

# **Health Workforce Shortage Study Report**

*Report to the Minnesota Legislature 2009*

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**Minnesota Department of Health**

**January 15, 2009**



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## **Executive Summary**

In May 2008, the Minnesota Legislature passed health reform legislation (Minnesota Sessions Laws 2008, Chapter 358, Article 2, Section 5) that requires “the commissioner of health, in consultation with the health licensing boards and professional associations, shall study changes necessary in health professional licensure and regulation to ensure full utilization of advanced practice registered nurses, physician assistants, and other licensed health care professionals in the health care home and primary care delivery system. The commissioner shall make recommendations to the legislature by January 15, 2009.”

In order to meet the objectives set forth in legislation, the commissioner of Health convened a Health Workforce Shortage Study Work Group in September 2008 comprising representatives of Minnesota’s physicians, advanced practice registered nurse, physician assistant and pharmacist professional associations and the related licensing boards – Medical Practice, Nursing and Pharmacy – to gather input on in the health care home and primary care delivery system. The work group met four times from September through December 2008.

### **Minnesota’s Primary Care Workforce**

Minnesota has a primary health care workforce shortage. A skilled health care workforce is necessary for both a healthy community and a strong local economy. An adequate supply of health care professionals is necessary to make care accessible. Thirty-seven percent of Minnesota’s rural population lives in a federally designated Health Professional Shortage Area (HPSA) or a Medically Underserved Area (MUA), factored upon physician-to-population ratio, poverty, and geographic distance to care. Parts of 30 Minnesota counties – mostly in the western and northern parts of the state – are designated as HPSAs. Forty-six of the most rural counties have 13 percent of the state’s population but only 5 percent of the state’s practicing physicians.

Age and geographic location are two important factors contributing to the primary health care workforce challenges in Minnesota. A large share of the primary health care workforce is near retirement, and the health care workforce is disproportionately located in urban areas. In addition, the number of medical students choosing primary care as their specialty is dwindling

Rural care is primary care. Approximately 52 percent of Minnesota’s 13,700 active physicians practice in a primary care specialty statewide, but that number jumps to 78 percent in rural areas. Only 8 percent of the state’s physicians practice in rural counties, but they represent 17 percent of all family medicine physicians.

Simply training enough primary care providers to meet Minnesota’s health care workforce needs is not a likely or realistic solution. Alternative care models that utilize all members of the health care team will not only increase access to primary care services, they will provide efficient and effective quality of care.

## Health Care Homes and Primary Care

The 2008 health reform legislation promotes the use of health care homes, requires the development and implementation of standards for certification by July 1, 2009, and establishes payment for care coordination from public and private payers for certified providers. It further requires that clinics pursuing certification as a health care home “*emphasize, enhance and encourage the use of primary care, and include use of primary care physicians, advanced practice nurses, and physician assistants as personal clinicians.*”

The workforce challenge for health care homes is to recruit appropriately trained providers across several professions, and combine them in the workplace in ways that improve care and control costs. This care model will allow all qualified primary care professionals to practice at the top of their education and capacity, use each profession for the tasks which they are uniquely qualified to perform and reduce tasks that do not make the best use of each professional on the team.

As a foundation for consideration of professional contributions to the delivery of primary care, the Health Workforce Shortage Study Work Group jointly identified a set of competencies and skills considered a requirement for the practice of primary care.

### Health Workforce Shortage Study Work Group Primary Care Core Competencies

#### Ability to:

- Conduct physical exams – simple and comprehensive
- Order labs and other diagnostic tests, interpret results
- Diagnose complex and multiple issues
- Refer and consult – integrate and coordinate specialty care
- Treat and/or prescribe, including knowing what is not indicated
- Use/integrate evidence-based guidelines into care
- Consider longitudinal care and make adjustments as appropriate
- Monitor and manage medication
- Advise patient on primary prevention/health promotion
- Assess patient’s psychosocial needs, lifestyle, and values
- Relate/communicate with patients/families.

All identified competencies and skills are characteristic of Minnesota’s primary care professionals – physicians, advanced practice registered nurses, and physician assistants. Pharmacists, while limited in providing diagnoses or prescribing treatment, provide an integral

primary care role in monitoring and managing patient medications. Other Minnesota licensed professionals, such as licensed psychologists, social workers and physical or occupational therapists may also play a supporting role in the collaborative practice of primary care.

## **Minnesota's Primary Care Licensing and Regulation Environment**

Of the four professions covered in this study, physician scope of practice is the broadest, and encompasses all aspects of patient care, diagnoses and treatment. Advanced practice registered nurses, physician assistants and pharmacists have varying restrictions on their ability to deliver primary care.

### **Advanced practice registered nurses (APRN)**

An APRN is an individual licensed as a registered nurse by the Minnesota Board of Nursing and certified as a nurse practitioner (NP), clinical nurse specialist (CNS), certified registered nurse anesthetist (CRNA) or nurse-midwife (CNM). Their scope of practice includes:

- Functioning as a direct care provider, case manager, consultant, educator and researcher
- Accepting referrals from, consulting with, cooperating with, or referring to all other types of health care providers, including but not limited to physicians, chiropractors, podiatrists, and dentists
- Practicing within a health care system that provides for consultation, collaborative management and referral as indicated by the health status of the patient.

*Minnesota Statutes*, section 148.235 establishes conditions under which APRNs may prescribe or administer drugs. CNMs may independently prescribe and administer drugs and therapeutic devices. NPs, CRNAs and CNSs who meet minimum pharmacology education requirements must have a written prescribing agreement with a physician based on standards established by the Minnesota Nurses Association (MNA) and the Minnesota Medical Association (MMA). CNSs in psychiatric and mental health nursing must have a written prescribing agreement with a psychiatrist or other physician based on standards established by the MNA and the Minnesota Psychiatric Association

### **Physician assistants (PA)**

Minnesota PAs are registered through the Minnesota Board of Medical Practice and may practice medicine only with physician supervision as delegated, within the PAs training and education, and customary to the practice area of the supervising physician. A physician may not supervise more than two full-time equivalent PAs simultaneously.

### **Pharmacists**

Minnesota law defines the practice of pharmacy to include managing drug therapy and modifying drug therapy according to a written protocol between the pharmacist and a licensed practitioner, defined as a dentist, optometrist, physician, podiatrist or veterinarian. However, pharmacists are not currently allowed to sign legally valid prescriptions while working under protocol or under a medication management agreement with a licensed practitioner.

## Barriers to Effective Primary Care Practice

The Health Workforce Shortage Study Work Group considered the core skills and competencies that define primary care delivery, and identified a number of barriers that interfere with effective delivery of primary care and prevent full utilization of primary care physicians, advanced practice registered nurses, physician assistants, and pharmacists practicing collaboratively in a primary care or health care home setting. The barriers identified fall primarily into several categories:

- Supervision, collaboration and management
- Restrictions on care delivery
- Reimbursements and payment
- Institutional
- Cultural.

## Conclusions and Recommendations

The recommendations in this report identify statutory and regulatory changes that would further address Minnesota's health workforce challenges and reform the way primary care is delivered. Recommendations for statutory, regulatory or other changes to promote efficient and effective delivery of primary care should also be viewed as part of a larger strategy to address Minnesota's primary care workforce shortages.

The recommendations do not address all of the professional barriers identified by the work group members. The recommendations put forth in this report are 1) within the scope of enhancing delivery of primary care; and 2) meet considerations of priority, timing and context; and 3) consider the following assumptions:

### Changing Scope of Practice: Assumptions

1. The purpose of regulation – public protection – should have top priority in scope of practice decisions, rather than professional self-interest.
2. Changes in scope of practice are inherent in our current healthcare system.
3. Collaboration between health care providers should be the professional norm.
4. Overlap among professions is necessary.
5. Practice acts should require licensees to demonstrate that they have the requisite training and competence to provide a service.

## **Recommendations**

- 1. Amend Nurse Practice Act to eliminate a written prescribing agreement as a requirement to prescribe drugs and therapeutic devices. (M.S. 148.235).**
- 2. Amend the Minnesota Nurse Practice Act to explicitly require the advanced practice registered nurse to practice within a health system that has a written plan for patient-centered care for interdisciplinary consultation, collaboration and referral as indicated to achieve optimal patient outcomes, as follows:**
  - a. Collaboration and consultation with physicians and other health care providers for purposes of assessment, diagnosis, and treatment based upon the needs, complexities and preferences of the patient and the competence, scope of practice and experience of the advanced practice registered nurse;**
  - b. Referral of patients to another member of the health care team when warranted, including communication of patient need and access to appropriate health records;**
  - c. Designation of hospital(s) or other in-patient facilities where patients requiring admission will be referred; and**
  - d. Designation of physicians and other health care provider(s) with whom the advanced practice registered nurse has a pre-established arrangement to accept the transfer of care if the APRN is without admitting privileges or has transferred care to another provider.**  
(M.S. 148.171)
- 3. Eliminate the limitation on the number of physician assistants a physician may supervise, placing responsibility for this determination upon the supervising physician (M.S. 147A.01, subd. 23).**
- 4. Allow pharmacists to sign legally valid prescriptions pursuant to protocol implemented by practitioners (M.S. 151.37 subd. 2).**
- 5. Permit advanced practice registered nurses and physician assistants to enter into collaborative practice agreements with pharmacists under protocol (M.S. 151.01, subd. 23 and 27).**
- 6. Replace current registration of physician assistants with licensure (M.S. 147A).**
- 7. Ensure that any statutory or regulatory modifications supersede obsolete wording in related statutes and elsewhere to ensure the broadest application, if appropriate.**
- 8. Complete a review of all applicable and related statutes and rules to ensure that they are not in conflict with any changes implemented as a result of these recommendations.**
- 9. Ensure that Minnesota's health care home learning collaboratives are required to address health professional cultural issues, collaborative team roles and team skill-building.**

- 10. Continue an advisory process with health licensing boards, professional associations and higher education to formalize collaboration and encourage interdisciplinary practice among health professionals, examine further policy changes required for effective care delivery, and respond to changes in the health care environment as health care reform moves forward.**

### **Additional Considerations: Federal Regulatory/Medicare, Reimbursement and Institutional Issues**

In addition to the ten Minnesota licensing and regulatory recommendations identified above, the work group advising this process noted that federal regulatory issues, reimbursement inequities and risk-based institutional decisions also contribute to perceived or real barriers or disincentives in making the fullest use of advanced practice professionals in primary care practice. They noted that these additional issues can exist in multiple locations, and include Medicare regulations and reimbursements, state licensing rules, and institutional decisions.

