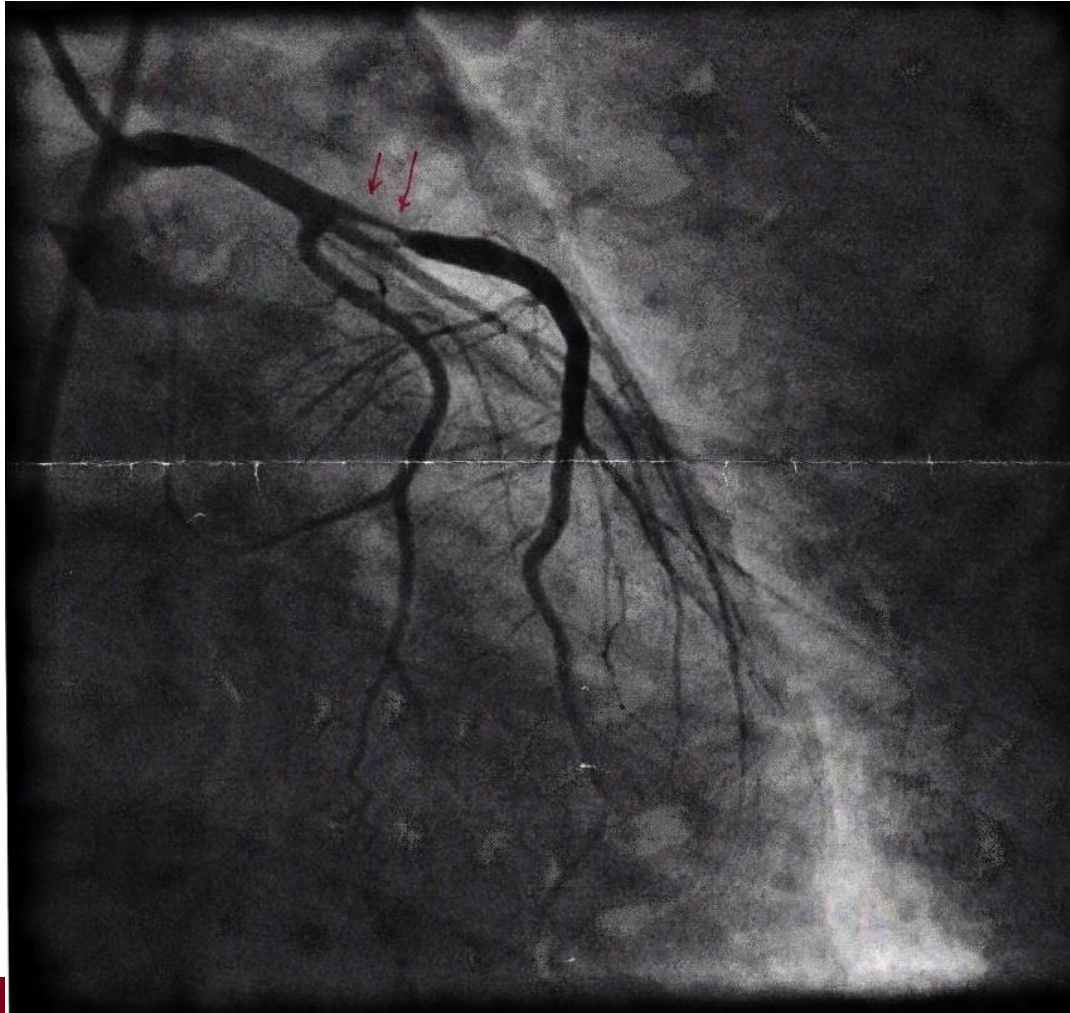
U.S ADULTS GO ONLINE
TO DIAGNOSE A
MEDICAL CONDITION

Source: Pew



Minnesota Electronic Health Library

Informed Patients



Workforce Development

301

HEALTH PROFESSIONAL
SHORTAGE AREAS

Source: MN Dept of Health



Decreased Health Disparities

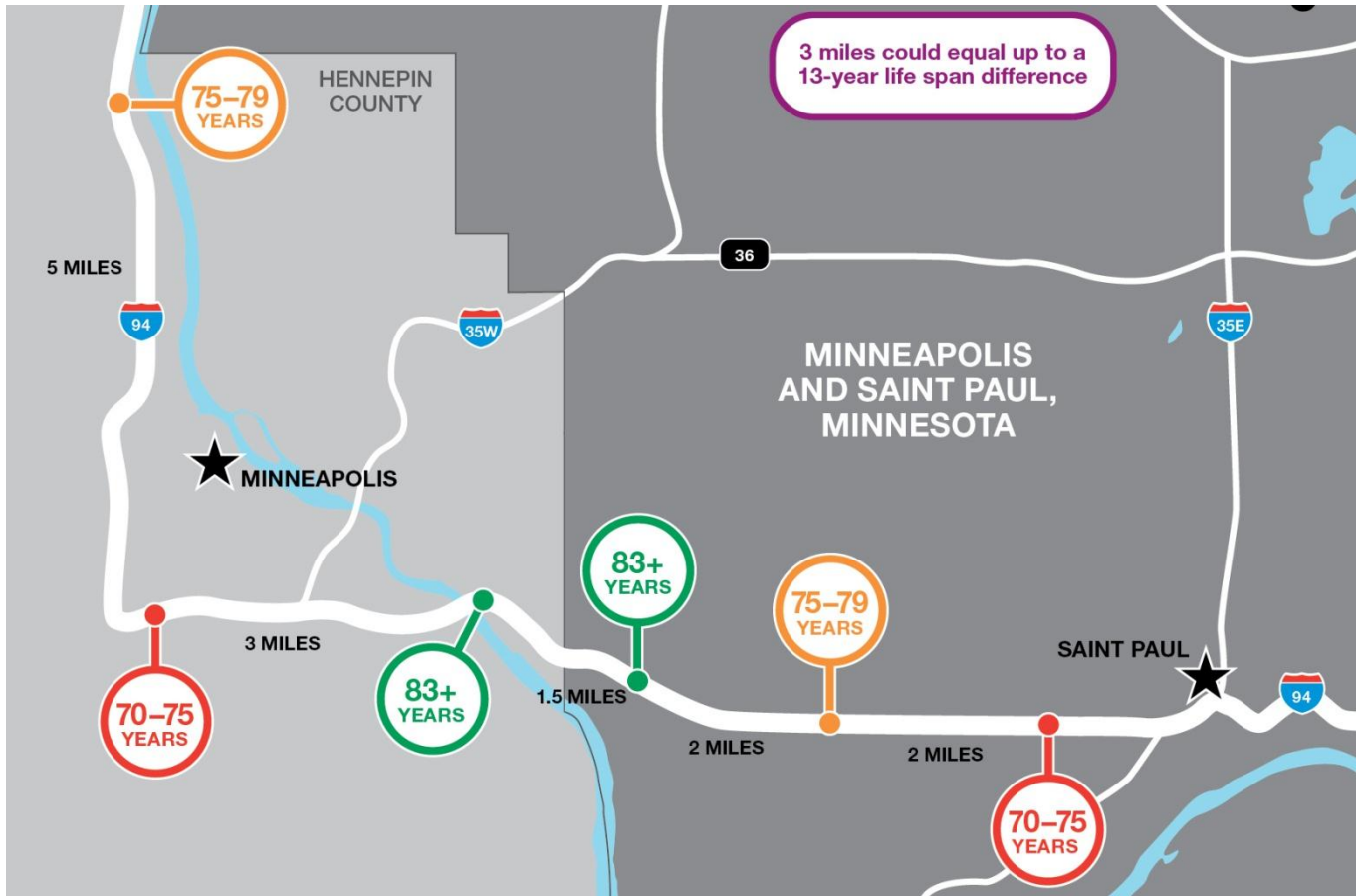
13 years

JUST 3 MILES CAN MEAN
A 13 YEAR DIFFERENCE
IN LIFE EXPECTANCY

Source: RWJF City Maps



Minnesota Electronic Health Library Workforce Development



Minnesota Electronic Health Library

Support a Healthy Minnesota



<http://hsl.lib.umn.edu/about/mehl>



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