

# **Minnesota's Health Workforce: Role of the Academic Health Center**

A Presentation to the Board of Regents  
Educational Policy and Planning Committee  
May 12, 2005

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## Health Workforce: AHC Role

- What is the AHC and what does it do?
- What do we understand the health workforce needs to be?
- What is the AHC doing to meet the health workforce needs?
- How do the efforts to meet the health workforce needs fit into the University's strategic positioning effort?

## **AHC Mission**

**To prepare the next generation of health professionals who can improve the health of our families and communities, discover and deliver new treatments and cures, and enhance the economic vitality of our health industries.**

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Our mission is to prepare the next generation of health professionals who can improve the health of our families and communities, discover and deliver new treatments and cures, and enhance the economic vitality of our health industries.

## AHC Strategic Commitment

- **Meet the health needs of the people of Minnesota**
- **Respond to the health workforce needs of the state**
- **Sustain excellence in health research**
- **Provide health services to the people of Minnesota**
- **Form more effective community partnerships that support the mission**
- **Be an effective part of the University of Minnesota.**

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To do this we need to:

1. Continue to train the health professionals we are now.
2. Increase student enrollments in the areas of need.
3. Increase the diversity of our workforce.
4. Develop new models of care delivery.
5. Recruit more faculty.
6. Work with state agencies and with and in communities.
7. Utilize more qualified community practitioners as teaching faculty.

## AHC Schools and Programs

- **6 health professional schools**
  - Dentistry, Medicine, Nursing, Pharmacy, Public Health, Veterinary Medicine
- **5 allied health programs**
  - Medical School: Medical Technology, Mortuary Science, Occupational Technology, Physical Therapy
  - School of Dentistry: Dental Hygiene
- **11 interprofessional centers, including:**
  - NCI Comprehensive Cancer Center; Center for Magnetic Resonance Research; Center for Bioethics, Center for Genomics, Center for Drug Design, Center for Pain Research, Center of Excellence in Critical Care

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The AHC is home to six professional schools: Medicine, Nursing, Pharmacy, Dentistry, Public Health, and Veterinary Medicine.

In addition, we benefit from the interdisciplinary work taking place in our centers and institutes such as the NCI Comprehensive Cancer Center; the Center for MRI Research; Center for Bioethics, and the Center for Spirituality & Healing.

## AHC Characteristics

- 6,400 students in 62 degree programs
- 1,400 faculty, 3,000 professional staff
- Educate/train 70% of Minnesota's physicians, advanced practice/PhD nurses, dentists, pharmacists, veterinarians and public health practitioners
- Educate in 400+ sites throughout the state

## AHC Characteristics

- Fairview Health System -- primary education partner
- Relationships with all health systems in Minnesota
- Hennepin County Medical Center, Regions, Veterans Affairs Medical Center, and Children's Hospital as major affiliates
- 460,000+ patient clinic visits/year
- \$300 million in health research, with associated intellectual property and technology commercialization

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## Health Professional Workforce Trends

- Current and impending workforce shortages across the state
- Mass retirements within next 10 years
- Most acute in Greater Minnesota
- A large portion of Minnesota: federally designated medical and dental underserved areas
- Growing health disparities and access challenges
- Educational pipeline issues: need to increase diversity, achievement gaps, declining interest in health careers

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Stories from my travels around the state:

Nursing shortage in acute settings is keeping hospital floors closed, operating rooms closed and is closing emergency rooms.

Nursing shortage in non-acute settings is limiting the delivery of chronic care and long term care.

Hospitals that cannot recruit pharmacists; patients that have to drive long distances to get prescriptions filled.

Getting to see a dentist in greater Mn is a real problem, particularly if you are on medicaid. We are taking out dental MASH unit out to communities.

Very tough to staff medical technologists and other technicians who run x-ray machines, etc.

Approximately 55% of physicians, pharmacists and dentists are over the age of 55

Achievement gap; declining interest in health professions



## Health Professional Workforce Shortages: A Major Problem in Minnesota

- In a 2002 study published in the *Journal of the American Pharmaceutical Association*, Minnesota was declared the number one state of pharmacist need.
- Minnesota: Leading State Experiencing Negative Percentage Change in Dentist to Population Ratio (American Dental Association, 2003)
- Given retirements and trends, 1359 *additional* physicians needed by 2020 to keep access at 2000 level. (Minnesota Medicine, September 2004)
- An MDH quote regarding next five years in state
- “right-sizing” the nursing workforce is challenging

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### Stories from my travels around the state:

In the last two years some “shortages/demands” have alleviated because of economy. Demographic time bomb is still with us.