# I. Overview

## Background and Purpose:

In May 2008, the Minnesota Legislature passed health reform legislation (Minnesota Sessions Laws 2008, Chapter 358, Article 2, Section 5) that requires “the commissioner of health, in consultation with the health licensing boards and professional associations, shall study changes necessary in health professional licensure and regulation to ensure full utilization of advanced practice registered nurses, physician assistants, and other licensed health care professionals in the health care home and primary care delivery system. The commissioner shall make recommendations to the legislature by January 15, 2009.”

In order to meet the objectives set forth in legislation, the Commissioner of Health convened a Health Workforce Shortage Study Work Group in September 2008 comprising representatives of Minnesota’s physicians, advanced practice registered nurse, physician assistant, and pharmacist professional associations<sup>1</sup> and the related licensing boards – Medical Practice, Nursing, and Pharmacy – to gather input on in the health care home and primary care delivery system. See Appendix A for a list of work group members and representation.

Other licensed ancillary health professionals, such as licensed psychologists, social workers, and physical and/or occupational therapists, and chiropractors contribute to the delivery of care in a primary care. However, the scope of this study and the focus of the work group was limited to those professionals that could or would be responsible for a patient’s primary care and coordination of auxiliary services.

## Objectives

The objectives of the Health Workforce Shortage Study and the Work Group were to:

- Review current and projected landscape, data and demographics of relevant licensed health professionals.
- Identify primary care and health care home professional competencies and skills and each profession’s contribution to meeting Minnesota’s needs for high quality patient-centered collaborative primary care.
- Identify regulatory, payment, or other gaps or barriers that prevent primary care professionals from practicing at the top of their capacity in delivering accessible, effective, quality, patient-centered care.
- Summarize Minnesota’s current licensing and regulatory environment for each of the identified professions.
- Review health professional licensing and regulatory environments nationally and in other states.

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<sup>1</sup> Minnesota Medical Association, Minnesota Academy of Family Physicians, Minnesota Nurses Association and Minnesota Pharmacists Association

- a. Identify recommendations for legislative, regulatory, reimbursement or related changes that would facilitate a collaborative, patient-centered health care home model of care.
- b. Report to the Minnesota Legislature no later than January 15, 2009.

## **Process**

The work group met four times from September through December 2008. Staff from the Minnesota Department of Health Office of Rural Health and Primary Care along with outside facilitation provided support to work group activities, including but not limited to:

- Facilitating four work group meetings
- Reviewing and summarizing current demographics, workforce trends, licensure, regulatory, and practice environments in Minnesota and nationally for relevant professions
- Reviewing and summarizing health care homes legislation and recommendations developed by previous Minnesota efforts related to collaborative practice in a primary care/health care home setting
- Soliciting input from work group members, professional associations and related licensing boards
- Assisting the work group in developing recommendations to ensure full utilization of registered and advanced practice nurses, physician assistants and pharmacists in the health care home and primary care delivery system.

In December 2009, the work group met to review the draft report and finalize its recommendations to the Commissioner of Health.

## II. Minnesota's Primary Care Workforce Landscape

### Introduction

Minnesota needs more primary health care professionals to meet the demand for services. Apart from basic population growth, several trends are putting pressure on the current health care system to meet patient needs, including:

- A larger senior population will require more care for conditions associated with aging.
- Large numbers of physicians, nurses and other health care professionals are nearing retirement age, requiring aggressive recruitment of providers to offset their departure from the labor force.
- The number of medical students choosing primary care as their specialty decreased.
- The younger population is more ethnically and culturally diverse.
- Changes in health care finance will also affect demand for health care. Should insurance coverage expand, it may increase overall demand for health care services.

If Minnesota does not have enough health care professionals to meet a larger, older, and more ethnically diverse population over the next decade, the quality and cost of care will suffer.

- Patients may have to wait longer for appointments and treatments.
- Patients may have to travel farther to get care, especially in rural or underserved areas.
- Physicians and other care providers may be able to spend less time with each patient, with consequences for patient outcomes.
- Labor shortages may drive up wage levels for high-demand health care occupations, putting cost pressures on hospitals and clinics, insurers and ultimately, consumers.

*Minnesota cannot afford to educate more of the same professionals to do the same work within the same model. We cannot educate ourselves out of this workforce shortage. We have to change the way we deliver care.*

Dr. Frank Cerra  
Senior Vice President  
University of Minnesota  
Academic Health Center

Older patients may present more complex combinations of chronic conditions, increasing demand for some medical specialties. In addition, the care of these older patients may require more coordination of care from physicians, nurses and others with strong primary care skills.

Simply training enough primary care providers to meet Minnesota's health care workforce needs is not a likely or realistic solution. Alternative care models that make better use of existing and emerging professions and occupations are needed. Pressures to improve patient outcomes while controlling costs of health care delivery will force both health care providers and consumers to adapt to new health care delivery models. Hospitals, clinics, long term care facilities and other

health care organizations will have to make creative use of a wide variety of health care professions and occupations to optimize the quality and cost of care.

## **Growing Demand for Health Care Services**

Minnesota's population has increased steadily in the last 20 years, and the population continues to grow older. The fastest growing age group is people in their 50s, followed by those older than 85. By 2020, the over-65 population will grow 53 percent, compared to an increase of only 23 percent among the population aged 20-64. Minnesota will have an additional 26,000 people age 85 or more by 2020.

While all of Minnesota's population is aging, it is disproportionately affecting rural areas. The Minnesota Demographer's office reports that 30 percent of the state's total population and 41 percent of those 65 and older live in rural Minnesota<sup>2</sup>. The 65 and over age group is projected to grow by almost 700,000 between 2000 and 2030, a rate of 117 percent. That would bring the 65 and over population up to 1.3 million or 1 in 4 Minnesotans. The Minnesota Demographer predicts that most rural areas will see more than 20 percent of their population over age 65 by 2025.<sup>3</sup>

It is widely assumed that an older population will require more health care services, putting pressure on the health care workforce. The federal Health Resources and Services Administration estimates that populations over 65 require more than twice as many primary care physician hours as younger groups. The differential is even greater for medical specialties.<sup>4</sup>

The most important impact on market need for health care professionals may be trends in both public and private insurance coverage. Expansion in numbers of people covered, or changes that make some kinds of health care services more affordable to consumers, may increase demand for health care professionals. Shrinkage of coverage or higher deductibles would logically dampen health care workforce needs.

## **Minnesota's Primary Health Care Workforce**

Minnesota has a primary health care workforce shortage. A skilled health care workforce is necessary for both a healthy community and a strong local economy. An adequate supply of health care professionals is necessary to make care accessible. Thirty-seven percent of Minnesota's rural population lives in a federally designated Health Professional Shortage Area (HPSA) or a Medically Underserved Area (MUA), factored upon physician-to-population ratio, poverty, and geographic distance to care. Parts of 30 Minnesota counties – mostly in the western

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<sup>2</sup> *Implications of rural Minnesota's changing demographics*, Minnesota Planning Critical Issues: Perspectives, July 2000.

<sup>3</sup> *Changing places: shifting livelihoods of people and communities in rural Minnesota*, Minnesota Planning Critical Issues: Perspectives, August 2001.

<sup>4</sup> U.S. Department of Health and Human Services, Health Resources and Services Administration, Bureau of Health Professions, *Physician Supply and Demand: Projections to 2020*, published October 2006, pp. 19-20.

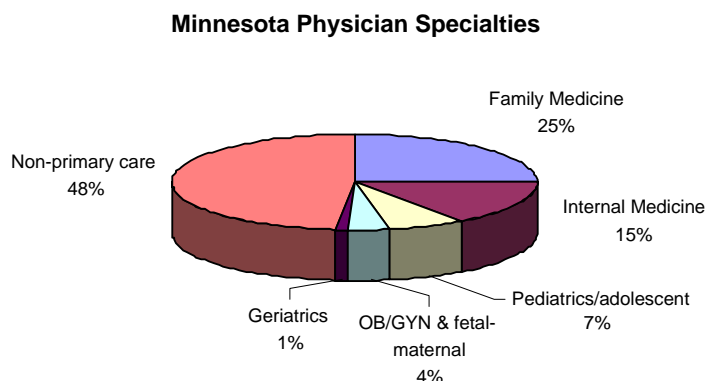
and northern parts of the state – are designated as HPSAs. Forty-six of the most rural counties have 13 percent of the state’s population but only 5 percent of the state’s practicing physicians.

Age and geographic location are two important factors contributing to the primary health care workforce challenges in Minnesota. A large share of the primary health care workforce is near retirement, and the health care workforce is disproportionately located in urban areas.

The Office of Rural Health and Primary Care (ORHPC) Health Workforce Analysis Program conducts surveys and analysis of a variety of health professions. Data is gathered from licensing boards as well as a voluntary survey from each of the professions highlighted in this report. Unless otherwise noted, information included in this section of report is derived from the data the Health Workforce Analysis Program staff gathered and analyzed.

### Primary care physicians

Based on licensing data from the Minnesota Board of Medical Practice, Minnesota had 18,625 licensed physicians in mid-2007. Of these, the Office of Rural Health and Primary Care estimates approximately 13,700 physicians were practicing at least part time in Minnesota, and about 52 percent of physicians claimed a primary care specialty as their first specialty.<sup>5</sup>



The Board of Medical Practices physician profiles identify more than 9,000 primary care physicians in Minnesota in 2008. Not all are practicing full-time. The three largest primary care specialties are internal medicine, family medicine and pediatrics. While the senior population is growing rapidly, only a small number of physicians identify geriatrics as their primary practice (see table on Page 12).

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<sup>5</sup> These specialties included adolescent medicine, family medicine, family practice, geriatric medicine, internal medicine, pediatrics, maternal-fetal medicine and obstetrics and gynecology.

### Primary Care Specialties

SPECIALTY/SUBSPECIALTY	ABMS	AOA	Total
Family Medicine/Family Medicine	3,077	52	3,129
Family Medicine/Adolescent Medicine	10	0	10
Family Medicine/Geriatric Medicine	104	4	108
Internal Medicine/Internal Medicine	3,844	17	3,861
Internal Medicine/Adolescent Medicine	1	n/a	1
Internal Medicine/Geriatric Medicine	175	1	176
Obstetrics and Gynecology/Maternal and Fetal Medicine	26	0	26
Obstetrics and Gynecology/Obstetrics and Gynecology	655	6	671
Pediatrics/Pediatrics	1,287	1	1,288
Pediatrics/Adolescent Medicine	12	n/a	12
TOTAL	9,191	81	9,282

ABMS = M.D.s certified by American Board of Medical Specialties.

AOA = Doctors of Osteopathy certified by American Osteopathic Association.

Source: Minnesota Board of Medical Practice online professional profiles, retrieved December 16, 2008.

**Rural care is primary care.** An estimated 70 percent of physicians in the state's 46 most rural counties practice in primary care, compared to 64 percent in micropolitan counties and only 48 percent in the state's metropolitan counties. Only 8 percent of the state's physicians practice in rural counties, but they represent 17 percent of all family medicine physicians. Seven percent of internal medicine specialists and only 3 percent of pediatricians practice in rural counties.

In spite of having a higher percentage of primary care physicians than metropolitan counties, rural counties still have fewer primary care physicians per capita than micropolitan or metropolitan area counties. Because of changes in data availability, ORHPC last did detailed geographic estimates of the number of primary care specialists based on 2005 data. That analysis produced an estimate of 74 primary care physicians per 100,000 population, compared to a statewide total of 119 per 100,000 population (see table below).

#### Actively Practicing Minnesota Physicians (per 100,000 population), 2005

	Metropolitan Counties <sup>1</sup>	Micropolitan Counties <sup>1</sup>	Rural Counties <sup>1</sup>	Statewide
<b>Physicians</b>	293	171	96	249
<b>Primary care physicians</b>	131	98	74	119
<b>Other specialty physicians</b>	162	73	22	130

Overall, 18 percent of primary care physicians active in 2006 said they expected to quit practicing within five years. Not all physicians nearing retirement age expect to leave their practices by age 65. Twenty-seven percent of physicians age 55 to 64 said they plan to work five years or less, but 28 percent said they expect to practice at least 10 more years. Sixty-eight percent of primary care physicians 65 and older said they plan to quit within five years, but 10 percent said they expected to practice another 10 years.

From 1998 to 2007, the number of primary care residencies offered by graduate medical programs nationally grew less than 1 percent, while non-primary care offerings increased 20 percent. In 2008, the number of family medicine residency positions increased for the first time since 1998, as did the percentage filled by U.S. medical school graduates. However, U.S. medical school graduates filled only 59 percent of all primary care residency openings, while they filled 78 percent of all non-primary care openings.<sup>6</sup> Primary care specialties accounted for 56 percent of Minnesota main residency matches, compared to 52 percent nationally.<sup>7</sup>

A possible contributing factor to fewer physicians choosing to practice primary care is the annual salary, which is significantly lower than some other specialties. The national median annual salary for family practice physicians is \$154,000. This salary is relatively low when compared to anesthesiologists or surgeons, who earn in the low \$190,000s on average annually.<sup>8</sup> While labor market statistics group all surgery specialties together, we know anecdotally that some specialties average much higher.

### **Physician assistants**

Minnesota ranks 30<sup>th</sup> in the number of physician assistants, with 14 per 100,000 population, compared to 17 nationally. Minnesota has 6.6 physician assistants per 100 physicians, compared to a national figure of 7.9<sup>9</sup>

In July 2007, Minnesota had 1,111 licensed physician assistants, nearly three times the number 10 years earlier, and a 34 percent increase in only two years. The number of licensed physicians increased only 27 percent from 1997 to 2007. As a result, the ratio of licensed physicians to physician assistants fell from 38 to 16.1.

With a median age of 38 years, physician assistants are relatively young compared to physicians. The younger age of physician assistants reflects both the shorter training period and the large number of young physician assistants entering the field in recent years. Fifty-three percent of physician assistants were less than 40 years old in 2005; more than one-third were under 35. Eighty-three percent of physician assistants under age 35 work in metropolitan counties.

Physician assistants are distributed among metropolitan, micropolitan and rural areas in close proportion to population. Compared to physicians, physician assistants are more likely to practice in smaller cities and rural areas. The 46 most rural counties have 13 percent of the state's population and about 14 percent of the state's practicing physician assistants.

Unlike the case for physicians, nurses and dentists, near-term retirements are not a major concern for physician assistants. Less than 20 percent expect to leave the field within five years. Fifty-nine percent expect to practice more than 10 additional years.

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<sup>6</sup> National Residency Match Program, *Results and Data, 2008 Main Residency Match, April 2008*, Table 1.

<sup>7</sup> Minnesota Department of Health calculations based on data from *Results and Data, 2008 Main Residency Match*, pp. 59-60.

<sup>8</sup> U. S. Bureau of Labor Statistics, *Occupational and Employment Statistics, 2<sup>nd</sup> Quarter 2007*.

<sup>9</sup> *United States Health Workforce Profile, 2006*

### Advanced practice registered nurses

As of June 2008, Minnesota had approximately 77,950 registered nurses. Only about 6 percent, or 4,570, of Minnesota registered nurses are certified as an advanced practice registered nurse (APRN): nurse practitioner, clinical nurse specialist, certified registered nurse anesthetist or nurse-midwife. Nurse practitioners account for about half of all Minnesota APRNs; most nurse practitioners practice in specialties related to primary care.

Relative to population and makeup of the nursing workforce, Minnesota has less nurse practitioners than most states. Minnesota ranks 37<sup>th</sup>, with 32.6 nurse practitioners per 100,000 population, compared 42.0 nationally. Both Iowa and Wisconsin have more nurse practitioners per capita than Minnesota. Minnesota has about 3.2 nurse practitioners per 100 RNs, compared to about 5.2 nationally.<sup>10</sup>

Advanced practice registered nurses in general are more heavily utilized in urban settings. Only 10 percent of nurse practitioners and 7 percent of clinical nurse specialists work in rural counties, while 78 percent of nurse practitioners and 83 percent of clinical nurse specialists work in metropolitan area counties.

Advanced Practice Specialty	Rural	Metropolitan	Micropolitan
Nurse Practitioners	10%	78%	12%
Clinical Nurse Specialists	7%	83%	10%

### Pharmacists

The pharmacist role continues to evolve in response to changes in the health care environment and shortages of primary care practitioners, with an increased emphasis on the pharmacist role in managing medication therapy.

Minnesota currently has 5,452 actively licensed pharmacists. Fifty-eight percent (3,158) are listed as being in the seven-county metropolitan area, with 42 percent (2,294) in Greater Minnesota<sup>11</sup>. This represents an average number of pharmacists relative to population with about 78 per 100,000 population, compared to a national figure of 77. Wisconsin has 82. Iowa and the Dakotas, with more dispersed rural populations, have similar per capita numbers.<sup>12</sup> Of note, females now represent 56 percent of seven-county metropolitan area pharmacists, and 45 percent of pharmacists in Greater Minnesota.

The University of Minnesota, the sole educator of pharmacists in Minnesota, has increased its enrollment and added a satellite program in Duluth. This parallels national efforts to expand availability of pharmacy services. But even an expansion in enrollment may be inadequate to fill the projected need.

<sup>10</sup> *The United States Health Workforce Profile*, October 2008.

<sup>11</sup> Minnesota Board of Pharmacy, 2008.

<sup>12</sup> *The United States Health Workforce Profile*, 2008, p. 134.

In 2008, there were 1,311 pharmacies in the state<sup>13</sup>. Of these, 612 were located in the seven-county metropolitan areas and 699 were located in greater Minnesota. The number of pharmacies located within the state has increased about 15 percent since 2000; 83 percent of that increase occurred in the metropolitan areas. An increase in the number of chain pharmacies and a decrease in the number of independent pharmacies (5.5 percent) accounts for the change. As more independent pharmacists close, access to pharmacy services in rural communities has been challenged.

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<sup>13</sup> Minnesota Board of Pharmacy, 2008.

### III. Health Care Homes and Primary Care

#### Development and History of the Health Care Home Model

The health care or medical home concept emerged over time with an understanding that primary care could be and should be delivered in a new way. The Institute of Medicine, in its report, *Primary Care: America's Health in a New Era* (1996), recommended a new definition of primary care as “the provision of integrated, accessible health care services by clinicians who are accountable for addressing a large majority of personal health care needs, developing a sustained partnership with patients, and practicing in the context of family community.” It further defined “clinician” as “an individual who uses a recognized scientific knowledge base and has the authority to direct the delivery of personal health care services to the “patient” and suggested that these clinicians could be a “*physician, nurse practitioner or physician assistant.*”

In 1967, the American Academy of Pediatrics (AAP) introduced the concept of “medical home” as a pediatric health care model, recognizing that children with special needs could benefit from having their health care coordinated with the social services they would need. In 2002, the AAP expanded its scope to include adults with chronic conditions by developing a set of joint principles to characterize the medical home concept as an approach to providing primary care that is:

- Accessible
- Continuous
- Comprehensive
- Family-centered
- Coordinated
- Compassionate
- Culturally effective

At the same time, recognizing growing frustration among family physicians, confusion among the public about the role of family physicians, and continuing inequities and inefficiencies in the U.S. health care system, the leadership of seven national family medicine organizations initiated the Future of Family Medicine (FFM) project in 2002. The goal of the project was to transform and renew the specialty of family medicine to meet the needs of people and society in a changing environment. In 2004, the *Future of Family Medicine Report*<sup>14</sup> outlined a New Model of Practice described as:

- Patient-centered
- Uses a team approach
- Eliminates barriers to access
- Uses electronic health records
- Focuses on quality and outcomes
- Enhances practice finances

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<sup>14</sup> *Annals of Family Medicine* 2:S3-S32 (2004) © 2004 [Annals of Family Medicine, Inc.](#) doi: 10.1370/afm.130

## Medical Home in Minnesota

Although Minnesota's primary care providers have incorporated elements of the medical home model into practice, formalizing the medical home began in Minnesota in the mid-1990s with a partnership between the Minnesota Department of Health's (MDH) Minnesota Children with Special Health Care Needs, the Minnesota Department of Human Services, the American Academy of Pediatrics, and Family Voices. It has evolved as an approach similar to the national models. In 2004, the first Medical Home Learning Collaboratives began to support individual clinicians and the clinic systems they work with to meet the needs of all individuals with chronic, complex health conditions or disabilities.