The pharmacy shortage has been well documented in several workforce studies 2000 – 2002. Over 330 vacancies in last study in 2002. Over 50% of pharmacists in the state are over 45. Rural Hospitals that cannot recruit pharmacists; patients that have to drive long distances to get prescriptions filled.

Average age of dentist in the state’s 2002 study was 49 -- ~60% of dentists plan to retire in 15 – 20 years. Access to dental care is a serious issue especially for Medicaid population – in one visit to Bemidji, it was reported that 1000s of children had to be transported out of the area to receive dental care. MASH unit and negotiating a second underserved clinic in the Willmar area. Dean Lloyd would like two more in new AHEC regions.

In the recent past, nursing shortage in acute settings is keeping hospital floors closed, operating rooms closed and is closing emergency rooms. Nursing shortage in non-acute settings is limiting the delivery of chronic care and long term care. MnSCU system has produced associate degree nurses – filling the gap, but we hear reports that many cannot find jobs because there is a need for BSNs. Joanne Disch is leading a statewide discussion about coordinating nursing education. Faculty shortage is severe – average age is 51.

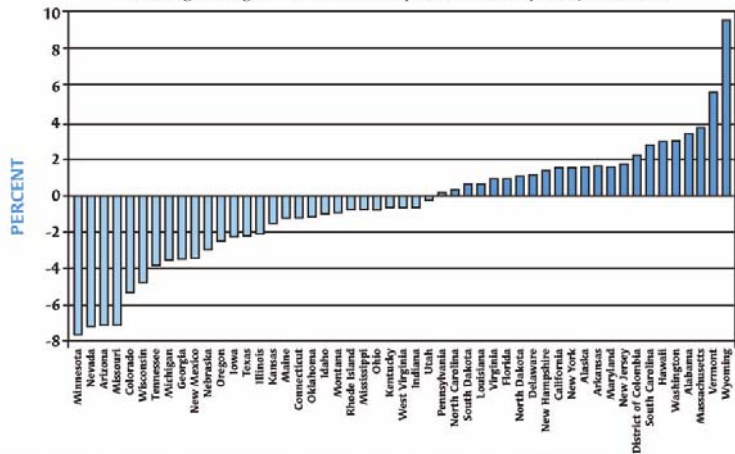
25% of MN specialist physicians are over the age of 55; 20%, primary care; 31% of rural specialty care. We know that 50% of the graduates of Mn two medical schools practice in Minnesota.

Will get public health information

Very tough to staff medical technologists and other technicians who run x-ray machines, etc.

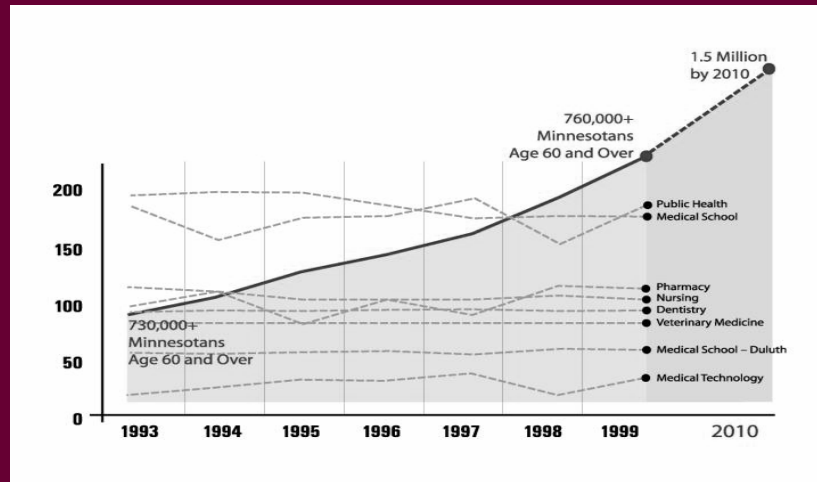
FIGURE 3.6

Percentage Change in the Dentist-to-Population Ratios by State, 1993-1999



Source: ADA, *Distribution of Dentists*; and U.S. Department of Commerce, Bureau of the Census, 1990 and 2000 Census.

## Aging vs. Graduation Rates



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Aging is a surrogate for chronic disease: hypertension, diabetes, arthritis, osteoporosis.