These community-based care models collaboratives ask the primary care provider – a *pediatrician, family physician, nurse practitioner and/or physician assistant* – to become an active co-manager with specialists involved in the child's care. The collaborative teams generally include a primary care provider, a staff person who can act as a care coordinator, and two parents or youth with special health care needs. There are currently 25 active collaborative practice improvement teams in Minnesota.

## 2008 Minnesota Health Care Homes Legislation and Primary Care Providers

The 2008 health reform legislation promotes the use of health care homes, requires the development and implementation of standards for certification by July 1, 2009, and establishes payment for care coordination from public and private payers for certified providers. While the details of health care homes and the certification standards are in development, current statute does require that clinics pursuing certification as a health care home “*emphasize, enhance and encourage the use of primary care, and include use of primary care physicians, advanced practice nurses, and physician assistants as personal clinicians.*”

While a primary care provider has traditionally been viewed as a physician trained in family medicine, pediatrics, general internal medicine, obstetrics and gynecology, and geriatrics, the health care home legislation recognizes the importance of expanding the definition to include physician assistants, nurses, pharmacists and others who provide primary care. In this definition, primary care provider includes the first provider-patient contact for a new health problem and ongoing coordination of patient-focused care.

The workforce challenge for health care homes is to recruit appropriately trained providers across several professions, and combine them in the workplace in ways that improve care and control costs. This care model will allow all qualified primary care professionals to practice at the top of their education and capacity, use each profession for the tasks that they are uniquely qualified to perform and reduce tasks that do not make the best use of each professional on the team.

## Primary Care Core Competencies and Skills

As a foundation for consideration of professional contributions to the delivery of primary care, the Health Workforce Shortage Study Work Group jointly identified a set of competencies and skills considered a requirement for the practice of primary care.

### Health Workforce Shortage Study Work Group Primary Care Core Competencies

Ability to:

- Conduct physical exams – simple and comprehensive
- Order labs and other diagnostic tests, interpret results
- Diagnose complex and multiple issues
  - Refer and consult – integrate and coordinate specialty care
- Treat and/or prescribe, including knowing what is not indicated
- Use/integrate evidence-based guidelines into care
- Consider longitudinal care and make adjustments as appropriate
- Monitor and manage medication
- Advise patient on primary prevention/health promotion
- Assess patient’s psychosocial needs, lifestyle, and values
- Relate/communicate with patients/families

### Supporting Competencies

- Informatics literacy
- Behavioral health knowledge and skills
- Community/population health awareness
- Team building/coordination with other professions/specialties

All identified competencies and skills are characteristic of Minnesota’s primary care professionals – physicians, advanced practice registered nurses, and physician assistants. Pharmacists, while limited in providing diagnoses or prescribing treatment, provide an integral primary care role in monitoring and managing patient medications. Other Minnesota licensed professionals, such as licensed psychologists, social workers and physical or occupational therapists may also play a supporting role in the collaborative practice of primary care. Understanding the role of Minnesota’s primary care professionals, identifying barriers that would prevent the effective use of each member of the team, and resolving those barriers is a prerequisite to the development of health care homes in Minnesota and the effective and efficient delivery of primary care.

## **IV. Minnesota’s Primary Care Licensing and Regulatory Environment**

This chapter reviews the extent or scope of practice under which Minnesota’s licensed primary care providers can provide care to patients. In order to “ensure full utilization of advanced practice registered nurses, physician assistants, and other licensed health care professionals in the health care home and primary care delivery system,” an understanding of Minnesota’s current licensing environment for these professions is required. It is important to examine whether Minnesota’s advanced practice professionals are allowed to practice at the highest level of their skills and competencies in providing primary care.

### **Physicians**

Physicians are licensed to practice medicine, which is defined to include:

- Prescribe, give, or administer any drug or medicine for the use of another
- Prevent, diagnose, correct, or treat in any manner or by any means, methods, devices, or instrumentalities, any disease, illness, pain, wound, fracture, infirmity, deformity or defect of any person
- Perform any surgical operation including any invasive or noninvasive procedures involving the use of a laser or laser assisted device, upon any person
- Use hypnosis for the treatment or relief of any wound, fracture, or bodily injury, infirmity, or disease

*(Minnesota Statutes, section 147.081, subd. 3).*

### **Advanced Practice Registered Nurses**

The Minnesota Nurse Practice Act (*Minnesota Statutes*, sections 148.171-148.285) establishes scopes of practice of Advanced Practice Registered Nurses (APRNs).

#### **Current scope of practice**

An APRN is an individual licensed as a registered nurse by the Minnesota Board of Nursing and certified by a national nurse certification organization acceptable to the board to practice as a nurse practitioner, clinical nurse specialist, certified registered nurse anesthetist, or nurse-midwife (M.S. 148.171, Subd. 3). Their practice includes:

- Functioning as a direct care provider, case manager, consultant, educator, and researcher.
- Accepting referrals from, consulting with, cooperating with, or referring to all other types of health care providers, including but not limited to physicians, chiropractors, podiatrists, and dentists

*(M.S. 148.171, Subd. 13).*

**Nurse practitioner (CNP)** practice includes:

- Diagnosing, directly managing, and preventing acute and chronic illness and diseases, and
  - Promoting wellness, including nonpharmacologic treatment
- (M.S. 148.171, Subd. 11).

**Clinical nurse specialist (CNS)** practice includes:

- Diagnosing disease,
  - Providing nonpharmacologic treatment (including psychotherapy),
  - Promoting wellness and
  - Preventing illness and disease
- (M.S. 148.171, Subd. 5).

**Certified registered nurse anesthetists (CRNA)** practice includes:

Provision of anesthesia care and related services, including selecting, obtaining and administering drugs and therapeutic devices to facilitate diagnostic, therapeutic, and surgical procedures upon request, assignment, or referral by a patient's physician, dentist, or podiatrist (M.S. 148.171, Subd. 21). CRNAs may provide anesthesia in collaboration with physicians, surgeons, podiatrists or dentists if services are provided at the same hospital, clinic or health care setting as the collaborating provider.

**Nurse-midwife (CNM)** practice includes:

Management of women's primary health care, focusing on pregnancy, childbirth, the postpartum period, care of the newborn, and the family planning and gynecological needs of women (M.S. 148.171, Subd. 10).

### **Practice of advanced practice nursing and collaborative management**

APRN practice includes "functioning as a direct care provider, case manager, consultant, educator, and researcher. The practice of advanced practice registered nursing also includes accepting referrals from, consulting with, cooperating with, or referring to all other types of health care providers, including but not limited to physicians, chiropractors, podiatrists, and dentists, provided that the advanced practice registered nurse and the other provider are practicing within their scopes of practice as defined in state law. Certified registered nurse anesthetists must provide anesthesia services at the same hospital, clinic, or health care setting as the physician, surgeon, podiatrist, or dentist." Furthermore, current statute requires that APRNs practice "*within a health care system that provides for consultation, collaborative management, and referral as indicated by the health status of the patient*" (M.S. 148.171, Subd. 13).

"Collaborative management" is defined as "*a mutually agreed upon plan between an APRN and one or more physicians or surgeons that designates the scope of collaboration necessary to manage the care of patients.*" The APRN and physician/surgeon(s) must have experience in

providing care to patients with the same or similar medical problems, with exceptions for CRNAs (M.S. 148.71, Subd. 6).

### **Prescribing agreements**

*Minnesota Statutes*, section 148.235 establishes conditions under which APRNs may prescribe or administer drugs.

**Certified nurse midwives** may prescribe and administer drugs and therapeutic devices. The law does not require a written agreement with a physician or surgeon (Subd. 1)

**Nurse practitioners** and **CRNAs** who have a written agreement with a physician based on standards established by the Minnesota Nurses Association (MNA) and the Minnesota Medical Association (MMA) that defines the delegated responsibilities related to the prescription of drugs and therapeutic devices may prescribe and administer drugs and therapeutic devices within the scope of the written agreement and within practice as an APRN (Subd. 2 and Subd. 2a). Prescribing does not include recommending or administering a drug or therapeutic device perioperatively by a CRNA (MS 148.171, Subd. 16). Written agreements must be maintained at the primary practice site of the APRN and the collaborating physician (MS 148.235, Subd 6).

The MNA and MMA *Memorandum of Understanding (MOU)* sets forth the minimum standards for a prescribing agreement. Any agreement must include:

- A general description of the practice setting
- Each category of drugs and therapeutic devices the APRN can prescribe and any specific limitations to prescribing
- Minimum frequencies and schedules for review of prescribing practices
- The APRN and physician must jointly review, sign and date their agreement at least annually.

Model agreements are available online at the MMA <http://www.mmaonline.net> and MNA Web sites: <http://www.mnnurses.org/>

**Clinical nurse specialists** who meet minimum pharmacology education requirements may prescribe and administer drugs within the scope of a written prescribing agreement with a physician based on standards established by the MNA and the MMA (Subd. 4a).

**Clinical nurse specialists in psychiatric and mental health nursing** may prescribe under a written agreement with a psychiatrist or other physician based on standards established in a separate *Memorandum of Understanding* developed by the MNA and the Minnesota Psychiatric Association (Subd. 4). An advanced practice registered nurse who is authorized by law to prescribe may also dispense drugs described in the written agreement (Subd 4b).

### **Registered nurses' implementation of protocol that results in prescription.**

A registered nurse may implement a protocol that does not reference a specific patient and results in a prescription of a legend drug that has been predetermined and delegated by a

“licensed practitioner”<sup>15</sup> only when caring for a patient whose condition falls within the protocol and the protocol specifies the circumstances under which the drug is to be prescribed or administered (Subd. 8).

## Physician Assistants

Minnesota physician assistant regulation began in 1987 with registration through the Minnesota Board of Medical Practice. Physician assistants **may practice medicine only with physician supervision** and may perform only those duties and responsibilities delegated to the physician assistant (M.S. 147A.09). The law defines “supervision” to mean “overseeing the activities of, and accepting responsibility for, the medical services rendered by a physician assistant.” Supervision can occur by personal contact or through telecommunications (M.S. 147A.01, Subd. 24). A physician may not supervise more than two full-time equivalent physician assistants simultaneously (Subd. 23).

### Registration and education

Applicants for physician assistant registration must be certified by the National Commission on Certification of Physician Assistants (NCCPA) (M.S. 147A.02). The NCCPA administers a certification exam to graduates of programs accredited by the Accreditation Review Commission on Education for the Physician Assistant (ARC-PA). Educational institutions offering physician assistant programs must offer a baccalaureate or higher degree. Minnesota’s only physician assistant training program is at Augsburg College. The three-year Augsburg program requires a baccalaureate degree for entry and leads to a master of science in Physician Assistant Studies and a P.A. certificate.

### Scope of practice

Patient services of physician assistants are limited to services that are:

- Within the training and experience of the physician assistant,
- Customary to the practice area of the supervising physician,
- Delegated by the supervising physician, and
- Within the parameters of the laws, rules, and standards of the facilities in which the physician assistant practices (M.S. 147A.09, Subd. 1).

Patient services may include, but are not limited to:

- Taking patient histories and developing medical status reports,
- Physical examinations,

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<sup>15</sup> “Licensed practitioner” is defined as a licensed doctor of medicine, licensed doctor of osteopathy duly licensed to practice medicine, licensed doctor of dentistry, licensed doctor of optometry, licensed podiatrist, or licensed veterinarian. For purposes of sections 151.15, subdivision 4, 151.37, subdivision 2, paragraph (b), and 151.461, “practitioner” also means a physician assistant authorized to prescribe, dispense, and administer under chapter 147A, or an advanced practice nurse authorized to prescribe, dispense, and administer under section 148.235. (M.S. § 151.01, subd.23)

- Interpretation and evaluation of patient data,
- Ordering or performance of diagnostic procedures (including radiography),
- Ordering or performance of therapeutic procedures,
- Instructions for patient care, disease prevention and health promotion,
- Assisting physician supervision of patient care,
- Creating and maintaining patient records,
- Transmitting and executing orders at the direction of the supervising physician,
- Prescribing, administering and dispensing legend drugs and medical devices (only this function has been delegated by the supervising physician),
- Administering legend drugs and medical devices following prospective review by and upon direction of the supervising physician,
- Initiating evaluation and treatment in emergency situations, and
- Certifying physical disability for parking permits.

(Subd. 2)

### **Practice agreements**

A physician assistant must practice within terms of a written agreement between the physician assistant and a supervising physician that defines the scope and nature of supervision. A separate agreement is required for each place of employment (M.S. 147A.20(b)). The agreement must describe:

- Practice setting,
- Practice type or specialty,
- Categories of delegated duties,
- Type, amount and frequency of supervision, and
- Process and schedule for review of any delegated prescribing, dispensing and administration of drugs and medical devices (including an internal protocol and delegation form) (M.S. 147A.20(a)).

### **Prescribing**

The supervising physician may delegate authority to prescribe, dispense and administer legend drugs, medical devices and controlled substances. The authority to dispense extends only to drugs described in the written agreement. Delegation must be “appropriate to the physician assistant’s practice and within the scope of the physician assistant’s training” as evidenced by certifications from the National Commission on Certification of Physician Assistants (M.S. 147A.18, Subd. 1).

The Board of Medical Practice is authorized to develop rules (M.S. 147A.18, Subd. 2) for:

- A system for identifying physician assistants eligible to prescribe, dispense or administer legend drugs, medical devices or controlled substances,
- A method for determining the categories of drugs and devices that each physician assistant is allowed to prescribe, dispense or administer, and
- A system of transmitting to pharmacies a list of physicians assistants eligible to prescribe legend and controlled drugs.

## **Pharmacists**

### **Licensing and education**

Applicants for Minnesota pharmacy licenses must have graduated from a college or school of pharmacy accredited by the Accreditation Council of Pharmacy Education (ACPE). ACPE accreditation requires a four-year professional program, leading to the doctor of pharmacy degree. While there are still many pharmacists who graduated when bachelor of science degrees in pharmacy still existed, all U.S. pharmacy schools now offer only the Pharm.D. Foreign pharmacy graduates are still allowed to be licensed with bachelor degrees. However, they are required to complete 1,600 hours of internship and must pass the Foreign Pharmacy Graduate Equivalency Examination and language tests before they are allowed to sit for the regular licensing exams.

### **Current scope of practice**

Minnesota law defines the practice of pharmacy to include (M.S. 151.01, Subd. 27):

- Interpretation and evaluation of prescription drug orders,
- Compounding, labeling and dispensing drugs and devices,
- Participation in:
  - clinical interpretations and monitoring of drug therapy,
  - drug and therapeutic device selection, drug administration for first dosage, and drug research,
  - administration of influenza vaccines (to patients 10 and older, and all other vaccines to patients 18 and older), under standing orders from a physician or by written protocol with a physician,
  - managing drug therapy and modifying drug therapy according to a written protocol between the pharmacist and a dentist, optometrist, physician, podiatrist or veterinarian, and
  - storage of drugs and the maintenance of records;
- Responsibility for participation in patient counseling on therapeutic values, content, hazards and use of drugs and devices, and
- Operating, managing and controlling a pharmacy.

Pharmacists have clear authority to compound, label and dispense drugs and to operate pharmacies. The use of the word “participation” implies that other aspects of pharmacy practice are shared with other health professions.

### **Drug therapy management**

Pharmacists may participate in managing drug therapy and modifying drug therapy under a written protocol with a dentist, optometrist, physician, podiatrist or veterinarian who is responsible for the patient’s care. (The law is silent with regard to a pharmacist’s ability to work under a written protocol with an advanced nurse registered nurse or a physician assistant.) The pharmacist must report significant changes in drug therapy to the patient’s medical record (M.S. 151.01, Subd. 27, paragraph 6).

### **Prescribing**

Licensed practitioners (physicians, dentists, optometrists, podiatrists and veterinarians) may direct (with supervision) a nurse, physician assistant or medical student or resident to administer legend drugs to an individual patient. For purposes of compounding and dispensing (Section 151.15, Subd. 4), and prescribing legend drugs (Section 151.37, Subd. 2, paragraph. b), “practitioner” is defined to also include physician assistants who are authorized to prescribe, dispense or administer under Chapter 147A, and advanced practice nurses authorized to prescribe, dispense or administer under Section 148.235. Since pharmacists are not considered to be licensed practitioners, they are not currently allowed to prescribe medications.

Licensed practitioners may also prescribe a legend drug, without reference to a specific patient, by directing a nurse (pursuant to M.S. 148.235, subd. 8 and 9), physician assistant or medical student or resident to adhere to a particular practice guideline or protocol when treating patients whose condition falls within such guideline or protocol (M.S. 151.37). Pharmacists are not currently allowed to sign legally valid prescriptions while working under protocol or under a medication management agreement with a licensed practitioner.

### **Pharmacist discretion**

Unless the prescriber has specifically indicated that a prescription is to be dispensed as written, a pharmacist may substitute a generically equivalent drug if, in the pharmacist’s professional judgment, the substituted drug is therapeutically equivalent and interchangeable to the prescribed drug. With this noted exception, a pharmacist may not substitute an article different from the one ordered, or deviate in any manner from the requirements of an order or prescription without the approval of the prescriber (M.S. 151.21).

## V. Barriers to Effective Primary Care Practice

The Health Workforce Shortage Study Work Group considered the core skills and competencies that define primary care delivery (see Chapter III). In that context, work group members identified a number of barriers that interfere with effective delivery of primary care and prevent full utilization of primary care physicians, advanced practice registered nurses, physician assistants and pharmacists practicing collaboratively in a primary care or health care home setting. The barriers identified cover a range of sources, including statutory, regulatory, payment, institutional/corporate and culture.

Each profession represented on the work group was asked to gather information from their respective associations and from individuals, and they reported the following barriers to the work group for discussion and clarification. Some of the barriers identified are real and some are perceived or unclear.

### Report from Physicians

- Primary care must be integrated and longitudinal. While no licensure or regulatory changes are required at this time for physicians to practice efficiently and effectively, there are changes in payment structure and licensure indicated for other professions.
- Culture change is as important to long term success as statutory or regulatory change. Statutory or regulatory changes without culture change will be less effective. Physicians are accustomed to operating independently, particularly in rural areas, and learning to work collaboratively is critical to the success of a medical home model.
- Patients do better if physicians work with others as a team. Communication in all directions is key, particularly with specialist or hospital referral.
- It is important to have well structured teams to promote communication and coordination. The Minnesota Children with Special Health Needs collaborative model demonstrates the strength in the team and the importance of communication.
- A concern for primary practices with patients from bordering states is that APRNs and PAs are unable to prescribe for those patients.