Chronic disease means more clinic visits and more prescriptions to fill.

OUR PROGRAMS ARE UNABLE TO INCREASE THEIR OUTPUT. WE ARE AT CAPACITY!!!

## Approaching the Workforce Shortage

- Increasing student enrollment and class size
- Producing “more” not sole solution
- Workforce redesign
- Greater Minnesota Strategy
- Creating sustainable community partnership models for education/training
- Work with the U of MN undergraduate programs
- AHC Diversity Council
- Providing leadership with the health community

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## Increasing Student Enrollment and Class Size

- Health Careers Center and K – 12 focus
- College of Pharmacy branch campus at UMD
- MnSCU, Mayo, UCR program in Nursing at Rochester
- Doubling student enrollment in SPH
- Increased class size in Dentistry and Veterinary Medicine

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## Greater Minnesota Strategy

- Recruiting, educating and training in Greater Minnesota
  - Rural Physician Associate Program
  - Area Health Education Centers
    - Northeast Minnesota
    - Southwest Minnesota
    - Expansion to West Central and Northwest Minnesota
  - Pipeline partnership with Iron Range Regional Resources
  - Sponsorship of Health Occupation Students of America Chapters
  - Hibbing Dental Clinic & new clinic in SW Minnesota
  - Minnesota Extension Liaison
  - Distance education in nursing, public health, pharmacy
  - Discussions with MnSCU Chancellor's Office

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Important that AHC students have exposure to rural practice to consider it. RPAP a very successful 30+ year program. AHEC working with AHC schools and other U of MN programs to promote rural practice.

The NE AHEC was recently awarded a \$100 K grant specifically to promote a pipeline strategy for our health professions – a different type of education that “staying” at home for your education”. Sponsoring HOSA chapters that are focused on “high-end” professions beyond technical fields – takes a very different academic strategy.

School of Dentistry is committed to developing 30 community-based sites so that each student spends two months in clinics outside of the U. Some will be similar to the Hibbing model that serves underserved populations.

Hiring a liaison with Extension (based in CHE Family Social Science) to coordinate programming between AHC and Extension: examples, leading change conference; meth lab programming

We believe that we need a pipeline strategy with MnSCU, especially for diversity. MnSCU needs to upgrade messages to students about becoming a physician, dentist, etc. -- rather than the career ladder approach.

## Creating Sustainable Community Partnership Models

- Interscholastic Programs
  - CHIP/Clarion
  - Interprofessional models of care delivery
  - Patient-Centered Teamwork courses
- AHC-Community Partnerships
  - Walker-Methodist Transitional Care Unit
  - Rural interprofessional site development with RPAP
  - NorthPoint Health and Wellness Center (formerly Pilot City)

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## Providing Leadership to the Health Community

- Work with regions to address their health delivery challenges.
  - St Cloud State Nursing Program
  - Northwest Minnesota
  - New MN AHEC program
- Workshops with communities to solve health workforce problems
- Participate in State-Wide Efforts
  - e-health
  - Biosciences
  - Economic Development
  - Vital Workforce conference and communications

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## Providing Leadership to the Health Community

- Finding new models for Allied Health
  - 5 of 45 allied health disciplines in AHC
  - Occupational and Medical Technology current models:
    - not financially sustainable
    - will not meet future workforce needs
  - State Leadership Model Development Group
    - MnSCU, HESO, Health Systems, Mayo, MOTO, MSCLS
    - New model development

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## Providing Leadership to the Health Community

- Produce a new kind of health professional:
  - People centered
  - Systems oriented
  - Technology competent with knowledge management
  - Cost-effective
  - Civically engaged
  - Life-long learners
  - Skills to lead health and health care where it needs to go

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## Challenges in Meeting Health Workforce Needs

- Creating career awareness and opportunity
- Academic excellence not career ladders
- Financing the paradigm
  - Student tuition and student debt
  - Graduate education
  - Research infrastructure
- Matching career choices with care delivery system needs

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## **Challenges in Meeting Health Workforce Needs**

- Lag between need recognition & production
- Faculty and facilities
  - Clinical science faculty shortages
  - Clinical facilities in a competitive market

## Fitting with University's Strategic Positioning

- Interscholastic education and administrative efficiencies
- Financing health professional education
- Competing for Big Science
- Excellence in clinical sciences
- Creating a diverse workforce and working environment
- Enhancing productivity in biology

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