### Report from Physician Assistants

Description	Origin				
	MN Stat.	MN Reg.	Fed. Stat/Reg	Ins/ Pymt/ Reimb.	(System, culture/ JCAHO)
Physician can only supervise up to two PAs. Affects rural practice and large system (e.g., Mayo limited on number of PAs it can hire due to ratio limit).	147A.01, subd. 23				
<b>Restrictions on referrals</b>					
Medicare restricts PAs from ordering home health care and hospice. Problem especially in rural areas, with more elderly.		X	X		

Description	Origin				
	MN Stat.	MN Reg.	Fed. Stat/Reg	Ins/ Pymt/ Reimb.	(System, culture/ JCAHO)
<b>Restrictions on care delivery</b>					
PA sees nursing home patient in clinic, writes orders for medications. Some nursing homes deny PAs orders w/o M.D.'s co-signature.				X	X
Restrictions placed on performance of duties already delegated by agreement, such as performing OB. Health system recent ruling banning PA from doing OB. PA in rural community had been doing OB for 30 years, told he couldn't. Supervising physician argued case and got exception.					X
PA can do pre-op assessments but in some institutions they must be co-signed by M.D..					X
Performing fluoroscopy (real-time X-ray), ordering and/or administering propofol sedative for rapid sequence intubation in the ER – inconsistency in allowing PAs to perform.					X
<b>Other</b>					
PAs not allowed to sign death certificates. "Associate of physician" can provide cause of death, but only M.D.s or coroners can sign		MN Rule 4601			

### Report from Advanced Practice Registered Nurses

Description	Origin				
	MN Stat.	MN Reg.	Fed. Stat/Reg	Ins/ Pymt/ Reimb.	(System, culture/ JCAHO)
<b>Collaborative management and prescribing agreements</b>					
Nurse practitioner (NP) difficulty finding MDs to sign prescriptive agreements. Especially affects rural practice.	X				X
Psych clinical nurse specialists (CNS) hindered in doing medication management; cannot find MDs willing to sign and monitor prescriptive agreements. Liability and lack of payment cited as reasons. Some MDs charge up to 10 percent of CNS's gross income to sign.	X				X
MNA-MPA MOU for psych NPs recommends that patients be seen by psychiatrist/MD w/in 30 days of initial assessment and every six months. Some MDs interpret as requirement.	X				X
<b>Reimbursement inequities</b>					
Health plan reimbursement for NPs moving to 85 percent, based upon Medicare/Medicaid rates. Includes preventive care, well-child visits. Result is MDs get booked with well child care, NPs end up with acute, urgent care as their schedules are open.			X	X	X
Certified nurse midwife (CNM) reimbursed at 65 percent of MD for Medicare patient care. One result is that some clinic systems do not use CNMs who are trained in colposcopy to do procedure, opting to have MD do instead.			X	X	X

Description	Origin				
	MN Stat.	MN Reg.	Fed. Stat/Reg	Ins/ Pymt/ Reimb.	(System, culture/ JCAHO)
Certified registered nurse anesthetists (CRNA) and neonatal NPs not paid for consultation or time spent standing-by during delivery time in hospital settings.				X	X
<b>Restrictions on referrals</b> <i>*Not specified in statute, but related to independent practice</i>					
NPs and CNMs cannot sign referral orders for hospital, nursing home, home care, OT/PT, diabetic nurse educator, etc. Medicare requires M.D. signature.	*	*	X		X
NPs cannot admit patients to long term care facilities. M.D. is required to do the admission history and physical exam.	*	*	X		X
Rural/micropolitan experience CNMs experience difficulty admitting to hospital. Risk/fear of liability are factors.	*	*			X
<b>Restrictions on care delivery</b>					
Medicare requires nursing homes patients to have a physician as primary care provider. MD must make nursing home rounds every other visit, yet NP is the one working in the home and knows the most about patients.			X		
NPs cannot sign pre-op forms; MD must cosign.	*	*		X	X
CRNAs in the urban areas with anesthesiologists are not allowed to perform all procedures for which trained. Since all training takes place in urban centers, rural CRNAs, who are often the only source of anesthesia care, are unable to get required experience.					X
<b>Other</b>					
NPs cannot sign death certificates. "Associate of physician" can provide cause of death, but only MDs or coroners can sign.	X	MN Rule 4601			
Patients/families lack understanding what a NP is and can do.					X

## Report from Pharmacists

Description	Origin				
	MN Stat.	MN Reg.	Fed. Stat/Reg	Ins/ Pymt/ Reimb.	(System, culture/ JCAHO)
Pharmacist cannot modify orders under existing prescribing agreement without M.D. signature and are not allowed to sign legally valid prescriptions pursuant to protocol implemented by licensed practitioners. Example: Pharmacist can make agreement with M.D. to manage a patient on <i>warfarin</i> . Pharmacist can then do lab work and change dosage if required. Currently, pharmacist needs to go back to M.D. to OK change even though agreement in place to do so.	151.37 subd. 2  151.01 subd. 23				

Description	Origin				
	MN Stat.	MN Reg.	Fed. Stat/Reg	Ins/ Pymt/ Reimb.	(System, culture/ JCAHO)
<b>Restrictions on care delivery</b>					
Pharmacist cannot enter into prescribing agreement with APRN or PA.	151.01 subd. 27(6)				
Lack of consistent and universally recognized billing mechanism for services provided by pharmacist.				X	
Many tasks that could be completed by certified pharmacy technician are required to be done by pharmacist. Some tasks required by a pharmacist could be done by a pharmacy tech (e.g., restocking); however, requirements for pharmacy techs are at issue (high school education only requirement).	X	X			
Access to patient health information difficult for pharmacist in community pharmacy (versus hospital/clinic setting). Hinders ability to truly manage medication.					X

### Multiple statutory and rule barriers outside of practice licensing

The work group noted that barriers exist in statutes and regulations that do not appear in statutes or rules directly relating to health professional practice. Many of these barriers are hidden or buried in non-health statutes, session laws and rules, but do create barriers to the practice of primary care. One example is a requirement that all Minnesota Department of Transportation physicals must be conducted by a “physician.” Similar examples were noted in other laws related to the Department of Education, Department of Corrections, etc.

A word search in Minnesota’s statutes and rules pertaining to “physician,” “physician assistant,” “registered nurse” and “pharmacist” to “physician,” “registered nurses,” and pharmacists – both practice-related and non-practice related suggests that a thorough review for identification of potential issues could require significant resources.

Profession	Number of Minnesota Statutes and Rules Citations
Physician	1,039
Physician Assistant (Physician)	136
Registered Nurse	252
Pharmacist	164

## VI. National and Other State Regulatory Perspectives

A review of other states' practice environment primary care advanced practice providers, including advanced practice registered nurses and physician assistants suggests that Minnesota is neither on the forefront in utilizing advanced practice providers nor is it lagging behind some states, but positioned somewhere in the middle.

### Overview of APRN Regulation

#### Other states

Currently, there is no uniform model of regulation of APRNs across the states. Each state independently determines the APRN legal scope of practice.

The regulatory environment for advanced practice nurses therefore varies from state to state. In 2007, the Center for Health Professions at the University of California, San Francisco gathered and summarized the oversight requirements, practice authorities, and prescriptive authorities for nurse practitioners in each state. The findings are summarized below:

Oversight Requirements	Total
No MD involvement required **	11
MD Supervision required	10
MD Collaboration required*	27
Written practice protocol required	21
<b>Practice Authorities</b>	
Explicit authority to diagnose*	44
Explicit authority to order tests	20
Explicit authority to refer*	33
<b>Prescriptive Authorities</b>	
Authority to prescribe w/o MD involvement <sup>*(a), **</sup>	11
Authority to prescribe w/MD collaboration <sup>*(b)</sup>	40
Written protocol required to prescribe <sup>*(c)</sup>	34
Authority to prescribe controlled substances*	48
<b>National certification required*</b>	42
<b>Joint Board of Nursing/Medicine authority*</b>	17

#### \*Minnesota

- (a) Certified nurse midwives only
- (b) Nurse practitioners, certified registered nurse anesthetists, clinical nurse specialists
- (c) Registered nurses only

\*\* No M.D. involvement: Alaska, Arizona, District of Columbia, Idaho, Iowa, Maine, Montana, New Hampshire, New Mexico, Oregon, Washington

Beginning in 2004, a national consensus-based process began with funding from the U.S. Department of Health and Human Services, Health Resources and Services Administration, Bureau of Health Professions, Division of Nursing, to develop and validate national consensus-based primary care nurse practitioner competencies in five specialty areas. In July 2008, an APRN Nurse Consensus Work Group and the National Council of State Boards of Nursing APRN Advisory Committee jointly released the *Consensus Model for APRN Regulation: Licensure, Accreditation, Certification & Education*.

Under the model, advanced practice registered nurses are licensed independent practitioners who are expected to practice within standards established or recognized by a licensing body. Each APRN is accountable to patients, the nursing profession and the licensing board to comply with the requirements of the state nurse practice act and the quality of advanced nursing care rendered; for recognizing limits of knowledge and experience; planning for the management of situations beyond the APRN's expertise; and for consulting with or referring patients to other health care providers as appropriate.

The consensus regulatory model developed targets 2015 for full implementation, and includes essential elements of licensure, accreditation, certification and education, including:

- Assumption that licensure is the granting of authority to practice and
- Authority of boards of nursing to be solely responsible for licensing advanced practice registered nurses as independent practitioners with no regulatory requirements for collaboration, direction or supervision.

The American Academy of Family Physicians supports innovative utilization of nurse practitioners to improve access to health care services in underserved communities and supports team-based, physician-led medical homes<sup>16</sup>.

## Overview of Physician Assistant Regulation

### Suggested guidelines for physician-physician assistant practice

In 1995, the American Medical Association (AMA) developed suggested guidelines for how physicians and PAs should work as a team in the delivery of medical care. The American Association of Physician Assistants (AAPA) model guidelines incorporate the AMA suggested guidelines and are based on the relationship of physician assistants as agents of physicians with respect to delegated medical acts and legal responsibilities. All states recognize physician supervision of physician assistants in the delivery of patient care, and the AAPA guidelines reflect that recognition.

1. The physician is ultimately responsible for coordinating and managing the care of patients and, with the appropriate input of the physician assistants, ensuring the quality of health care provided to patients.
2. The physician is responsible for the supervision of the physician assistants in all settings.

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<sup>16</sup> American Academy of Family Physicians, *Guidelines on the Supervision of Certified Nurse Midwives, Nurse Practitioners and Physician Assistants*, <http://www.aafp.org>

3. The role of the physician assistants in the delivery of care should be defined through mutually agreed upon guidelines that are developed by the physician and the physician assistant and based on the physician's delegatory style.
4. The physician must be available for consultation with the physician assistant at all times either in person or through telecommunication systems or other means.
5. The extent of the involvement by the physician assistant in the assessment and implementation of treatment will depend on the complexity and acuity of the patient's condition and the training and experience and preparation of the physician assistant as adjudged by the physician.
6. The physician and physician assistant together should review all delegated patient services on a regular basis, as well as the mutually agreed upon guidelines for practice.

### **Physician to physician assistant supervision ratio**

According to the AAPA issue brief *Ratio of Physician Assistants to Supervising Physicians*, the supervising physician-PA model was initially envisioned as a single physician assistant working with a single physician in a primary care setting. Early state laws governing PAs frequently limited the number of PAs that could be supervised to two. As medical practice has changed and physician assistant practice has grown, the model has changed, and many state laws have been modified to reflect the change.

- Connecticut now allows a supervising physician to supervise up to six PAs or the part-time equivalent of six PAs.
- California law specifies a 4:1 ratio "at any one time."
- Pennsylvania law specifies a 4:1 ratio, but states that physicians may apply for a waiver or exception to the board for good causes. Licensing boards in several states have adopted similar exception processes.
- A growing number of states do not limit the number of PAs that a physician may supervise.

In 1996, the American Academy of Family Physicians (AAFP) revised its policy on the ratio of PAs by deleting a sentence in the guideline limiting supervision to two non-physician providers. The American Medical Association's Council on Medical Service followed suit in 1998, as follows: "The appropriate ratio of physician to physician extenders should be determined by physicians at the practice level, consistent with good medical practice and state law where relevant." The Council further stated, "Supervising physicians are the most knowledgeable of their own supervisory abilities and practice style, as well as the training and experience of physician extenders in their practice...specified ratio of supervisor physicians to physician extenders might restrict appropriate provision of care and could reduce access to care."

The AAPA recommends that state laws contain no reference to specific ratios of physician assistants to supervising physician, but clarifies that state laws should "contain an appropriate definition of supervision and require that supervision as defined by maintained at all times and in all settings" (AAPA, April 2008).

### **Prescribing authority**

All 50 states, the District of Columbia and Guam have enacted laws that authorize PA prescribing. Thirty-one states allow physician assistants to prescribe Schedule II controlled substances; of those, 10 states including Minnesota restrict these prescriptions to formulary or legend drugs only.

### **Licensure versus registration**

Forty-three states require licensure of physician assistants, following the model physician assistant practice act produced by the AAPA in 1982.

Three states – Minnesota, Massachusetts and New York – register physician assistants, while Maryland, Ohio and Vermont require certification.

### **An Approach to Changing Scope of Practice**

In 2006, six national health care regulatory organizations (representing state boards of medicine, nursing, occupational therapy, pharmacy, physical therapy and social work) collaborated to produce a report outlining a rational approach to evaluating proposals to expand or revise practice acts<sup>17</sup>. It recognizes that changes in scopes of practice are inherent in our current system, and urges regulators to allow for innovation in the use of all types of clinicians to meet consumer needs. The decision to alter scope of practice should be guided by promoting better consumer care across professions and competent providers and improving access to care.

The report outlined some basic assumptions as changes to scope of practice are considered, as follows:

#### **Changing Scope of Practice: Assumptions**

1. The purpose of regulation – public protection – should have top priority in scope of practice decisions, rather than professional self-interest.
2. Changes in scope of practice are inherent in our current healthcare system.
3. Collaboration between health care providers should be the professional norm.
4. Overlap among professions is necessary.
5. Practice acts should require licensees to demonstrate that they have the requisite training and competence to provide a service.

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<sup>17</sup>“Changes in Healthcare Professions’ Scope of Practice: Legislative Considerations” (February 2007), <https://www.ncsbn.org/ScopeofPractice.pdf>

## VII. Conclusions and Recommendations

Minnesota has experienced challenges in workforce supply for several decades. The public and private sectors have responded to years of demographic changes, shortages in health care workers, and changes in the delivery of primary care by: 1) increasing the educational pipeline for primary care physicians, nurses, pharmacists and allied health professionals; 2) providing financial incentives to health professionals to practice in rural and underserved communities; 3) redesigning health professional education to encourage interdisciplinary collaborative practice; 4) expanding use of health information technology; and 5) redesigning the way health care is delivered. However, the challenges of an aging population, demographic shifts, higher health care costs, and finite resources for response continue to call for new strategies and innovation.

The recommendations in this report identify statutory and regulatory changes that would further address Minnesota's health workforce challenges and reform the way primary care is delivered.

The recommendations do not address all of the professional barriers identified by the work group members and professional associations. The recommendations put forth in this report 1) are within the scope of enhancing delivery of primary care, and 2) meet considerations of priority, timing and context, and 3) follow the assumptions set forth in the national report on changes in scope of practice:

1. The purpose of regulation – public protection – should have top priority in scope of practice decisions, rather than professional self-interest.
2. Changes in scope of practice are inherent in our current health care system.
3. Collaboration between health care providers should be the professional norm.
4. Overlap among professions is necessary.
5. Practice acts should require licensees to demonstrate that they have the requisite training and competence to provide a service.

The report addresses additional issues and considerations identified by the work group regarding reimbursement, payment, institutional and cultural barriers that were not translated into recommendations, but can stand in the way of efficient and effective delivery of primary care by the primary care professionals that make up the core team of primary care providers.

Recommendations for statutory, regulatory or other changes to promote efficient and effective delivery of primary care should also be viewed as part of a larger strategy to address Minnesota's primary care workforce shortages, including:

- Use all available primary care providers to the highest and best use of their respective education and capacity.
- Support development of new models of care, such as the health care or medical home, that encourage collaboration and team delivery of care.

- Consider new financial models and incentives for primary care and family practice, mental health, and related specialties.
- Ensure that payments or reimbursements align closely with services provided rather than the individual providing the services.
- Provide financial incentives to attract health professionals to rural and underserved communities.
- Increase physician production in areas of need: primary care and family practice and related specialties.
- Increase production of nurse practitioners and other advanced practice registered nurses, physician assistants, clinical pharmacists and other ancillary professionals
- Encourage community partnerships for recruitment and experiential training in underserved and rural areas.

## Recommendations

### 1. Amend the Minnesota Nurse Practice Act to eliminate a written prescribing agreement as a requirement to prescribe drugs and therapeutic devices (M.S. 148.235).

**Discussion:** Currently, Certified Nurse Midwives may prescribe drugs and therapeutic devices within their scope of practice and no written prescribing agreement is required. All other advanced practice registered nurses must have a written prescribing agreement with a physician. Advance practice registered nurses report difficulty in finding a physician to enter into a written prescribing agreement which can limit access to primary and mental health care access for patients in rural and underserved communities that have difficulty recruiting or retaining a primary care or specialty physician workforce. Advanced practice registered nurse education includes pharmacology and pharmacotherapy. The Minnesota Board of Nursing reports minimal complaints regarding prescribing by advanced practice registered nurses. In reality, advanced practice registered nurses commonly prescribe within their scope of practice without direct physician supervision and are accountable to consult with a physician or pharmacist if a situation is beyond the knowledge and experience of the advanced practice registered nurse. This change would allow other qualified APRNs to independently prescribe within their current scope of practice and education. This recommendation qualifies APRNs to independently prescribe and be accountable within their scope of practice, and recognizes the authority of the Minnesota Board of Nursing's responsibility for regulation of this activity by advanced practice registered nurses.

The Minnesota Nurses Association supports this recommendation. The Minnesota Boards of Nursing and Medical Practice staff provided input for this recommendation. The Minnesota Medical Association and the Minnesota Family Practice Association staff also provided preliminary input for this recommendation and advocated that it be considered in tandem with Recommendation #2, below. The timing of this report prevented the above organizations' boards from taking a formal position on the recommendation.

2. **Amend the Minnesota Nurse Practice Act to explicitly require the advanced practice registered nurse to practice within a health system that has a written plan for patient-centered care for interdisciplinary consultation, collaboration and referral as indicated to achieve optimal patient outcomes, as follows:**
  - a. **Collaboration and consultation with physicians and other health care providers for purposes of assessment, diagnosis, and treatment based upon the needs, complexities and preferences of the patient and the competence, scope of practice and experience of the advanced practice registered nurse;**
  - b. **Referral of patients to another member of the health care team when warranted, including communication of patient need and access to appropriate health records;**
  - c. **Designation of hospital(s) or other in-patient facilities where patients requiring admission will be referred; and**
  - d. **Designation of physicians and other health care provider(s) with whom the advanced practice registered nurse has a pre-established arrangement to accept the transfer of care if the APRN is without admitting privileges or has transferred care to another provider.**

(M.S. 148.171)

**Discussion:** Currently, the law requires APRNs to practice “within a health care system that provides for consultation, collaborative management, and referral as indicated by the health status of the patient and defines APRN practice, to include “accepting referrals from, consulting with, cooperating with, or referring to all other types of health care providers, including but not limited to physicians, chiropractors, podiatrists, and dentists, provided that the advanced practice registered nurse and the other provider are practicing within their scopes of practice as defined in state law.”  
(M.S. 148.171, Subd. 13)

The law defines “collaborative management” as “a mutually agreed upon plan between an APRN and one or more physicians or surgeons that designates the scope of collaboration necessary to manage the care of patients, and requires that the APRN and physician/surgeon(s) must have experience in providing care to patients with the same or similar medical problems, with exceptions for CRNA practice (M.S. 148.71, Subd. 6).

The current collaborative management requirement serves to protect the consumer and ensure that should the patient require referral or admission to other providers or facilities for complex issues beyond the scope of the APRN, the relationships and referral patterns are established to ensure continuity of care. However, nursing representatives on the work group reported that the term “collaborative management” is frequently misinterpreted by institutions resulting in the implementation of decisions that restrict care, manage risk or deny reimbursements. Collaborative management is often confused with the written prescribing agreement requirement. The effect is that collaborative management is misinterpreted to be the management of the advanced practice registered nurse rather than the collaborative management of patient care. Additionally, physicians often express concern for their level of liability for the practice of an advanced practice registered nurse’s practice.

Work group members agreed that the term “collaborative management” invites potential confusion or misinterpretation and worked together on a solution that would be less restrictive or confusing without compromising patient safety and care coordination. They agreed it is imperative to identify the explicit accountability of the advanced practice registered nurse to practice to the extent of their competence, scope of practice and experience.

Requiring the advanced practice registered nurse to be accountable for plans and relationships for consultation, referral and continuity of care for patients acknowledges the ability of advanced practice registered nurses to provide patient-centered care commensurate with their education and scope of practice without the perceived management of their practice by any other health care practitioner.

Foremost, it ensures the consumer that if consultation with or referral to other providers or facilities is required for issues beyond the scope of the APRN, the relationships and referral patterns are pre-established.

The Minnesota Nurses Association supports this recommendation. The Minnesota Board of Nursing, the Minnesota Medical Association and the Minnesota Family Practice Association staff provided preliminary input for this recommendation. The timing of this report prevented the above organizations’ boards from taking a formal position on the recommendation

**3. Eliminate the limitation on the number of physician assistants that a physician may supervise, placing responsibility for this determination upon the supervising physician (M.S. 147A.01, subd. 23).**

*Discussion:* This recommendation aligns with the national model set forth by the American Academy of Physician Assistants and American Academy of Family Physicians, placing the responsibility and judgment upon the supervising physician, who is most knowledgeable about their practice as well as the training and experience of the physician assistant(s) they supervise. The work group was in complete agreement that the 2:1 supervision ratio currently in Minnesota statute can limit access to care in rural and underserved areas. In addition, large systems, such as Mayo, which use more physician assistants, are limited by the ratio when filling open positions. Work group members expressed mixed opinions about eliminating the limit entirely versus increasing the number. Other states, such as California and Pennsylvania, have placed a limit of 4:1 on supervision with options for waiver; this option would also resolve the current limitation, but could be seen as a somewhat arbitrary number. Placing the responsibility for appropriate supervision upon the supervising physician protects the consumer while providing some flexibility to respond to unique needs for providing care. The Minnesota Board of Medicine staff recommended a 5:1 ratio in the interest of clear regulation options.

**4. Allow pharmacists to sign legally valid prescriptions pursuant to protocol implemented by practitioners (M.S. 151.37 subd. 2).**

**Discussion:** Current statute permits registered nurses, physician assistants and medical students or residents to sign prescriptions for legend drugs under protocol, but does not allow pharmacists the same authority. The Minnesota Board of Pharmacy reviewed this issue in June 2008, following an inquiry from staff at the Minnesota Department of Health, seeking clarification regarding a citation to a home health agency after an order had been signed by the pharmacist but not countersigned by the practitioner authorized to actually prescribe. The work group agreed that allowing pharmacists to modify prescriptions of legend drugs under protocol would enhance patient care; an example includes adjusting anticoagulant dosage under an established collaboration agreement with prescribing practitioner. The Board of Pharmacy supports adding pharmacists to the list of practitioners allowed to sign valid prescriptions of legend drugs under protocol under M.S. 151.37, subd. 2.

**5. Permit advanced practice registered nurses and physician assistants to enter into collaborative practice agreements with pharmacists under protocol (M.S. 151.01, Subd. 23 and 27).**

**Discussion:** Current statute allows pharmacists to participate in the practice of managing drug therapy and modifying drug therapy, according to a written protocol between the pharmacist and a dentist, optometrist, physician, podiatrist or veterinarian who is responsible for the patient's care and authorized to independently prescribe drugs. Any significant changes in drug therapy must be reported by the pharmacist to the patient's medical record. Work group members were in agreement that allowing a direct collaborative medication management relationship between APRNs/PAs and pharmacists would facilitate patient care. Adding APRNs and PAs to the list of practitioners with whom a pharmacist may collaborate for medication management will facilitate patient care without compromising patient safety, and reflects current primary care practice. *This recommendation is dependent upon Recommendation #1, recognizing APRN independent authority to prescribe.*

**6. Replace current registration of physician assistants with licensure (M.S. 147A).**

**Discussion:** This change would result in minimal substantive changes in regulation of physician assistants; Minnesota registration system already operates in a *de facto* licensing model. While this change would not directly affect the delivery of primary care, it would allow physician assistants to be considered "licensed practitioners" under statute and could serve as a foundation for addressing reimbursement inequities and disincentives. It does not change current scope of practice or otherwise lead to independent practice by physician assistants. The Board of Medicine staff provided input to this recommendation; the timing of this report prevented the Board from taking a formal position on the recommendation

- 7. Ensure that any statutory or regulatory modifications supersede obsolete wording in related statutes and elsewhere to ensure the broadest application, if appropriate.**

*Discussion:* The general recommendation addresses the work group concern that modification of a handful of professional practice statutes or regulations not occur in isolation to avoid statutory or regulatory wording conflicts. Example: ensuring that any reference to the term “licensed practitioner” be treated consistently in statute. This would require a review of current practice statutes by each affected licensing board.

- 8. Complete a review of all applicable and related statutes and rules to ensure that they are not in conflict with any changes implemented as a result of these recommendations.**

*Discussion:* This recommendation recognizes that a comprehensive review of statutes and rules must follow any statutory or regulatory changes to determine the impact upon related statutes and regulations. Each of the 1,039 physician, 136 physician assistant, 252 registered nurse and 164 pharmacist references in current statutes and regulations must be reviewed carefully and individual determinations made regarding need or appropriateness for modification to conform to changes in health professional practice acts or regulations. This would require a review of current practice statutes by each affected licensing board.

- 9. Ensure that Minnesota’s health care home learning collaboratives are required to address health professional cultural issues, collaborative team roles, and team skill-building.**

*Discussion:* This recommendation would direct the Minnesota Departments of Human Services and Health to build interprofessional communications and team building into the ongoing learning collaborative model to be developed under health care homes. This recommendation responds to work group members’ concerns that changes to culture and attitudes existing must go hand in hand to support the success of a health care home model and any statutory or regulatory changes being considered. It would build upon strategies already employed in Minnesota’s health professional higher education environment to increase interdisciplinary learning and collaboration.

- 10. Continue an advisory process with health licensing boards, professional associations and higher education to formalize collaboration and encourage interdisciplinary practice among health professionals, examine further policy changes required for effective care delivery, and respond to changes in the health care environment as health care reform moves forward.**

*Discussion:* Work group members advising this study noted that they appreciated the opportunity provided by the work group process to share concerns, ideas and policy perspectives with other health professionals. There was consensus that it was a valuable experience and agreement that continuing a similar forum on an ongoing basis would encourage continued collaboration among the professions and provide opportunity to respond to future changes in the health care environment.

## **Additional Considerations: Federal Regulatory/Medicare, Reimbursement and Institutional Issues**

In addition to the 10 licensing and regulatory recommendations identified above, the work group advising this process noted that federal regulatory issues, reimbursement inequities and risk-based institutional decisions also contribute to perceived or real barriers or disincentives in making the fullest use of advanced practice professionals in primary care practice. They noted that these additional issues can exist in multiple locations, and include Medicare regulations and reimbursements, state licensing rules, and institutional decisions. **These issues can often serve as greater barriers to effective and efficient primary care practice than those directly related to health professional practice**, yet the solutions must be considered carefully and include broad representation. In keeping with the legislative charge, the work group process for this study did not include Medicare or other payer representatives or those involved in licensing and certification of state health care facilities. Summarizing and documenting the issues is a starting point for further study and consideration.

- Medicare currently does not allow advanced practice registered nurses (APRN) and physician assistant (PA) to refer to federally certified health care providers or suppliers without physician signatures. A core function of primary care is making referrals to facilities or services; APRNs and PAs who see patients in primary care must obtain physician signatures on referrals to these providers even though they may be the patient's primary care provider. The list of facilities includes nursing homes, home health agencies, psychiatric facilities, or outpatient physical or speech therapy. Nurse Practitioners (NP) and PAs are further restricted from admitting patients to nursing homes or performing admission physicals.
- Medicare and other payers do not recognize and/or reimburse for pre-operative physicals performed by and signed by physician assistants or advanced practice professionals. All pre-operative physicals must be signed by a physician.
- Some nursing homes do not accept medication orders written by physician assistants for nursing home patients without physician co-signature, even though the prescriptive authority is assigned in the physician delegation agreement. Minnesota Rule 4658.1330 states that "all medications brought into a nursing home by a resident must be administered in accordance with a written order signed by a health care practitioner licensed to prescribe in Minnesota," which includes physician assistants prescribing under delegated authority. A nursing home management interpretation to deny medication orders from physician assistants is not in conformance with state regulation.
- Reimbursement or payments for services currently do not reflect the level of service performed, but the educational level of the provider. Reimbursement for services performed by APRNs and PAs can range from 65 to 85 percent. This differential has the effect of discouraging clinics from having advanced practice professionals perform services for which they are trained and capable and encouraging the same to be

performed by a physician in order to achieve better reimbursement. One example provided includes scheduling physicians for routine preventative and well-child visits and shifting NP or PA visits to acute or urgent situations, which may be more appropriately handled by a physician. Another example is choosing to have all coloscopies performed by a higher cost physician rather than the certified nurse midwife.

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## Appendix A

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